CHAPTER 3

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Changes in Chapter 3 between Draft and Final EIS

Section 3 – Table 3.1.2. The Basic Assumptions about Alternatives Table has been modified removing the active verb "will" and replacing it with "may" in the following sentence; The river segments would be determined suitable and may be recommended for designation.

Section 3.2 – General Environment and throughout the document. The paragraph describing the inclusion of private land in maps and descriptions has been updated.

Section 3.2 – General Environment; Section 3.3f – Geologic and Hydrologic Values; Section 3.3g – Ecological Values. Geological and Ecological outstanding remarkable values were removed from Mamie creek.

Section 3.2 – General Environment; 3.3g – Ecological Values. Ecological outstandingly remarkable value was removed from Death Hollow Creek.

Sections 3.3 to 3.18 have been modified to include the analysis of Alternative 7, the changes in rivers in Alternative 3 and 4, as well as the clarification of the definition of reasonably foreseeable water project and updates from information submitted during the DEIS comment period. The difference between the Alternatives 3 and 4 was that Alternative 3 contained those river segments that did not have existing or reasonably foreseeable water projects or other developmental activities and Alternative 4 contained segments that could have been adversely affected by existing or reasonably foreseeable future water resource projects or other developmental activities. In the Draft EIS, river segments in Alternatives 3 and 4 included the best representation of outstanding remarkable values and were based on the best available information about potential projects at the Draft EIS release. Between the Draft and Final EIS, new information was found or presented about reasonably foreseeable developments that caused shifting of rivers between Alternatives 3 and 4.

Section 3.3a – Scenic Value. Scenic outstanding remarkable value descriptions have been reviewed and revised to ensure that the scenic value occurs within the ¼ mile corridor.

Section 3.6 – Mineral Resources. Areas already designated Wilderness was exactly defined in table. The section and table were adapted to reflect the fact that Research Natural Areas are not necessarily withdrawn from mineral entry

Section 3.10 – Social and Economic Resources. References consulted expanded for environmental consequences. Potential economic and social impacts discussion expanded.

Section 3.12 – Water Resources and Water Developments and throughout the document. Comments on the DEIS provided more detailed information regarding the locations of projects, withdrawn lands, and the development of feasibility studies. These changes resulted in additions to or omissions of water development projects that are currently being analyzed. Following receipt of new information from the DEIS comments, the Forest Service determined that many of the water development projects were not reasonably foreseeable and changes are reflected in FEIS Section 3.12 and throughout the document.

Section 3.12 – Water Resources and Water Developments. Limits to Water Resource Development Analysis removed. West Fork Whiterocks River diversion added to Table 3.12.3. Definition of Reasonably Foreseeable Water Development added. Tables 3.12.6 -3.12.9 removed. Information added to 3.12.4.

Section 3.14 – Cumulative Effects Analysis. Section updated following release of BLM Proposed Resource Management Plans and Final EISs in 2008.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This chapter focuses on selected resources in the 86 eligible river segment study areas. Only those resources relevant to the issues identified in Chapter 1, Section 1.11 – Issues are described and analyzed in Chapter 3. The chapter summarizes the physical, biological, social, and economic environments of selected resources and describes the environment that could be affected by implementation of the alternatives. It also describes the effects of implementing each alternative on that environment and uses and activities that may be precluded, limited or enhanced if the river segment and its corridor were included in the National System. Direct and indirect effects are described by resource area in Sections 3.3 to 3.13, and Section 3.14 describes the cumulative effects analysis. This chapter also presents the scientific and analytical basis for the comparison of alternatives presented in Chapter 2, Section 2.4 – Comparison of Alternatives.

The techniques and methodologies used in this analysis consider the best available science. The analysis references scientific sources relied on. When appropriate, the conclusions are based on the scientific analysis that shows a thorough review of relevant scientific information.

The information for Table 3.1.1 was obtained from FSH 1909.12, Chapter 80, Section 82.51, Management Guidelines for Eligible or Suitable Rivers. It describes the guidelines that apply to interim management of eligible or suitable rivers identified through agency planning as Section 5(d)(1) study rivers. The protection necessary to maintain a river segment as a potential wild and scenic river may be modified or discontinued for identified rivers upon a finding of ineligibility or nonsuitability. Management of river segments would continue to be in accordance with existing laws, regulations, and land and resource management plans (Forest Plans). If a river is designated, refer to Appendix C – Wild and Scenic River Management Statutory Requirements and Appendix D – Effects of Managing a River as a Component of the National Wild and Scenic Rivers System.

Table 3.1.1. Restriction to activities within stream corridors based on classification.

A Responsible Official may authorize site-specific projects and activities on National Forest System lands within river corridors eligible or suitable where the project and activities are consistent with the following:
Water Resources Projects (Water Supply/Flood Control) **Wild, Scenic, Recreational**. A water resources project is defined in Title 36, Code of Federal Regulations part 297 (36 CFR part 297) as the construction of developments that affect the river's free-flowing characteristics. Water resources projects proposed on a section 5(d)(1) study river will be analyzed as to their effect on a river's free-flow, water quality, and outstandingly remarkable values (ORVs), with adverse effects prevented to the extent of existing agency authorities (such as special-use authority).
Hydroelectric Power **Wild, Scenic, Recreational**. Section 5(d)(1) study rivers found eligible are to be protected pending a suitability determination. Protect section 5(d)(1) study rivers found suitable for inclusion in the National Wild and Scenic Rivers System (National System) for their free-flowing condition, water quality, and ORVs.
Minerals **Wild**. (1) Locatable. Existing or new mining activity on a section 5(d)(1) study river are subject to regulations in 36 CFR part 228 and shall be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment. (2) Leasable. Leases, licenses, and permits under mineral leasing laws are subject to conditions necessary to protect the values of the river corridor in the event it is subsequently included in the National System.

(3) Saleable. Disposal of saleable mineral material is prohibited to protect river values.
Scenic, Recreational.
(1) Locatable. Existing or new mining activity on a section 5(d)(1) study river are subject to regulations in 36 CFR part 228 and must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.
(2) Leasable. Leases, licenses, and permits under mineral leasing laws would be subject to conditions necessary to protect the values of the river corridor in the event it is subsequently included in the National System.
(3) Saleable. Saleable mineral material disposal is allowed if the values for which the river may be included in the National System are protected.

Transportation System

Wild. New roads are not generally compatible with this classification. A few existing roads leading to the boundary of the river corridor may be acceptable. New trail construction should generally be designed for nonmotorized uses. However, limited motorized uses that are compatible with identified values and unobtrusive trail bridges may be allowed. New airfields may not be developed.
Scenic. New roads and railroads are permitted to parallel the river for short segments or bridge the river if such construction fully protects river values (including river's free-flowing character). Bridge crossings and river access are allowed. New trail construction or airfields must be compatible with and fully protect identified values.
Recreational. New roads and railroads are permitted to parallel the river if such construction fully protects river values (including river's free-flowing character). Bridge crossings and river access are allowed. New trail construction or airfields must be compatible with and fully protect identified values.

Utility Proposal

Wild, Scenic, Recreational. New transmission lines such as gas lines, water lines, and so forth are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, the project shall be evaluated as to its effect on the river's ORVs and classification. Any portion of a utility proposal that has the potential to affect the river's free-flowing character shall be evaluated as a water resources project.

Recreation Development

Wild. Major public-use areas such as large campgrounds, interpretive centers, or administrative headquarters should be located outside the river corridor. Minimum facilities may be provided in keeping with the essentially primitive character. If sanitation and convenience facilities are necessary, locate them at access points or at a sufficient distance from the river bank so that they are not visible from the river. Prevent impacts to water quality and other identified river values.
Scenic. Public-use facilities such as moderate-size campgrounds, simple sanitation and convenience facilities, public information centers, administrative sites, or river access developments and so forth are allowed within the river corridor. All facilities shall be located and designed to harmonize with their natural and cultural settings, protect identified river values including water quality, and be screened from view from the river to the extent possible.
Recreational. Recreation, administrative, and river access facilities may be located in close proximity to the river. However, recreational classification does not require extensive recreation development. All facilities shall be located and designed to harmonize with their natural and cultural settings, protect identified river values including water quality, and be screened from view from the river to the extent possible.

Motorized Travel

Wild. Motorized travel on land or water may be permitted, but is generally not compatible with this classification.
Scenic, Recreational. Motorized travel on land or water may be permitted, prohibited, or restricted to protect the river values.

Wildlife and Fish Projects

Wild. Construction of minor structures and vegetation management to protect and enhance wildlife and fish habitat should harmonize with the area's essentially primitive character and fully protect identified river values. Any portion of a wildlife or fisheries restoration or enhancement project that has the potential to affect the river's free-flowing character shall be evaluated as a water resources project.
Scenic. Construction of structures and vegetation management to protect and enhance wildlife and fish habitat should harmonize with the area's largely undeveloped character and fully protect identified river values. Any portion of a wildlife or fisheries restoration or enhancement project that has the potential to affect the free-flowing character shall be evaluated as a water resources project.
Recreational. Construction of structures and vegetation management to protect and enhance wildlife and fish habitat should fully protect identified river values. Any portion of a wildlife or fisheries restoration or enhancement project that has the potential to affect the river's free-flowing character shall be evaluated as a water resources project.

Vegetation Management

Wild. Cutting of trees and other vegetation is not permitted except when needed in association with a primitive recreation experience such as to clear trails or to protect users or the environment, including wildfire suppression.

Prescribed fire and wildland fire use may be used to restore or maintain habitat for threatened, endangered, or sensitive species and/or restore the historic range of variability.
Scenic, Recreational. A range of vegetation management and timber harvest practices are allowed, provided that these practices are designed to protect, restore, or enhance the river environment, including the long-term scenic character.

Domestic Livestock Grazing

Wild. Domestic livestock grazing should be managed to protect identified river values. Existing structures may be maintained. New facilities may be developed to facilitate livestock management so long as they maintain the values for which a river was found eligible or suitable, including the area's essentially primitive character.
Scenic. Domestic livestock grazing should be managed to protect identified river values. Existing structures may be maintained. New facilities may be developed to facilitate livestock management so long as they maintain the values for which a river was found eligible or suitable, including the area's largely undeveloped character.
Recreational. Domestic livestock grazing should be managed to protect identified river values. Existing structures may be maintained. New facilities may be developed to facilitate livestock management so long as they maintain the values for which a river was found eligible or suitable.

Table 3.1.2 is a basic set of assumptions for alternatives. This basic set of assumptions helped to define the parameters the Interdisciplinary Team based the effects analysis on.

Table 3.1.2. Basic set of assumptions for alternatives.

Alternative 1 Assumptions

- Suitability findings would be deferred and current management practices would continue. All 86 river segments (a total of 840 miles) would continue to be managed as "eligible" for their potential inclusion into the National System.
- No amendments to Forest Plans would be necessary as this alternative maintains the status quo.
- Management of river segments would continue to be in accordance with existing laws and regulations and Forest Plans.
- The Forest Service would continue to use its existing authorities and interim protection of free flow, water quality, ORVs, and recommended tentative classifications as provided by direction in Forest Plans, and existing laws and regulations. To the extent the Forest Service is authorized by statute, a Responsible Official may authorize site-specific projects and activities on National Forest System lands within river corridors eligible or suitable only where the projects and activities are consistent with the following (FSH 1909.12, Chapter 80, Section 82.5):
  - The free-flowing character is not modified by construction or development of stream impoundments, diversions, or other water resources projects.
  - ORVs are protected.
  - Classification (Wild, Scenic, and Recreational) must be maintained as inventoried unless a suitability study (decision) is completed that recommends management at a less restrictive class (e.g., change from Wild to Scenic).
- Site-specific activities may be authorized as long as they are consistent with activities listed in Table 3.1.1. Proposed site-specific activities would be analyzed in a separate NEPA document.
- Projects of others, for which the Forest Service has no or limited authority (e.g., development of a federal dam or licensing of a hydropower plant), may occur.
- No Comprehensive River Management Plan would be developed.

Alternative 2 Assumptions

- All 86 river segments (840 miles) would be determined "not suitable" for designation. Consequently, none of the river segments would be recommended for inclusion in the National System.
- Forest Plans would be amended to remove any wild and scenic eligible river interim measures to protect free flow, ORVs, and recommended classification, for river segments in this study.
- Reservoirs and other water projects may be constructed following site-specific NEPA analysis.
- Management of river segments would continue to be in accordance with existing laws and regulations and Forest Plans.
- No Comprehensive River Management Plans would be developed.

Alternatives 3 through 7 Assumptions

Segments Determined Suitable (for a list of rivers by alternative, refer to Chapter 2, Tables 2.2.1 through 2.2.4:

- River segments would be determined suitable and may be recommended for designation.
- Forest Plans would be amended, as needed, to provide interim measures to protect free flow, ORVs, and recommended classification for river segments found suitable for designation.
- Management of river segments would continue to be in accordance with existing laws and regulations and Forest Plans.

- The Forest Service would continue to use its existing authorities and interim protection of free flow, water quality, ORVs, and recommended tentative classifications as provided by direction in Forest Plans, and existing laws and regulations. To the extent the Forest Service is authorized by statute, a Responsible Official may authorize site-specific projects and activities on National Forest System lands within river corridors eligible or suitable only where the projects and activities are consistent with (FSH 1909.12, Chapter 80, Section 82.5):
  - The free-flowing character is not modified by construction or development of stream impoundments, diversions, or other water resources projects.
  - ORVs are protected.
  - Classification (Wild, Scenic, and Recreational) must be maintained as inventoried unless a suitability study (decision) is completed that recommends management at a less restrictive class (e.g., change from Wild to Scenic).
- There are no ground disturbing activities associated with this project. Site-specific activities may be authorized as long as they are consistent with activities listed in Table 3.1.1. Proposed site-specific activities would be analyzed in a separate NEPA document.
- Segments that are ultimately designated by Congress, receive a Comprehensive River Management Plan.

Segments Determined "Not Suitable" for Designation:

- Segments would be determined "not suitable" for designation. Consequently, none of these river segments would be recommended for inclusion in the National System.
- Interim protection as potential wild and scenic rivers would be removed. Forest Plan amendments would be made as necessary to remove any specific interim protections as eligible river segments.
- Reservoirs and other water projects may be constructed following site-specific NEPA analysis.
- Management of river segments would continue to be in accordance with existing laws and regulations and Forest Plans.
- No Comprehensive River Management Plans would be developed.

3.2 General Environment

Table 3.2.1 displays information about eligible river segments administered by the National Forests in Utah. It includes: river segment name, classification, outstandingly remarkable value (ORV), ranger district, county, and river miles.

Table 3.2.1. River segments eligible for inclusion in the wild and scenic rivers suitability study by forest. (All mileages are approximate).

Ashley National Forest

Ashley NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Middle Main Sheep Creek	5	Recreational	Scenic, Geologic/ Hydrologic, Wildlife	Flaming Gorge	Daggett
Lower Main Sheep Creek	4	Recreational	Recreational, Geologic/ Hydrologic, Fish, Wildlife, Other Similar Values	Flaming Gorge	Daggett
Carter Creek	16	Scenic	Historic, Cultural	Flaming Gorge	Daggett
Cart Creek Proper	10	Scenic	Cultural	Flaming Gorge	Daggett
Green River	13	Scenic	Scenic, Recreational, Fish, Wildlife, Historic, Cultural	Flaming Gorge	Daggett
Pipe Creek	6	Scenic	Cultural	Flaming Gorge	Daggett
Reader Creek	6	Scenic	Scenic, Recreational, Geologic/ Hydrologic, Fish, Wildlife, Other Similar Values	Vernal	Duchesne
West Fork Whiterocks River	11	Scenic	Scenic, Recreation	Vernal	Duchesne

Ashley NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Upper Whiterocks River and	4	Scenic	Scenic, Recreation	Vernal	Duchesne
East Fork Whiterocks River *(Upper and East Fork Whiterocks combined in SER)	4	Scenic	Scenic	Vernal	Uintah & Duchesne
Middle Whiterocks River	9	Wild	Scenic	Vernal	Uintah & Duchesne
Lower Dry Fork Creek	7	Recreational	Geologic/Hydrologic, Wildlife, Historic, Cultural	Vernal	Uintah
South Fork Ashley Creek	15	Scenic	Geologic/Hydrologic, Wildlife, Scenic	Vernal	Uintah
Black Canyon	10	Wild	Scenic, Geologic/Hydrologic, Wildlife	Vernal	Uintah
Ashley Gorge Creek	10	Wild	Scenic, Geologic/Hydrologic, Wildlife, Historic, Other Similar Value	Vernal	Uintah
Upper Rock Creek and	21	Wild	Scenic	Duchesne	Duchesne
Fall Creek *(Upper Rock Creek and Fall Creek combined in SER)	6	Wild	Scenic	Duchesne	Duchesne
West Fork Rock Creek, including Fish Creek	13	Wild	Scenic, Historic	Duchesne	Duchesne
Upper Lake Fork River, including Ottoson and East Basin Creeks and	35	Wild	Scenic	Duchesne	Duchesne
Oweep Creek *(Upper Lake Fork and Oweep Creek combined in SER)	20	Wild	Scenic	Duchesne	Duchesne
Upper Yellowstone Creek, including Milk Creek	33	Wild	Scenic, Geologic/Hydrologic, Wildlife	Duchesne	Duchesne
Garfield Creek	17	Wild	Cultural	Duchesne	Duchesne
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	Wild	Geologic/Hydrologic, Wildlife	Roosevelt/ Duchesne	Duchesne
Shale Creek and Tributaries [(1)]	10	Wild	Historic, Cultural	Duchesne	Duchesne
	325 Miles Total	Total by Classification: Wild - 12 Scenic - 9 Recreational - 3			

* Suitability Evaluation Reports (SERs) are located in Appendix A.
The following eligibility errors were discovered during scoping and are now being corrected:
[(1)] Shale Creek and Tributaries – An error was made which included Fox Reservoir and the short section upstream of the reservoir in the segment. The locations of these water developments were clarified and mileage was recalculated to begin at the outlet of Fox reservoir.

Dixie National Forest

Dixie NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
North Fork Virgin River [1]	1	Scenic	Scenic, Geologic, Recreational	Cedar City	Kane
East Fork Boulder Creek	3	Wild	Scenic, Recreational, Fish	Escalante	Garfield
Pine Creek	8	Wild	Scenic, Recreational, Geological, Ecological	Escalante	Garfield
Mamie Creek [2]	2	Wild	Scenic, Recreational	Escalante	Garfield
Death Hollow Creek [3]	10	Wild	Scenic, Recreational	Escalante	Garfield
Moody Wash [4]	5	Wild	Ecological, Fish, Geological/ Hydrological	Pine Valley	Washing -ton
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	Scenic, Recreational, Cultural, Ecological	Fremont River	Garfield
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	Scenic, Recreational, Cultural	Fremont River	Garfield
The Gulch [5] – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	Scenic, Recreational, Cultural	Fremont River	Garfield
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	Scenic, Recreational, Ecological	Fremont River	Garfield
	46 Miles Total	Total by Classification: Wild – 8 Scenic – 1 Recreational – 1			

The following eligibility errors were discovered during scoping and the DEIS and are now being corrected:

[1] North Fork Virgin River - An error was made during the classification of the North Fork of Virgin River. It was classified as Wild, but needs to be changed to Scenic. There are significant signs of human activity and road access from the private land within ½ mile of the river corridor and road access from Federal lands is within ⅛ mile of river corridor.

[2] Mamie Creek - During the interagency process (between the Dixie National Forest, Grand Staircase-Escalante N.M., and Glen Canyon NRA), eligible river segments were identified across agency boundaries. ORVs were determined across the interagency segments. At the beginning of this Forest Service Utah Statewide Suitability project, the Forest Service revalidated the presence of individual ORVs on these river segments. Some ORVs were present on lands administered by other agencies (e.g., downstream on GSENM), but not found on the Forest Service administered segment. The ecological, cultural, wildlife, fish and geological ORVs identified in the interagency report are not found to be regionally significant on the Forest Service portions of the segment.

[3] Death Hollow - During the interagency process (between the Dixie National Forest, Grand Staircase-Escalante N.M., and Glen Canyon NRA), eligible river segments were identified across agency boundaries. ORVs were determined across the interagency segments. At the beginning of this Forest Service Utah Statewide Suitability project, the Forest Service revalidated the presence of individual ORVs on these river segments. Some ORVs were present on lands administered by other agencies (e.g., downstream on GSENM), but not found on the Forest Service administered segment. The ecological, cultural, wildlife, and paleontological ORVs identified in the interagency report is not found to be regionally significant on the Forest Service portions of the segment.

[4] Moody Wash - Eligibility determinations were made pending “ground truthing” of ORVs. Upon ground truthing Moody Wash, it was determined that only 5.08 miles contained the ORV. The new segment reflects the segment that meets eligibility criteria.

[5] The Gulch - An error was made during the classification of The Gulch. It was classified as Wild, but needs to be changed to Recreational, due to the presence of a road within the stream corridor.

Fishlake National Forest

Fishlake NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Salina Creek	7	Wild	Recreational	Richfield	Sevier
Fish Creek	15	Wild - (4.3 mi.); Recreational - lower (10.5 mi.)	Prehistoric / Historic, Wildlife / Ecology, Fish	Beaver	Sevier & Piute
Corn Creek	2	Scenic	Recreational	Fillmore	Millard
Pine Creek / Bullion Falls	4	Wild	Wildlife / Ecology, Fish	Beaver	Piute
Manning Creek	4	Wild	Fish	Richfield	Piute
	32 Miles Total	Total by Classification: Wild - 4 Scenic - 1 Recreational - 1			

Manti-La Sal National Forest

Manti-La Sal NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Miners Basin (Placer Creek)	2	Recreational	Historic	Moab	Grand
Mill Creek Gorge	3	Wild	Scenic, Geologic/ Hydrologic, Other Similar Values	Moab	San Juan
Roc Creek	9	Wild	Scenic, Geologic/ Hydrologic	Moab	San Juan & Montrose,CO
Huntington Creek	19	Recreational	Scenic, Recreational	Ferron/Price	Emery
Fish Creek and Gooseberry Creek	21	Scenic - Upper Fish Creek and Gooseberry (17.05 Mi); Recreational – Fish Creek (3.6 mi)	Wildlife	Ferron/ Price	Carbon, Sanpete & Utah
Lower Left Fork of Huntington	5	Scenic	Scenic	Ferron/Price	Emery
Hammond Canyon	10	Scenic	Geologic, Scenic, Cultural	Monticello	San Juan
Chippean and Allen Canyons	21	Scenic:Chippean Canyon (2.6 mi); Recreational: Allen Canyon (19 mi)	Cultural	Monticello	San Juan
Upper Dark, Horse Pasture, Peavine & Kigalia Canyons in Upper Dark Canyon	26	Recreational	Geologic, Cultural	Monticello	San Juan
Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	41	Wild	Cultural	Monticello	San Juan
	157 Miles Total	Total by Classification: Wild - 3 Scenic - 4 Recreational - 5			

Uinta National Forest

Uinta NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
North Fork, Provo River	1	Wild within Wilderness; Recreational below Wilderness	Scenic	Pleasant Grove	Utah
South Fork, American Fork River	1	Wild within Wilderness; Recreational below Wilderness	Scenic	Pleasant Grove	Utah
Little Provo Deer Creek	3	Recreational	Geological/ Hydrological, Ecological	Pleasant Grove	Wasatch
Fifth Water Creek	8	Scenic	Recreational	Spanish Fork	Utah
	13 Miles Total	Total by Classification: Wild - 2 Scenic - 1 Recreational - 3			

Wasatch-Cache National Forest

Wasatch-Cache NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Henry's Fork: Henry's Fork Lake to Trailhead	8	Wild	Scenic, Recreational, Wildlife, Ecology	Mountain View	Summit
West Fork Beaver Creek: Source to Forest Boundary	10	Wild within Wilderness (4.6 Mi.); Scenic below Wilderness (5.5 Mi.)	Wildlife, Ecology	Mountain View	Summit
Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	11	Wild within Wilderness (6.9 Mi.); Scenic below Wilderness (4.2 Mi.)	Wildlife, Ecology	Mountain View	Summit
Thompson Creek: Source to Hoop Lake Diversion	5	Wild	Wildlife	Mountain View	Summit
West Fork Blacks Fork: Source to Trailhead	12	Wild within Wilderness (8 Mi.); Scenic below Wilderness (3.9 Mi.)	Scenic, Ecology	Mountain View	Summit
East Fork Blacks Fork: Headwaters to confluence with Little East Fork	10	Wild	Ecology	Evanston	Summit
Little East Fork: Source to Mouth	9	Wild	Ecology	Evanston	Summit
Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	3	Recreational	History	Evanston	Summit

Wasatch-Cache NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
West Fork Smiths Fork: Source to Forest Boundary [1]	14	Wild (4 mi.); Scenic (10 mi.)	History	Mountain View	Summit (Utah) & Uinta (Wyoming)
East Fork Smiths Fork: Red Castle Lake to Trailhead	12	Wild	Scenic, Recreational, Wildlife, Ecology	Mountain View	Summit
Hayden Fork: Source to Mouth	12	Recreational	Scenic, Ecology	Evanston	Summit
Stillwater Fork: Source to Mouth [2]	14	Wild within Wilderness (6 Mi.); Scenic below Wilderness (8 Mi.)	Scenic, Ecology	Evanston	Summit
Ostler Fork: Source to Mouth	4	Wild	Ecology	Evanston	Summit
Left, Right, and East Forks Bear River: Alsop Lake and Norice Lake to near Trailhead	13	Wild	Scenic, Geology/ Hydrology, Ecology	Evanston	Summit
Boundary Creek: Source to Confluence with East Fork Bear River	4	Wild	Ecology	Evanston	Summit
High Creek: High Creek Lake to Forest Boundary [3]	7	Wild (4 miles); Recreational (3 mi.)	Ecology	Logan	Cache
Left Hand Fork Blacksmiths Fork: Source to Mouth	15	Recreational	Scenic	Logan	Cache
Logan River: Idaho State line to confluence with Beaver Creek	7	Scenic	Fish	Logan	Cache
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	Recreational	Scenic, Recreational, Geology/ Hydrology, Fish, Ecology	Logan	Cache
Beaver Creek: South Boundary of State Land to Mouth	3	Recreational	Fish	Logan	Cache
White Pine Creek: Source to Mouth [4]	1	Scenic	Fish	Logan	Cache
Temple Fork: Source to Mouth	6	Scenic	Fish	Logan	Cache
Spawn Creek: Source to Mouth	4	Scenic	Fish	Logan	Cache
Bunchgrass Creek: Source to Mouth	5	Scenic	Fish	Logan	Cache
Little Bear Creek: Little Bear Spring to Mouth	1	Scenic	Fish	Logan	Cache
Main Fork Weber River: Source to Forest Boundary	6	Scenic	Scenic	Kamas & Evanston	Summit
Middle Fork Weber River: Source to Forest Boundary	6	Wild	Scenic	Kamas	Summit
Beaver Creek: Source to Forest Boundary	6	Recreational	Recreational	Kamas	Summit
Provo River: Trial Lake to U35 Bridge	20	Recreational	Scenic, Recreational	Kamas	Summit
Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	5	Wild	Scenic	Ogden	Weber
Willard Creek: Source to Forest Boundary	4	Scenic	Scenic, Wildlife	Ogden	Box Elder

Wasatch-Cache NF Eligible River Segment	Miles	Classification	Outstandingly Remarkable Values	Ranger District	County
Red Butte Creek: Source to Red Butte Reservoir	3	Scenic	Ecology	Salt Lake	Salt Lake
Little Cottonwood Creek: Source to Murray City Diversion [5]	8	Recreational	Scenic, Geology/ Hydrology, Ecology	Salt Lake	Salt Lake
	267 Miles Total	Total by Classification: Wild - 16 Scenic - 14 Recreational - 9			

The following eligibility errors were discovered during scoping and are being corrected:

[1] West Fork Smiths Fork - The classification of the West Fork Smiths Fork segment was changed from 15 miles (Scenic) to 14 miles (Wild 4 mi. and Scenic 10 mi.) to reflect the lack of development within the stream corridor that is within the Wilderness boundary. This classification pattern is consistent with the classification of other stream segments on the North Slope of the Uintas that have sections classified as Wild in the Wilderness and Scenic below the Wilderness boundary.

[2] Stillwater Fork - The Stillwater Fork segment length changed from 12 miles (Wild 6 mi. and Scenic 6 mi.) to 14 miles (Wild 6 mi and Scenic 8 mi.) because the length was calculated with stream ending at the confluence with Main Fork, which was incorrect. The length is now correctly calculated to show the segment ending at the confluence with Hayden Fork.

[3] High Creek - The classification of the High Creek segment was changed from 7 miles (Wild) to 7 miles (Wild 4 mi. and Recreational 3 mi.), to reflect the level of development of roads within the stream corridor. High Creek was classified as Wild for the whole length. This classification did not reflect the existence of a road that runs parallel to the lower portion of the stream, therefore the classification was split at the Trailhead parking lot, where the portion upstream would remain classified as Wild and the portion of the segment below the Trailhead would be Scenic.

[4] White Pine Creek - The White Pine segment length was shortened from 6 miles Scenic to 1 mile Scenic to reflect the perennial conditions of the stream that supports the Fish ORV. The stream is intermittent above this point and does not support the Fish ORV upstream to White Pine Lake. This change was made after the conditions were field verified by the Fisheries Biologist.

[5] Little Cottonwood Creek - The Little Cottonwood Creek segment length was shortened from 10 miles to 8 miles to reflect the location where Little Cottonwood Creek begins at the confluence with Grizzly Gulch, the 10 miles segment extended to include an unnamed tributary that begins at Cecret Lake.

Table 3.2.2. Summary of eligible rivers, total miles, and number of classifications by forest.

National Forest	Total River Segment Miles	Total Number of Segments by Classifications		
		Wild	Scenic	Recreational
Ashley NF	325	12	9	3
Dixie NF	46	8	1	1
Fishlake NF	32	4	1	1
Manti-La Sal NF	157	3	4	5
Uinta NF	13	2	1	3
Wasatch-Cache NF	267	16	14	9
Total for National Forests in Utah	**840**	**45**	**30**	**22**

Readers should note that the study area boundaries displayed in Appendix A – Suitability Evaluation Reports, do not represent actual Wild and Scenic River boundaries, but the area of interest for eligible river segments. It should be noted that of the eligible rivers studied, 14 of the 86 river segments appear to include portions of private land, at the end of segments near the National Forest boundary. These typically short river stretches (¼ to 4 miles long) were included in the eligibility study as part of the river segment length because they brought the river segment to a logical terminus at a confluence with a larger stream, also contained the ORVs of the National Forest portion of the segment, or National Forest System land was located within ¼ mile of these segments. These lengths are also included in the tables found in

this suitability study. The magnitude of this effect is small, representing approximately 22 miles total over 14 segments, or less than 3 percent of the total mileage in the study.

The final decision will apply only to river segments located on National Forest System lands. The dashed lines on the individual river maps represent the approximate ¼ mile river corridor boundary of the river segment under study. If Congress chooses to add any of the suitable river segments to the National Wild and Scenic River System, Section 3(b) of the Wild and Scenic Rivers Act requires the establishment of detailed boundaries (an average of not more than 320 acres of land per river mile) within one year of designation or other date. At that time, the boundary would be adjusted to exclude private, State, or other Federal agency land located at the end or beginning of the river segment. Congress could include private lands (in holdings) within the boundaries of the designated river area; however, management restrictions would apply only to public lands.

3.3 Outstandingly Remarkable Values

For a river to be eligible for designation to the National System, the river, with its adjacent corridor, must have one or more outstandingly remarkable value (ORV). Appendix A – Suitability Evaluation Reports includes detailed information about the values determined to be outstandingly remarkable. Sections 3.3a to 3.3g describe how an ORV was arrayed in the alternatives and includes a general discussion of the effects of recommending a segment for designation or the effects on segments found not suitable.

During the determination of eligibility, National Forests in Utah used the eligibility criteria offered in the FSH 1909.12, Sec. 82.14a and the "Process and Criteria for Interagency Use" Interagency paper for Wild and Scenic River Review in The State of Utah (July 1996). The criteria are intended to set minimum thresholds to establish ORVs and are illustrative and not all-inclusive. The criteria include: Scenery, Recreation, Geology, Fish, Wildlife, Historic and Cultural, and Other Values. Section 3.3 is organized as follows: 3.3a Scenic Values, 3.3b Recreational Values, 3.3c Fish and Aquatic Habitat Values, 3.3d Wildlife Values, 3.3e Historic and Cultural Values, 3.3f Geologic and Hydrologic Values, and 3.3g Ecological Values.

3.3a Scenic Values

Introduction

The Scenic or Scenery ORVs are applied to river segments that contain the following: The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed, may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment. (FSH 1909.12, Sec. 82.14a) Scenic ORV descriptions have been reviewed and revised to ensure that the value occurs within the ¼ mile corridor.

Detailed information for Section 3.3a came from Appendix A – Suitability Evaluation Reports, Summary of Outstandingly Remarkable Values.

Affected Environment

Forty-six of the wild and scenic study areas (458 miles) possess outstandingly remarkable scenic values. The outstandingly remarkable scenic values are varied and are described in Appendix A – Suitability Evaluation Reports.

Table 3.3a.1 lists the segments with scenic ORVs, their mileage, whether or not the area is already wholly or partially within an area that offers some protections by other designations, like Wilderness, Research Natural Area (RNA), National Recreation Area (NRA) or National Geologic Area (NGA), and in which alternatives the segments were found suitable.

Table 3.3a.1. Eligible segments with a description of Scenic ORVs. (This information was provided by the Forests and can also be found in Appendix A – Suitability Evaluation Reports).

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
Ashley National Forest 24 segments of which 16 have Scenic ORVs.				
Ashley Gorge Creek	10	Wild	NRA	3
Ashley Gorge is located in an extremely rugged and steep canyon area, with the exception of short sections near the upper and lower ends of the segment, i.e., near the junction of the segment with the North and South Forks of Ashley Creek, and at the terminus near the "spring box" on land administered by the Bureau of Land Management. Steep slopes, rock outcrops, and a mosaic of conifers, aspen, cottonwoods and willows provide breathtaking scenery to those who venture on foot in the canyon.				
Black Canyon	10	Wild	No	3, 5
Black Canyon is located in both meadow and canyon environments, with lodgepole and aspen stands on adjacent side slopes. Black Canyon is a highly scenic canyon, with access limited to several undeveloped roads near the upper end of the canyon. The canyon is very similar in scenic beauty to the lower portion of Ashley Gorge. The canyon area is relatively isolated and inaccessible. A combination of open meadows, forested side slopes, colorful rock outcrops and steep gorge-like canyons, and small stringers of riparian vegetation provide striking diversity in the landscape. Numerous deciduous trees (aspen, maple, willow, etc., are located in the canyon bottom. Logging roads are found in the upper headwaters. Panoramic views of Ashley Valley exist from several locations within the canyon.				
East Fork Whiterocks River	4	Scenic	No	5, 6
East Fork of Whiterocks River runs through a lush riparian area of meadow vegetation for approximately half of its length. Small lakes and streams within scenic basins and meadow corridors dot the northwestern facing slopes adjacent to the river. The riparian areas, bogs, meadows and conifer stands provide seasonal variation in color throughout the year. Late spring, summer and fall flowers are found in meadow locations and the riparian vegetation changes to yellows and reds in the late fall months.				
Fall Creek	6	Wild	Wilderness	5
Wildflowers provide variation in color in the higher basins and meadows during mid- and late summer months. Seasonal variation in color occurs in the lower portions of the watercourses where small stands of Aspen and streamside riparian vegetation exist. Vegetation in the canyon bottoms has great diversity, is highly variable, and contributes to the outstanding scenery. The glacial bottoms in the main portion of the watercourses are in glacial canyon bottoms with wet meadows, springs and seeps with some inner gorges cut deep in the underlying quartzite bedrock. This unit type contains most of the larger glacial lakes in the Uinta Mountains, and the wet meadows resulted from the filling of former lakes. The watercourse serves as the corridor for primitive trails to the panoramic and strikingly beautiful lakes, meadows, cirque basins, and surrounding peaks and ridgelines in the headwaters. Backpackers and horse packers are attracted to this outstandingly beautiful scenery, with the season of use from late June to October**.**				
Green River	13	Scenic	NRA	3, 5, 6, 7
The Green River provides a unique up close and background view of steep and colorful cliffs that are intersected by slopes of various steepness and texture. The cliffs are either up close at the waters edge or off in the distance above the immediate river gorge. These views are contrasted with the view of Flaming Gorge Dam from below at the beginning of this river segment. The foreground view of the river is one of differing riparian vegetation at the water's edge that contrasts with more xeric vegetation as you move up the slopes along the river. The crystal clear water of the river provides a dramatic contrast to the red canyon walls and cliffs especially when the canyon straightens and the river can be viewed for an extended distance. Rock outcrops along the inner canyon rim seem to extend out over the river. The views of calm sections of the river are interrupted by the appearance of a disappearing river as one floats closer to a rapid and its drop in elevation. Large boulders in the river are also a special feature of the river. Cottonwoods and willows, along with other riparian vegetation, provide a change in the scenery as the seasons change. The contrast between winter snow, the clear bluish water, and the red cliffs is striking. Fall colors of cottonwoods, willows, aspen higher up on the slopes, and Ponderosa pine along the river contribute to dramatic scenery in the fall. Steep, vertical sandstone spires, escarpments of 400-800 feet (Organ Rock formation), deep gorges, and flat, narrow valley bottoms characterize this watercourse. Erosion has produced highly scenic rock outcrops and alcoves along the canyon walls. Views are expansive and unobstructed within the canyon. The Flaming Gorge Dam and the Little Hole National Recreation Trail (sections of natural trail with sections of boardwalks extending out into the river) add to the dramatic scenery of the Green River. The dam and its related power generation structures provide a unique visual experience. On rare occasions when jet tube water releases from Flaming Gorge Dam occur, the experience is world class.				
Middle Main Sheep Creek	5	Recreational	NGA	3, 5
Middle Main Sheep Creek is located within the Sheep Creek Canyon National Geological Area. Steep canyon walls, color variations in geologic features and formations, deciduous trees, riparian vegetation, and forested side slopes attract thousands of regional, national and international visitors to this segment. The Sheep Creek Cave located adjacent to the creek is also an				

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
attraction to many visitors.				
Middle Whiterocks River	9	Wild	No	6
Middle Whiterocks River is considered pristine in character. There are no roads, trails or water diversions in the canyon bottom for the entire length. Developed trails and roads are visible at various points along the river, but are located at outside of the river corridor. Sights and sound of human activity are overcome by both distance and the sound of the cascading river. The scenic Cliff Lake falls is within the river corridor. The canyon bottom is extremely rugged, with small falls, pools, steep forested side slopes, side canyons, and many rock outcrops. Small areas of riparian vegetation provide seasonal variation in color.				
Oweep Creek	20	Wild	Wilderness	5
Cirque basins, broad glacial valleys, lakes, numerous meadows and V-shaped canyons are the principal scenic attractions in the corridor of the watercourse. The "Scenic" value is well known, due to the popularity of the Moon Lake Reservoir area, and heavily used trails leading to the High Uintas Wilderness. The watercourse exhibits striking scenic views, especially in the upper headwaters where numerous alpine lakes, glaciated cirques and basins, and meadows are found. Seasonal variation in color is limited to the lower portion of the watercourse where large stands of Aspen and streamside riparian vegetation exist. Wildflowers provide some variation in color in the higher basins and meadows during mid- and late summer months. Similar to other wilderness areas, the streams serve as the corridors for primitive trails to the outstandingly scenic lakes, basins and meadows in the headwaters.				
Reader Creek	6	Scenic	No	3, 5, 6
The river, lakes, and streams cross through a striking landscape of basins, meadows, ridgelines and peaks. Riparian areas and meadows provide seasonal variation in color during late fall months. There is exceptional contrast in vegetative cover with the high ridges that parallel both sides of the river and tributary. The corridor offers panoramic vistas of the peaks ("bollies") of the High Uintas backcountry, including cirques, lakes, and small streams.				
South Fork Ashley Creek	15	Scenic	No	*
Lakeshore Basin is part of the upper headwaters of this segment and is a highly scenic backcountry area. Forested slopes, glaciated cirques and basins, lateral moraines, rock outcrops, steep escarpments, alpine meadow, and small lakes are located adjacent to this beautiful stream. Spruce, fir, other conifer stands, and ground vegetation provide scenic contrast with the ridges, meadows, lakes and streams in the watercourse corridor. Outstanding views of Leidy and Marsh Peaks exist along the watercourse corridor. Lush areas of riparian areas exist in the lower part of the segment as it passes through Horseshoe and Hicks Parks. Vegetative color changes occur during spring and early summer flower bloom, and during the fall as the leaves change color in small stands of aspen and riparian vegetation.				
Upper Lake Fork River, including Ottoson and East Basin Creeks	35	Wild	Wilderness	5
Cirque basins, broad glacial valleys, lakes, numerous meadows and V-shaped canyons are the principal scenic attractions in the corridor of the watercourse. The "Scenic" value is well known, due to the popularity of the Moon Lake Reservoir area, and heavily used trails leading to the High Uintas Wilderness. The watercourse exhibits striking scenic views, especially in the upper headwaters where numerous alpine lakes, glaciated cirques and basins, and meadows are found. Seasonal variation in color is limited to the lower portion of the watercourse where large stands of Aspen and streamside riparian vegetation exist. Wildflowers provide some variation in color in the higher basins and meadows during mid- and late summer months. Similar to other wilderness areas, the streams serve as the corridors for primitive trails to the outstandingly scenic lakes, basins and meadows in the headwaters.				
Upper Rock Creek	21	Wild	Wilderness	5
The watercourse serves as the corridor for primitive trails to the panoramic and strikingly beautiful lakes, meadows, cirque basins, and surrounding peaks and ridgelines in the headwaters. Wildflowers provide variation in color in the higher basins and meadows during mid- and late summer months. Seasonal variation in color occurs in the lower portions of the watercourses where small stands of aspen and streamside riparian vegetation exist. Vegetation in the canyon bottoms has great diversity, is highly variable, and contributes to the outstanding scenery.				
Upper Whiterocks River	4	Scenic	No	5, 6
The surrounding ridges, basins and meadows provide a striking and beautiful background to the segment. Although seasonal color changes are limited to the riparian areas along the river, there is excellent diversity in vegetation types (conifers, riparian, meadows, bogs), which provides outstanding diversity in the landscape. There are outstanding views of the higher peaks ("bollies") of the Uinta Mountains and High Uinta Wilderness. Tree covered slopes, rock outcrops, meadows, lakes, and small streams provide diversity of view and setting. Rose Peak is a significant feature in the background, along with the ridgelines of the High Uintas backcountry. There is also a striking contrast between vegetative cover and rocky ridges.				
Upper Yellowstone Creek, including Milk Creek	33	Wild	Wilderness	5, 6
There are outstanding scenic views of waterfalls and forested slopes along the stream corridors, along with alpine lakes, glaciated cirques and basin, and meadows in the upper headwaters. The Yellowstone's headwaters collect from the alpine cirques along the crest of the Uinta Mountains. The river then descends through one of the most picturesque basins in the Uintas. Small waterfalls and cascades abound – often following one after another like a staircase. Beaver dams form deep pools throughout the canyon. Wildflowers and lush riparian areas stretch along the length of the waterways. The highest point in Utah (Kings Peak) is located north of the headwaters of Yellowstone Creek. Seasonal variation in color is limited to the lower portion of the segment where large stands of aspen and streamside riparian vegetation exist. Wildflowers provide variation in color in the higher basins and meadows during mid- and late summer months.				
West Fork Rock Creek, including Fish Creek	13	Wild	Wilderness	5
The watercourse serves as the corridor for primitive trails to the panoramic and strikingly beautiful lakes, meadows, cirque				

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
basins, and surrounding peaks and ridgelines in the headwaters. Wildflowers provide variation in color in the higher basins and meadows during mid- and late summer months. Seasonal variation in color occurs in the lower portions of the watercourses where small stands of aspen and streamside riparian vegetation exist. Vegetation in the canyon bottoms has great diversity, is highly variable, and contributes to the outstanding scenery. The glacial bottoms in the main portion of the watercourses are in glacial canyon bottoms with wet meadows, springs and seeps with some inner gorges cut deep in the underlying quartzite bedrock. This unit type contains most of the larger glacial lakes in the Uinta Mountains, and the wet meadows resulted from the filling of former lakes. Backpackers and horse packers are attracted to this outstandingly beautiful scenery, with the season of use from late June to mid-October.				
West Fork Whiterocks River	11	Scenic	No	5, 6
The river, crosses through a striking landscape of basins, meadows, ridgelines and peaks. Riparian areas and meadows provide seasonal variation in color during late fall months. There is exceptional contrast in vegetative cover with the high ridges that parallel both sides of the river and tributary. The corridor offers panoramic vistas of the peaks ("bollies") of the High Uintas backcountry, including cirques, lakes, and small streams along the corridor length.				
Dixie National Forest 10 segments of which 9 have Scenic ORVs				
Death Hollow Creek	10	Wild	Wilderness	3, 5, 6, 7
Death Hollow Creek is a small creek that runs down a broad canyon in the Box-Death Hollow Wilderness know as "Death Hollow". The upper headwaters of Death Hollow Creek are located in open ponderosa pine stand with a Manzanita understory that is surrounded by thousand foot cliffs. The upper reach of the river typically is ephemeral with flows typically occurring December through May, and following localized late summer thunderstorms. The lower reaches of the river flow through the Escalante Monocline and into Navajo Sandstone where the canyon narrows into a slot canyon and slickrock pockets catch and hold water year-round.				
East Fork Boulder Creek	3	Wild	No	5
This segment is located at the base of the ledge dominated face of the Aquarius Plateau known as the Boulder Top. The upper reaches of the creek are dominated by wet marshy meadows speckled with small beaver ponds, highlighted with a band of aspen trees. The lower reaches of the creek are located in a mixed conifer forest that boasts large Engelmann spruce and Douglas-fir trees. The presence of mule deer, black bear, and large herds of elk enhance the corridor's scenic qualities.				
Mamie Creek	2	Wild	Wilderness	3, 5,7
Mamie Creek provides unique scenic views as it carves through the Navajo Sandstone. A geological mixture of shapes, textures, and colors that are complimented by waterfalls and scenic pools creates the unique scenic value.				
North Fork Virgin River	1	Scenic	No	3, 5, 6, 7
The North Fork of the Virgin River begins at Cascade Falls, a spring that is fed by Navajo Lake through underground lava tubes and limestone solution channel. The river flows down the south face of the Markagunt Plateau through high elevation landscapes of Jurassic and Cretaceous sediment deposits, with extensive viewsheds and examples of stream erosion in Utah including views of Zion National Park. The upper portions of the watershed are located amidst the pink cliffs of the Virgin River rim. The stream corridor supports a diverse riparian plant community. Near Cascade Falls the watershed supports an abundance of bristlecone pine trees.				
Pine Creek	8	Wild	Wilderness	3, 5, 7
This small, fast running creek is predominantly a step-pool system that carves its way through the Escalante Monocline and into Navajo Sandstone. The upper reaches of the creek are particularly scenic with steep cliffs ranging from 800 to 1,200 feet tall that descend to the creek's edge which is vegetated with large spruce and ponderosa pine trees. The lower reaches transition into sandy benches thick with willows and ponderosa pines, but maintain the spectacular cliff walls.				
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	No	*
In common with other segments in this landscape, the area offers dramatic contrasts of color, texture, and slope which are unique to southern Utah redrock country. As the segment leaves the GSENM and extends into the Fishlake National Forest it become broader and loses some of the narrowness and dramatic contrasts found on the lower stretches.				
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	No	5
The area offers dramatic contrasts of color, texture, and slope common to other similar drainages in the surrounding landscape. This short segment (1.6 miles) of riparian corridor on the Fishlake National Forest parallels Cottonwood Canyon, yet is broader and more intermittent. The east facing escarpment of the mesa to the west, which the Long Neck Trail (non-motorized) traverses towards the north, is a significant visual feature as seen from this limited segment. The scenic value of the area is less than that found lower in the drainage on the GSENM.				
Steep Creek (4 miles in Alt. 3) – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	No	3, 5
The area offers dramatic contrasts of color, texture, and slope as is common to other segments of this and other similar drainages which have carved the associated landscape. This segment of riparian corridor extends over 7 miles into the Fishlake National Forest. The area in general as associated with the Monument is regionally, nationally, and even internationally recognized as an important scenic attraction.				
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	No	3, 5
As is common to adjoining segments of this and other similar drainages in the surrounding landscape, the area offers dramatic				

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
contrasts of color, texture, and slope. This relatively short segment (2.1 miles) of riparian corridor from the confluence with Stair Canyon to the Forest boundary down stream is paralleled by Forest roads (#147 and #023) for its entire length. Associated human related activity is apparent. The gulch is nearly a mile wide at the Forest boundary with few features that compare with other segments down stream on the GSENM lands.				
Fishlake National Forest 5 segments of which 0 have Scenic ORVs				
Manti-La Sal National Forest 10 segments of which 5 have Scenic ORVs				
Hammond Canyon	10	Scenic	No	3, 6
Hammond Canyon possesses an excellent combination of vegetative and geologic contrasts. Ponderosa pine and Douglas-fir that are well developed in the upper reaches contrast with the white cliffs. This massive Wingate sandstone uniquely contrasts with ponderosa pine. Exposed brownish red Moenkopi Formation sits atop the white Cedar Mesa Sandstone providing an additional color contrast. Geologic features are abundant including cliffs with more than 1,000 feet of relief and many free standing pinnacles.				
Huntington Creek	19	Recreational	No	4, 6
The canyon area is narrow, with a willow/riparian bottom and tree covered side slopes. The corridor of the creek exhibits rich diversity in vegetation and geology. The canyon areas and side canyons are capped with sandstone formations. The colorful geology, aspen and mountain brush on south facing slopes, conifer cover on north facing slopes, lush riparian vegetation along crystal clear streams, and rock outcrops and ledges all provide outstanding scenery in canyon environments.				
Lower Left Fork of Huntington Creek	5	Scenic	No	4, 6
The colorful geology and aspen, mountain brush, conifers, and riparian vegetation provide an outstanding scenic canyon environment. The north facing slopes are covered with a combination of conifer and aspen. The south facing slopes have splashes of conifer and aspen, but mostly mountain brush and sagebrush.				
Mill Creek Gorge	3	Wild	RNA	5
Riparian vegetation covers the stream banks. Rock outcrops and ledges add variety and a rugged beauty to this canyon.				
Roc Creek	9	Wild	No	3, 5
Sinbad Ridge forms the north wall of the 1,500-foot gorge of Roc Creek. Green forests of Douglas-fir and ponderosa pine frame the brilliant red walls of the canyon. A pinyon-juniper forest covers the mesa above the canyon. Faulting and erosion have created ledges, benches and spire-like sandstone columns along the cliff areas of the gorge and along Sinbad Ridge				
Uinta National Forest 4 segments of which 2 have Scenic ORVs				
North Fork, Provo River	1	Wild (9 mi.); Recreational (4 mi.)	Wilderness	3, 6
The stream and features in the entire viewshed contribute significantly to the overall scenic quality of the segment. The stream is steep, traversing from its alpine headwaters on Mt. Timpanogos through the forest below. There is a wide variety of vegetation in the corridor and along the stream including alpine grasses, forbs and wildflowers in the upper reaches; to riparian cottonwood, oak/maple, Douglas-fir, spruce-fir, and aspen forests with diverse grass, forb and wildflower understories at the lower reaches. Similar vegetation communities and diversity can be found both within the corridor and on other mountain slopes adjoining the corridor and in the vicinity. In the fall, this diversity of vegetation communities is especially attractive with its mosaic of yellow, orange, red, browns and greens. This fall color attracts thousands of viewers to the Aspen Grove (Mt. Timpanogos) National Recreation Trail and American Fork Scenic Byway which cross through the corridor. Mt. Timpanogos is also widely known for its wild flowers. Each summer thousands of visitors traverse the Mt. Timpanogos National Recreation Trail to view wildflowers in the meadows and on the slopes in, adjacent to, and above the corridor. Lower reaches of the stream are intermittent, but the intermittent water still supports mesic plants such as cottonwood, willow, grasses, forbes and wildflowers which contribute to the scenic diversity. The upper half or so of the segment is perennial and is characterized by steep cascading runs and several short waterfalls. These are visible in several places from the stream and trail below. The Mt. Timpanogos National Recreation Trail passes under or next to some of these, which contributes greatly to the aesthetic and recreational appeal. The stream plunges from the heights of Mt. Timpanogos through a glacial cirque and into the glacial valley below. The exposed geologic strata and steep cliffs along the stream, in the corridor, and on nearby mountain slopes contribute to the scenic diversity and quality of the scenery. The summit of Mt. Timpanogos, located outside the corridor, provides a not too distant majestic scenic focal point for viewers located along the stream and trail. This combination of features and access are unusual in northern Utah.				
South Fork, American Fork River	1	Wild (1.1 mi.); Recreational (0.3)	Wilderness	5
The stream course and features in the entire viewshed contribute significantly to the overall scenic quality of the segment. The stream course is steep, traversing from its alpine headwaters on Mt. Timpanogos through the forest below. There is a wide variety of vegetation in the corridor and along the stream including alpine grasses, forbs and wildflowers in the upper reaches; to riparian cottonwood, oak/maple, Douglas-fir, spruce-fir, and aspen forests with rich grass, forb and wildflower understories at the lower reaches. Similar vegetation communities and diversity can be found both within the corridor and on other mountain slopes adjoining the corridor and in the vicinity. In the fall, this diversity of vegetation communities is especially attractive with its mosaic of yellow, orange, red, browns and greens. This fall color attracts thousands of viewers to the American Fork Scenic Backway which crosses the very lower end of the corridor. Mt. Timpanogos is also widely known for its wild flowers. Each summer thousands of visitors traverse the Giant Staircase-Timpooneke Trail, a portion of a National Recreation Trail, through the corridor to view wildflowers found on the alpine meadows and slopes in, adjacent to, and above the corridor. The stream				

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
though small, is characterized by steep cascading runs and short waterfalls. Scout Falls, located at the very upper end of this segment, is a well-know and relatively popular local attraction. The Giant Staircase-Timpooneke Trail is generally not located immediately adjacent to the stream, but does lie within and extends the length of the corridor. Distant (but still within the corridor) views of the stream and falls contribute to the aesthetic and recreational appeal of this very heavily used trail. The stream descends from the heights of Mt. Timpanogos through a glacial cirque and valley. The exposed geologic strata and steep cliffs along the stream, in the corridor, and on nearby mountain slopes contribute to the scenic diversity and quality of the scenery. The summit of Mt. Timpanogos, located outside the corridor, provides a not to distant majestic scenic focal point for the scenery observed from the stream and trail. The Inventory rated this segment as scenic, regionally significant, with a high value in diversity of view, special features and seasonal variation. Cultural modification is highly appropriate.				
Wasatch-Cache National Forest 33 segments of which 14 have Scenic ORVs				
East Fork Smiths Fork	12	Wild	Wilderness	3, 5
This segment originates from Red Castle Lake, a visually spectacular setting in the High Uintas wilderness. As the stream traverses from this alpine environment a rich diversity is created by intermixing of vegetation types found in the broad riparian areas of extensive willow stands bordered by conifers. At lower elevations the stream channel flows through narrow valley bottoms providing a striking visual contrast to basin views. The view of the Red Castle Lakes area may be the most spectacular in the Uintas. It is often photographed for calendars and large-format books.				
Hayden Fork: Source to Mouth	12	Recreational	No	3, 6
The diversity of views in the Hayden Fork corridor is of high value, with varied riparian and alpine scenes present which are accessible to a large number of viewers. Fall colors offered by deciduous riparian vegetation and adjacent upland aspen provide high value seasonal variation.				
Henry's Fork	12	Wild	Wilderness	3, 5, 6
Henrys Fork Lake nestled in an alpine mountain basin in the heart of the High Uintas Wilderness marks the origin of this segment. The broad riparian areas mix with the spruce-fir parklands to offer a striking alpine view to visitors. Lodgepole pine and aspen and scattered alpine meadows found lower on the segment create an exceptional riparian environment as the river descends. At times hikers on the nearby trail are afforded an especially attractive view looking down on the river. Though outside of the corridor, breathtaking views of Gilbert Peak and Kings Peak complement the values found in the corridor.				
Left Fork South Fork Ogden River	5	Wild	No	5
The canyon through which Left Fork South Fork Ogden River flows has lush vegetation with visually striking rock outcrops throughout the segment. Its undisturbed character contributes to the visual quality. Cascading water creates pleasing views.				
Left Hand Fork Blacksmiths Fork	15	Recreational	No	*
The scenery provides a mosaic of colors and textures year-round. This value, when compared to nearby adjacent drainages and areas can be considered outstandingly remarkable.				
Left, Right, and East Forks Bear River	13	Wild	Wilderness	3, 6
This same glacial action combined with the anticlinal uplift of the general Uinta Range has produced a scenic display in these drainages that is remarkable. Views of the Cathedral, Mt. Beulah, and the waterfalls near the confluence of the Left and Right Hand Forks are special when compared to others in the range. The scenery value along these forks is remarkable and outstanding.				
Little Cottonwood Creek	8	Recreational	Wilderness	3
Topographic relief is great, and vegetation diversity is very good. Scenes in the upper portion of the segment are very high quality. This kind of valley scene is unique locally and is considered one of the more spectacular viewsheds in the area. Several viewpoints within the corridor offer a spectacular diversity of view. Scenic views from the stream to the rugged cliff faces are very striking.				
Logan River: Beaver Creek Guinavah-Malibu Campground	19	Recreational	No	3, 6
Scenery along the segment has been recognized as outstanding by the creation of the National Scenic Byway for Highway 89. This scenery is diverse and variable, a scenic smorgasbord of this part of the Wasatch Range.				
Main Fork Weber River	6	Scenic	No	*
Visitors to the river corridor enjoy varied scenery that range from its source in a glacial basin to a densely timbered forest with steep and rugged canyon walls to lower elevations riparian communities of cottonwoods and alders dotted by creek-side meadows. The variety of vegetation and steep cliffs capturing a high energy mountain stream offers memorable views. While outside the corridor, from the upper reaches of the stream, vistas of Bald Mountain and Reids Peak can be seen that complement the scenic values present in the stream corridor.				
Middle Fork Weber River	6	Wild	No	5
The river corridor offers a pristine visual appeal with a variety of views throughout the corridor. Seasonal variations enhance the scenic quality in the corridor. Along the route lush meadows and open woodlands enhance the attractiveness of the corridor. A hidden waterfall cascades 15 feet to a large pool contributing to the overall scenic quality of the creek-side environment. Openings in the vegetation allow scenic views down valley. Outside of the corridor striking views of rugged country are offered from the upper reach of this stream near Mt. Watson.				
Provo River: Trial Lake to U35 Bridge	20	Recreational	No	3, 6
While resource damage is still evident from the Trial Lake Dam failure, views from the corridor are still very pleasing and enjoyable. Two outstanding scenic views are located within the corridor. The Provo River Falls is an unusual feature that is particularly memorable. Autumn views along the river are spectacular.				

Eligible Segment	Miles	Classification	Other Designations	Found Suitable in Alternatives
Stillwater Fork: Source to Mouth	14	Wild (6.1 Mi.); Scenic (8 Mi.)	Wilderness	3, 6, 7
The segment originates in one of the many glacier-carved valleys at the base of the central spine of the Uinta Mountains. Spruce-fir krummholz and alpine meadows found at its headwaters in the upper cirque basin give way to lodgepole and aspen forests. The Stillwater is known for its extensive riparian and meadowland communities. Lower on the segment outside of wilderness the creek flows through Christmas Meadows, a pleasant, open grassland. The diversity of views along its entire length contributes to the scenic value. The picturesque view along the Stillwater Fork and its nearby surrounding landscape is regionally recognized as one of the best in Northern Utah. Outside of the corridor views of the high elevations of the Uintas complement the setting and are frequently painted and photographed.				
West Fork Blacks Fork	12	Wild (8 Mi.); Scenic (3.9 Mi.)	Wilderness	3, 5
Wide meadows in a broad alpine valley mark the beginning of the segment. The segment offers a variety of scenes along its length with meadows, conifer forests and aspen communities. The pleasing setting is enjoyed by hikers of the West Fork Blacks Fork Trail. Outside of the corridor there are stunning views of the High Uintas enjoyed by photographers, hikers, and artists alike. The scenic values of the stream are outstandingly remarkable.				
Willard Creek	4	Scenic	No	3, 5
The canyon through which Willard Creek flows has dramatic topographic relief. It is visually striking. The two waterfalls present create a memorable focal point.				

* Segment(s) only occur in Alternatives 1 and 2

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3a addresses one issue:

> Issue 4 – Designation offers long-term protection of resource values. The measurement indicator for scenic values is miles of river by Wild, Scenic, and Recreational classification and analysis of the impacts to the ORVs by river.

Table 3.3a.2 summarizes the effects showing miles of river segments with scenic ORVs found suitable in each alternative by classification.

Table 3.3a.2. Miles of segments with scenic ORVs found suitable by alternative and classification.

Segments with Scenic ORVS		Alternatives						
		1	2	3	4	5	6	7
Total Segments	46	0	0	24	2	31	19	6
Total Miles	458	0	0	220	24	290	212	43
Recreational Miles	101	0	0	70	19	7	70	0
Scenic Miles	90	0	0	42	5	61	82	22
Wild Miles	267	0	0	108	0	222	60	21

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification and scenic ORVs. Refer to Table 3.1.2 for specifics on interim management. Scenic resources will be managed by Forest Plans, including the Scenery

Management System / Visual Management System. Scenery may be adversely affected by the projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant). If these projects were built they could dramatically change a segments landscape and free flowing character.

Alternative 2 – No rivers recommended.

Under this alternative, a determination would be made that all 86 segments (840 miles) are determined not suitable and released from Wild and Scenic River interim protection. Protection of river values would continue to be managed by the standards provided in the underlying Forest Plans for the area, which can be amended as needs emerge, changing visual/scenery standards/objectives for the segments. Choosing this alternative would not in itself initiate any changes to forest scenic quality nor would it provide any additional protection for scenic values on the forest.

Over time, depending on area management, large-scale projects like dams, water projects and other activities such as timber harvest and road building could be approved for some segments, affecting scenic quality. In the case of reservoirs, if developed on rivers such as Huntington Creek, and Left Hand Fork of Huntington Creek, the visual change would be dramatic. The change would be from a moving river and associated canyon and riparian areas, to a flat water reservoir. Aesthetically, both settings can be very attractive, but the landscape character is quite different. A reservoir also would introduce additional elements into the landscape such as the dam structure itself, powerhouse, power lines, roads, parking areas, boat ramps and lighting. Many of these elements can be planned to harmonize with the natural setting, but the built environment associated with reservoirs could be apparent.

Many segments are not affected by water development projects or other large-scale activities and here scenery will generally remain the same. Segments would be managed as per Forest Plan Scenic Integrity Objectives/Visual Quality Objectives. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, the approximately 366 miles of segments which are located in Wilderness and Research Natural Areas will generally remain unaffected.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

Under Alternative 3, 24 rivers segments with scenic ORVs (220 miles) would be recommended for designation. Those segments found suitable for wild and scenic designation would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality or ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and ORVs. Those segments with scenic ORVs would be managed to protect scenery. Segments designated in Wilderness or other special legislative management prescription would continue to carry those management guidelines, along with Wild and Scenic River Act and comprehensive river management plan prescriptions.

The 22 segments (238 miles) with scenic ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects on scenery as discussed in Alternative 2 would apply. Eight of the 22 segments are wholly or partially in designated Wilderness, Research Natural Area, National Recreation Area, or National Geologic Area and will generally remain unaffected (see Table 3.3a.1). Two of the 22 segments determined not suitable have proposed water projects on them which would change current scenic qualities, as outlined in Table 3.12.5. Under this

alternative, most planned water projects might be able to move forward, and a change in scenery is expected as these projects are developed.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

Under this alternative, two segments with scenic ORVs (24 miles) would be recommended as suitable for designation. Those segments found suitable for wild and scenic designation would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis), and could be congressionally designated. Congressional action would require a comprehensive river management plan be developed within three years of designation. Those segments with scenic ORVs would be managed to protect scenery.

The 44 segments (434 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects on scenery as discussed in Alternative 2 would apply. Twenty-one of the 44 segments are wholly or partially in designated Wilderness, Research Natural Area, National Recreation Area, or National Geologic Area and will generally remain unaffected. None of the 44 segments determined not suitable have reasonably foreseeable water projects on them which would change current scenic qualities as these projects are developed (see Table 3.12.7).

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

Thirty-one segments with scenic ORVs (290 miles) would be found suitable. The effects on scenery are discussed in Alternative 3.

The 15 segments with scenic ORVs (168 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on scenery as discussed in Alternative 2 would apply. Five of the 15 segments are wholly or partially in designated Wilderness, Research Natural Area, National Recreation Area or National Geologic Area and will generally remain unaffected. Under this alternative, two reasonably foreseeable water projects would be able to move forward, and a change in scenery is expected as these projects are developed (See Table 3.12.8).

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In Alternative 6, 19 segments with scenic ORVs (212 miles) would be found suitable and effects on scenery as discussed in Alternative 3 would apply.

The 27 segments with scenic ORVs (246 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on scenery as discussed in Alternative 2 would apply. Fourteen of these 27 segments are wholly or partially in designated Wilderness, Research Natural Area, National Recreation Area, or National Geologic Area and will generally remain unaffected. In this alternative, no reasonably foreseeable water projects would be able to move forward, and thus a change in scenery would not be expected (See Table 3.12.9).

Alternative 7 – Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In Alternative 7, six segments with scenic ORVs (43 miles) would be found suitable and effects on scenery as discussed in Alternative 3 would apply.

The 40 segments with scenic ORVs (415 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on scenery as discussed in Alternative 2 would apply. Sixteen of these 40 segments are wholly or partially in designated Wilderness, Research Natural Area, National Recreation Area, or National Geologic Area and will generally remain unaffected. In this alternative, two reasonably foreseeable water projects would be able to move forward, and a change in scenery is expected if these projects are developed (See Table 3.12.9).

3.3b Recreational Values

Introduction

The Recreational ORV is applied to river segments that contain the following: River related opportunities include, but are not limited to, sightseeing, interpretation, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. The river may provide settings for national or regional usage or competitive events. (FSH 1909.12, Sec. 82.14a).

Recreational ORVs represent opportunities that apply to river segments that are popular enough to attract visitors from throughout or beyond Utah's boundaries or are unique or rare in Utah or nationally.

This section discusses the affected environment and environmental impacts on outstandingly remarkable recreation values. Refer to Section 3.8 for a description of impacts on recreation in general.

Detailed information for Section 3.3b came from Appendix A – Suitability Evaluation Reports, Summary of Outstanding Remarkable Values.

Affected Environment

Twenty-three, or 180 miles, of the 86 eligible river segments under study possess outstandingly remarkable recreational values. These ORVs are significant or unique regionally, in Utah, and/or a national scale.

Table 3.3b.1 lists the segments with Recreation ORVs, their mileage, whether or not the area is already wholly or partially within an area that offers some protections by other designations like Wilderness, National Recreation Area (NRA), or National Geologic Area (NGA), Research Natural Area (RNA), and in which alternatives the segments were found suitable.

Table 3.3b.1. Eligible segments with a description of the Recreation ORVs. (This information was provided by the forests and can also be found in more detail in Appendix A – Suitability Evaluation Reports).

Eligible Segment	Miles	Classification	Other Designation	Found Suitable in Alternatives
Ashley National Forest 24 segments of which 5 have Recreational ORVs				
Green River*	13	Scenic	NRA	3, 5, 6, 7
Year round world class fishing- blue ribbon fishery, fish density high, large sized fish and size continuous flow for a variety of boating such as rafting, kayaking, canoeing, etc, trails, access to Flaming Gorge/Uintas National Scenic Byway, photography, picnicking, scenic. Recreation facilities include: boat ramps, parking areas and restrooms, overlooks, trails.				

Eligible Segment	Miles	Classification	Other Designation	Found Suitable in Alternatives
Lower Main Sheep Creek	4	Recreational	NRA	3, 5
Flaming Gorge National Scenic Byway parallels portions of the segment, Kokanee salmon spawning, easy access, fishing, hiking, and camping. Recreation facilities include: developed campgrounds, trails, interpretive sites.				
Reader Creek	6	Scenic	No	3, 5, 6
Outstanding backcountry scenery, solitude, fishing, backpacking, recreational stock use, deer and elk hunting, snowmobiling. Recreation facilities: trails and stream trail crossings.				
Upper Whiterocks River	4	Scenic	No	5, 6
Scenic, fishing, hunting, horseback riding driving for pleasure, hiking and dispersed camping. Recreation facilities: trailhead parking, trails, road bridge.				
West Fork White Rocks River	11	Scenic	No	5, 6
Outstanding backcountry scenery, solitude and fishing. Backpacking, recreation stock use, deer and elk hunting and snowmobiling. Access to High Uintas Wilderness. Recreation facilities: Developed trailhead, trail, and foot bridges.				
Dixie National Forest 10 segments of which 9 have Recreational ORVs				
Death Hollow Creek	10	Wild	Wilderness	3, 5, 6, 7
Scenery, primitive recreation/hiking, solitude. Recreation facilities: none.				
East Fork Boulder Creek	3	Wild	No	5
Scenery, fishing, hunting, hiking. Recreation facilities: one trail.				
Mamie Creek	2	Wild	Wilderness	3, 5, 7
Scenery, primitive recreation, hiking, swimming, rock climbing, advanced navigations skills. Recreational facilities: none.				
North Fork Virgin River	1	Scenic	No	3, 5, 6, 7
Scenery, water fall, hiking, sightseeing, trail access. Recreation facilities: trail, viewing platform.				
Pine Creek	8	Wild	Wilderness	3, 5, 7
Scenery, hiking through box canyon along creek. Recreation facilities: trail.				
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	No	**
Scenery, hiking, back packing, steep winding canyon provides solitude and primitive experience. Recreation facility: trail near-by.				
Slickrock Canyon– (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	No	5
Scenery, steep winding canyon provides solitude and primitive recreation experience. Hiking and backpacking. Recreation Facilities: trail near-by.				
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	No	3, 5
Scenery, steep winding canyon provides solitude and primitive recreation experience. Hiking and backpacking. Recreation Facilities: trail near-by.				
The Gulch– (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	No	3, 5
Scenery, steep winding canyon provides solitude and primitive recreation experience. Hiking and backpacking. Recreation Facilities: non system trail near-by, forest roads.				
Fishlake National Forest 5 segments of which 2 have Recreational ORVs				
Corn Creek	2	Scenic	No	**
Fishing, hiking, horseback riding, vehicle access, camping, springs. Recreation facilities: trail.				
Salina Creek	7	Wild	No	5
Remote, expert level fishing. Recreation facilities: trail near-by.				
Manti-La Sal National Forest 10 segments of which 1 has Recreational ORVs				
Huntington Creek*	19	Recreational	No	4, 6
Scenery, variety of recreation opportunities such as camping, fishing-blue ribbon fishery, hiking, horseback riding, all terrain vehicle use, driving for pleasure, rock climbing, cross country skiing, adjacent to The Energy Loop: Huntington and Eccles Canyons National Scenic Byway. Recreation facilities: trail, visitor center, forest roads.				
Uinta National Forest 4 segments of which 1 has Recreational ORVs				
Fifth Water Creek	8	Scenic	No	3
Hot springs are major attraction. Hiking, biking, dispersed camping, hunting, fishing and motorcycle riding. Recreation facilities: trail.				
Wasatch-Cache National Forest 33 segments of which 5 have Recreational ORVs				
Beaver Creek: Source to Forest Boundary	6	Recreational	No	6

Eligible Segment	Miles	Classification	Other Designation	Found Suitable in Alternatives
Variety of activities all seasons, easy access, Mirror Lake Scenic Highway parallels, camping, hiking fishing, cross country skiing, ATV trail. Recreation facilities: developed campgrounds & picnic area, trails.				
East Fork Smiths Fork: Red Castle Lake to Trailhead	12	Wild	Wilderness	3, 5
Scenery, primitive setting, easy access, hiking, horseback riding, fishing. Recreation facilities: trail.				
Henry's Fork: Henry's Fork Lake to Trailhead	8	Wild	Wilderness	3, 5, 6
Scenery, primitive setting, easy access, hiking, horseback riding, fishing, shortest/easiest access to Kings Peak. Recreation facilities: trail.				
Logan River: confluence with Beaver Creek to bridge at Guinavah-Malibu Campground*	19	Recreational	No	3, 6
Scenery, fishing-Blue Ribbon Fishery, tubing, kayaking, hiking, rock climbing, along Logan Canyon National Scenic Byway, easy access. Recreational facilities: developed campgrounds, trailheads, trails.				
Provo River: Trial Lake to U35 Bridge	20	Recreational	No	3, 6
Scenery, fishing, developed and dispersed camping, hiking, horseback riding, hunting, ATV trail use, along the Mirror Lake Scenic Byway, trailheads and viewing areas. Recreation facilities: developed campgrounds, picnic areas, overlooks, trailheads and trails, interpretive sites.				

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery.
**.Segment(s) only occur in Alternatives 1 and 2

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3b addresses one issue:

Issue 4 – Designation offers long-term protection of resource values. The measurement indicators are: miles of river by Wild, Scenic, and/or Recreational classification and the analysis of the impacts to Recreational ORVs by river.

Table 3.3b.2. Miles of segments with Recreation ORVs found suitable by alternative and classification.

Segments with Recreational ORVS		Alternatives						
		1	2	3	4	5	6	7
Total Segments	23	0	0	14	1	17	11	5
Total Miles	180	0	0	120	19	104	117	34
Recreational Miles	70	0	0	45	19	6	64	0
Scenic Miles	45	0	0	28	0	38	34	14
Wild Miles	65	0	0	47	0	60	19	20

Alternative 1 – No action, maintain eligibility of all river segments.

All of the 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, Recreational ORVs, and recommended classification (interim management outlined in FSH 1909.12 Chapter 80-Wild and Scenic River Evaluation). Management would continue to be in accordance with existing laws and regulations and Forest Plans.

Alternative 2 – No rivers recommended.

Under this alternative, a determination would be made that all 86 river segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. Therefore, no river segments with

Recreation ORVs would be recommended as suitable. Segments would continue to be managed under general guidance of Forest Plan direction and in accordance with existing laws and regulations. Without the development of a comprehensive river management plan, recreation and non-recreation ORVs may be affected by unmanaged activities and amounts of use.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

Fourteen segments (120 miles) with Recreation as an ORV would be recommended as suitable for designation in to the Wild and Scenic River System. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Recreational ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Recreational ORVs.

The nine segments (60 miles) with recreation ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation ORVs may occur as discussed in Alternative 2. Those segments determined not suitable that have proposed water projects on them could change current recreational qualities (see Table 3.12.5). Under this alternative, most planned water projects might be able to move forward, and a change in recreation is expected as these projects are developed.

Table 3.3b.3. Alternative 3, rivers with Recreation ORVs.

Eligible River Segment	Classification	Miles
Ashley National Forest		
Green River*	Scenic	13
Lower Main Sheep Creek	Recreational	4
Reader Creek	Scenic	6
Dixie National Forest		
Death Hollow Creek	Wild	10
Mamie Creek	Wild	2
North Fork Virgin River	Wild	1
Pine Creek	Wild	8
Steep Creek	Wild	7
The Gulch	Recreational	2
Uinta National Forest		
Fifth Water Creek	Scenic	8
Wasatch-Cache National Forest		
East Fork Smiths Fork: Red Castle Lake to Trailhead	Wild	12
Henry's Fork: Henry's Fork Lake to Trailhead	Wild	8
Logan River: confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground *	Recreational	19
Provo River: Trail Lake to U35 Bridge	Recreational	20

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

One segment (19 miles) with Recreation as an ORV would be recommended as suitable for designation in to the Wild and Scenic River System. This alternative recommends one river with recreation as an ORV

on the Manti-La Sal National Forest. This segment would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect the segment from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Recreational ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Recreational ORVs.

The 22 segments (161 miles) with recreation ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in Alternative 2. Of those 22 segments, three are in designated Wilderness and two are in a National Recreation Area designation and will generally remain unaffected. Those segments determined not suitable that have proposed water projects on them could change current recreational qualities (see Table 3.12.5).

Table 3.3b.4. Alternative 4, rivers with Recreation ORVs.

Eligible River Segment	Classification	Miles
Manti-La Sal National Forest		
Huntington Creek*	Recreational	19

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

Seventeen segments (104 miles) with Recreation as an ORV would be recommended for designation in to the Wild and Scenic River System. The Ashley, Dixie, and Wasatch-Cache National Forests would have river segments with Recreation as an ORV protected through designation. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Recreational ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Recreational ORVs.

The six segments (76 miles) with recreation ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in Alternative 2. Of those six, none are in designated Wilderness and would not have additional protections. Those segments determined not suitable that have proposed water projects on them could change current recreational qualities (see Table 3.12.5).

Table 3.3b.5. Alternative 5, rivers with Recreation ORVs.

Eligible River Segment	Classification	Miles
Ashley National Forest		
Green River*	Scenic	13
Lower Main Sheep Creek	Recreational	4
Reader Creek	Scenic	6
Upper Whiterocks River	Scenic	4
West Fork Whiterocks River	Scenic	11
Upper White Rocks	Scenic	4
Dixie National Forest		
Death Hollow	Wild	10
East Fork Boulder creek	Wild	3
Mamie Creek	Wild	2

North Fork Virgin River	Wild	1
Pine Creek	Wild	8
Salina Creek	Wild	7
Slickrock Canyon	Wild	2
Steep Creek	Wild	7
The Gulch	Recreational	2
Wasatch-Cache National Forest		
East Fork Smiths Fork: Red Castle Lake to Trailhead	Wild	12
Henry's Fork: Henry's Fork Lake to Trailhead	Wild	8

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

Eleven segments (117 miles) with Recreation as an ORV would be recommended for designation in to the Wild and Scenic River System. This alternative includes recreation representative segments from the Ashley, Dixie, Manti-La Sal and Wasatch-Cache National Forests. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Recreational ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Recreational ORVs.

The 12 segments (63 miles) with recreation ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in Alternative 2. Of those 12, two are in designated Wilderness and one is in a National Recreation Area and will remain generally unaffected. None of the 12 segments have proposed water projects, that could change current recreational qualities (see Tables 3.12.5).

Table 3.3b.6. Alternative 6, rivers with Recreation ORVs.

Eligible River Segment	Classification	Miles
Ashley National Forest		
Green River*	Scenic	13
Reader Creek	Scenic	6
West Fork Whiterocks River	Scenic	11
Upper White Rocks	Scenic	4
Dixie National Forest		
Death Hollow	Wild	10
North Fork Virgin River	Wild	1
Manti-La Sal National Forest		
Huntington Creek*	Recreational	19
Wasatch-Cache National Forest		
Beaver Creek: Source to Forest Boundary	Recreational	6
Henry's Fork: Henry's Fork Lake to Trailhead	Wild	8
Logan River: confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground*	Recreational	19
Provo River: Trial Lake to U35 Bridge	Recreational	20

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

Five segments (34 miles) with Recreation as an ORV would be recommended for designation in to the

Wild and Scenic River System. This alternative includes recreation representative segments from the Ashley and Dixie National Forests. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Recreational ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Recreational ORVs.

The 18 segments (146 miles) with recreation ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in Alternative 2. One of the 18 segments has a reasonably foreseeable water project, that could change current recreational qualities (see Tables 3.12.5).

Table 3.3b.7. Alternative 7, rivers with Recreation ORVs.

Eligible River Segment	Classification	Miles
Ashley National Forest		
Green River*	Scenic	13
Dixie National Forest		
Death Hollow	Wild	10
Mamie Creek	Wild	2
North Fork Virgin River	Wild	1
Pine Creek	Wild	8

* State of Utah Natural Resources Division of Wildlife Resources, Blue Ribbon Fishery

3.3c Fish and Aquatic Habitat Values

Introduction

The Fish and Aquatic Habitat ORVs are applied to river segments that contain the following: Fish values may be judged on the relative merits of either fish populations or habitat, or a combination of these river-related conditions.

a. Populations. The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

b. Habitat. The river provides exceptionally high quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable. (FSH 1909.12, Sec. 82.14a)

This section discusses the affected environment and environmental impacts on outstandingly remarkable fish values. Refer to Section 3.5 – Fish and Aquatic Resources for a description of impacts on fish and aquatic resources in general, including threatened, endangered, candidate, sensitive, and management indicator species.

Detailed information for Section 3.3c came from Appendix A – Suitability Evaluation Reports, Summary of Outstanding Remarkable Values.

Affected Environment

Sixteen (100 miles) of the 86 eligible river segments possess outstandingly remarkable fish values.

Detailed information for Table 3.3c.1 came from Appendix A – Suitability Evaluation Reports, Summary of ORVs.

Table 3.3c.1. Description of Fish ORVs by forest. Information provided is from the individual forest's Suitability Evaluation Report.

Eligible River Segment	Miles	Classification	Segment Found Suitable in Alternatives
Ashley National Forest 24 segments of which 3 have fish as an ORV.			
Green River	13	Scenic	3, 5, 6, 7
The Green River is a world famous recreational trout fishing stream, and is one of the top "blue ribbon" fly fishing rivers in the United States. Anglers travel from all over the world to experience this exceptional tail water fishery which can produce trophy sized rainbow and brown trout. The Green River is economically essential to the local communities and its fishery values are considered outstandingly remarkable. The tail water fishery provides excellent habitat for the targeted introduced trout species and native mountain whitefish. Dam releases can be manipulated throughout the summer to provide trout with optimal water temperatures. The cool, clean water provides favorable conditions for aquatic macro-invertebrate production, which constitutes almost 100% of the trout diet. Even with recent fire damage to the watershed fine sediment loads are relatively low throughout the first 16 miles of stream, allowing both brown and rainbow trout to spawn and recruit naturally. Width to depth ratios are very high and micro-habitats including deep runs, pools and eddies are in high concentration. The value of the species in the Green River is considered high due to the amount of income the communities receive from tourist dollars. Without these species of sport fish present to attract recreational anglers the communities would not experience a fraction of the current income realized. Densities of trout in the Green River rival those found anywhere in the world. A robust, naturally reproducing population of brown trout exists in the Green River. The Utah Division of Wildlife Resources does augment the population with hatchery reared fish and brown trout are the dominant species downstream of the Little Hole boat ramp. A small number of wild rainbow trout also show up the creel and annual electro-fishing survey, but do not compare to brown trout numbers. Brown trout over 21 inches are common and have been caught up to 18 pounds. Rainbows over 20 inches and 3-5 pounds are also present.			
Lower Main Sheep Creek	4	Recreational	3, 5
This segment is the only significant Kokanee salmon spawning stream reach in eastern Utah and serves as spawn for reintroduction to other water bodies in the state. It is also a popular recreation fishing area and stocked with non-natives.			
Reader Creek	6	Scenic	3, 5, 6
Several lakes are present along the stair-step series of benches from the upper to lower basin. Current fish populations include stocked brook trout and relict native Colorado River cutthroat trout. The stream is a reference reach for evaluating stream habitat since it is relatively unaltered by management activity. Treatments to eliminate the brook trout and enhance the cutthroat population were planned for the years 2000-2004. Colorado cutthroat trout restoration is continuing in Reader Creek.			
Dixie National Forest 10 segments of which 2 have Fish as an ORV.			
East Fork Boulder Creek	3	Wild	5
The segment supports a self-sustaining trout fishery with Colorado River cutthroat trout and brook trout present. The upper half mile reach of the creek is inhabited exclusively by native Colorado River cutthroat trout. Natural cascades prevent upstream movement of non-native brook trout into this upper stream segment. The Colorado River cutthroat trout within the stream are a remnant population and a genetically pure population.			
Moody Wash	5	Wild	3, 5, 6
Moody Wash is considered a very important refuge area for Virgin spinedace (*Lepidomeda mollispinis mollispinis*), a state sensitive species, in the Virgin River Basin. It is the only tributary to the Santa Clara River that has its historic range intact and occupied. During annual periods of high flow spinedace are connected throughout the drainage; in periods of low flow spinedace recede to upper areas of perennial flow as refugia habitat. The population of Virgin spinedace is a self-sustaining, breeding population, and is considered an important population that could be used to restock other areas. Moody Wash also contains desert sucker (*Catostomus clarkia*), also a state sensitive species list, speckled dace (*Rhinichthys osculus*), and habitat for the Arizona toad (*Bufo microscaphus*) (also called southwestern toad), another state sensitive species.			
Fishlake National Forest 5 segments of which 3 have fish as an ORV.			
Fish Creek	15	Wild (4.3 mi.); Recreational	3, 5, 7

Eligible River Segment	Miles	Classification	Segment Found Suitable in Alternatives
		(10.5 mi.)	
Historically, this stream course supported native Bonneville cutthroat trout. Currently, it supports non-native salmonid populations; however, remnant populations of native Bonneville cutthroat trout may exist in the headwaters and supporting tributaries. Native cyprinids, suckers, sculpins, and dace exist in the lower portion of Fish Creek. Fish Creek has a large volume of water and high potential for future fisheries development.			
Manning Creek	4	Wild	5, 6
Manning Creek supports an important population of Bonneville cutthroat trout. This native cutthroat trout requires good water quality and diversity of habitat. The State of Utah owns a water right for the stream, which supports instream flow. The canyon that holds the middle segment is very rugged, remote, and dominated by natural processes.			
Pine Creek/Bullion Falls	4	Wild	5
The area provides remote location for native fisheries. Bullion Falls is a significant natural barrier that provides isolation for the upper segment. DWR is considering Bonneville cutthroat trout recovery in the upper portions of the watershed. Pine Creek drains a rather large undeveloped watershed. The stream has significant boulders and cobble structures which limits potential impacts from sediment.			
Manti-La Sal National Forest 10 segments of which 0 have fish as an ORV.			
Uinta National Forest 4 segments of which 0 have fish as an ORV.			
Wasatch-Cache National Forest 33 segments of which 8 have fish as an ORV.			
Beaver Creek: South Boundary of State Land to Mouth	3	Recreational	3, 6
Fish species include brook trout, sculpin and Bonneville cutthroat trout (a sensitive species). While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. These several streams in addition to the upper portions of the main Logan River are occupied with a meta-population (that is a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population. The importance of this meta-population of Bonneville cutthroat trout is an ORV.			
Bunchgrass Creek: Source to Mouth	5	Scenic	3, 6
Fish species include Bonneville cutthroat trout (a sensitive species). While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. These several streams in addition to the upper portions of the main Logan River are occupied with a meta-population (that is a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population. The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV.			
Little Bear Creek: Little Bear Spring to Mouth	1	Scenic	3, 6
Fish species include brown and brook trout, sculpin and Bonneville cutthroat trout (a sensitive species). The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV. While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. These several streams in addition to the upper portions of the main Logan River are occupied			

Eligible River Segment	Miles	Classification	Segment Found Suitable in Alternatives
with a meta-population (that is a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population.			
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	Recreational	3, 6
Logan River: Idaho State Line to Confluence with Beaver Creek	7	Scenic	3, 6
Both Logan River from Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground and from Idaho State Line to Confluence with Beaver Creek had the following description: The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV. The range of Bonneville cutthroat includes most of the eastern Great Basin. This portion of the main Logan River along with several tributaries are occupied with a meta-population (that is a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population.			
Spawn Creek: Source to Mouth	4	Scenic	3, 6
The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV. Fish species include brown and brook trout, sculpin and Bonneville cutthroat trout (a sensitive species). While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. These several streams, in addition to the upper portions of the main Logan River, are occupied with a meta-population (that is a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population.			
Temple Fork: Source to Mouth	6	Scenic	3, 6
The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV. Fish species include brown trout, sculpin and Bonneville cutthroat trout (a sensitive species). While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. These several streams in addition to the upper portions of the main Logan River are occupied with a meta-population (that is, a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population.			
White Pine Creek: Source to Mouth	1	Scenic	3, 6
The Bonneville cutthroat trout fishery within this tributary to the upper Logan River is a significant population, because of its size, diversity, distribution within several suitable habitats, self-sustaining natural reproduction and the size and vigor of the fish. The importance of this meta-population of Bonneville cutthroat trout is an ORV.			

Eligible River Segment	Miles	Classification	Segment Found Suitable in Alternatives
Fish species include rainbow, brown and brook trout, sculpin and Bonneville cutthroat trout (a sensitive species). While all the fish species in these tributaries can add to visitor enjoyment or the overall wildlife diversity in the upper Logan River drainage, the Bonneville cutthroat trout population is of special interest and value. The range of Bonneville cutthroat includes most of the eastern Great Basin. This stream, in addition to the upper portions of the main Logan River, is occupied with a meta-population (that is, a genetically interactive larger population of the species) that, if protected, can insure the preservation of the species, which is currently under some considerable pressure to survive due to pressures of exotic species introduction, fishing pressure, and habitat fragmentation, destruction, and/or degradation. The upper Logan River population of these fish is probably the largest and most diverse subpopulation with habitat connectivity that remains. Fish abundance for the Bonneville cutthroat is high, and the population is self-sustaining through natural spawning in both the main Logan River and these tributaries. This river system is of critical importance to Bonneville cutthroat because of its lack of migratory obstructions, the large number of connected populations, and the overall strength and diversity of the population.			

A review of the existing habitat conditions can be found in the technical report for this resource area and varies in complexity from a few notes taken on a single visit to the stream to a full detailed analysis of an entire stream segment.

Table 3.3c.2. Miles of segments with Fish ORVs found suitable by alternative and classification.

Segments with Fish ORVS		Alternatives						
		1	2	3	4	5	6	7
Total Segments	16	0	0	13	0	8	12	2
Total Miles	100	0	0	89	0	54	74	28
Recreational Miles	37	0	0	37	0	15	22	11
Scenic Miles	43	0	0	43	0	19	43	13
Wild Miles	20	0	0	9	0	20	9	4

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3c addresses one issue:

Issue 4 – Designation offers long-term protection of resource values. The measurement indicators are: miles of river by Wild, Scenic, and/or Recreational classification and the analysis of the impacts to Fish ORVs by river.

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification and fish ORVs (see Table 3.1.2 for description of interim management). Of these 86 segments, Fish ORVs would be preserved in 16 river segments or 100 miles of stream. Fish may be adversely affected by the projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant). If these projects were built they could change outstandingly remarkable fish values.

Alternative 2 – No rivers recommended.

In this alternative, a determination would be made that all 86 segments (840 miles) are found not suitable and released from Wild and Scenic River interim protection. Of these 86 segments, Fish ORVs occur in 16 river segments or 100 miles of stream. Protection of river values would continue to be managed by

existing laws and regulations and standards provided in Forest Plans. Choosing this alternative would not in itself initiate any changes to fish values nor would it provide any additional protection for outstandingly remarkable fish values on the National Forests in Utah.

Over time, depending on area management standards, large-scale projects like dams, water projects and other activities such as timber harvest and road building could be approved for some segments, affecting outstandingly remarkable fish values. The combined effect of reasonably foreseeable water projects if managed to change the free-flow would be three segments, a total of 45 miles of stream (see Table 3.12.5).

Many segments will not be affected by water development projects or other large-scale activities and here outstandingly remarkable fish values will generally remain the same. Existing laws and regulations and Forest Plan standards would continue to be followed. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, the approximately 366 miles of segments which are located in Wilderness and Research Natural Areas will generally remain unaffected.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

In this alternative, 13 river segments with fish ORVs (89 miles) would be determined suitable for designation. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis and Table 3.1.2), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Fish ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Fish ORVs.

The three segments (11 miles) with fish ORVs determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection (see Table 3.1.1) and effects on fish values as discussed in Alternative 2 would apply. There are no reasonably foreseeable water projects on segments that have outstandingly remarkable fish values (see Table 3.12.5).

This alternative protects 370 total miles of stream of which 89 miles have fish ORVs (Table 3.3c.2). The majority of the 370 miles will be identified as Wild while a majority of the Alternative 3 Fish ORV miles will be Scenic (Table 3.3c.2). Note the actual number of protected miles is 366 with four miles of Hayden Fork being on private land being reflected in the tables.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

In this alternative, no segments with fish ORVs (0 miles) would be found suitable for designation. Those segments found suitable would continue to receive interim protection (see Table 3.1.1) the effects of which are explained in Alternative 1 analysis, and could be congressionally designated. Congressional action would require a comprehensive river management plan be developed within three years of designation.

The 16 segments with fish ORVs (100 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection (see Table 3.1.1) and effects on

outstandingly remarkable fish values as discussed in Alternative 2 would apply. There are no reasonably foreseeable water projects on segments that have outstandingly remarkable fish values (see Table 3.12.5).

This alternative protects 45 total miles of stream of which none of the segments have fish ORVs (Table 3.3c.2). The majority of the 45 miles will be identified as Scenic and Recreational affording the least protection. Note the actual number of protected miles is 40 with five miles of Huntington Creek being on private land being reflected in the tables.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

Eight segments with fish ORVs (54 miles) would be found suitable, the effects on outstandingly remarkable fish values are discussed in Alternative 3.

The 8 segments with fish ORVs (46 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on outstandingly remarkable fish values as discussed in Alternative 2 would apply. There are no reasonably foreseeable water projects on segments that have outstandingly remarkable fish values (see Table 3.12.5).

This alternative protects 531 total miles of stream of which 54 miles have fish ORVs (Table 3.3c.2). The majority of the 531 miles will be identified as Wild affording the greatest protection. The majority of Alternative 5 Fish ORV miles will also be Wild (Table 3.3c.2) affording the greatest protection. It should be remembered that in many cases this will be a duplication of protection with many Wild segments being located in designated Wilderness or Research Natural Areas.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In Alternative 6, 12 segments with fish ORVs (74 miles) would be found suitable and effects on outstandingly remarkable fish values as discussed in Alternative 3 would apply.

The four segments with fish ORVs (26 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on outstandingly remarkable fish values as discussed in Alternative 2 would apply. There are no reasonably foreseeable water projects on segments that have outstandingly remarkable fish values (see Table 3.12.5).

This alternative protects 442 total miles of stream of which 74 miles have fish ORVs (Table 3.3c.2). The majority of the 442 miles will be identified as Wild affording the greatest protection. The majority of Alternative 6 Fish ORV miles will be Scenic (Table 3.3c.2) protecting segments that may not be currently protected because of other designations. All river segments with fish as an ORV and that are identified as Scenic are selected in this alternative. Alternative 6 protects just over half of the miles that have fish as an ORV and are classified as Recreational. The miles with Fish as an ORV and are classified as Wild miles drop from the total available of 20 to 9 being selected under this alternative. All of the non-selected sections currently have other protective designations like Research Natural Area, Wilderness, or are identified as being in inventoried Roadless areas.

Alternative 7 – Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In Alternative 7, two segments with fish ORVs (28 miles) would be found suitable and effects on

outstandingly remarkable fish values as discussed in Alternative 3 would apply.

The 14 segments with fish ORVs (72 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and the effects on outstandingly remarkable fish values as discussed in Alternative 2 would apply. None of these 14 segments determined not suitable have reasonably foreseeable proposed water projects on them (See Alternative 4).

This alternative protects 108 total miles of stream of which 28 miles have fish ORVs (Table 3.3c.2). The majority of the 108 miles, 74, will be identified as Wild affording the greatest protection. The majority of Alternative 7 Fish ORV miles will be Scenic (Table 3.3c.2) protecting segments that may not be currently protected because of other designations. Alternative 7 protects just over one third of the miles that have fish as an ORV and are classified as Recreational. The miles with Fish as an ORV and are classified as Wild miles drop from the total available of 20 to 4 being selected under this alternative.

3.3d Wildlife Values

Introduction

The Wildlife ORVs are applied to river segments that contain the following: Wildlife values may be judged on the relative merits of either terrestrial or aquatic wildlife populations or habitat, or a combination of these conditions.

a. Populations. The river, or area within the river corridor, contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique, and/or populations of federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

b. Habitat. The river, or area within the river corridor, provides exceptionally high quality habitat for wildlife of national or regional significance, and/or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate threatened, endangered, or sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitat is an important consideration and could, in itself, lead to a determination of outstandingly remarkable. (FSH 1909.12, Sec. 82.14a).

This section discusses the affected environment and environmental impacts on outstandingly remarkable Wildlife values. Refer to Wildlife (Terrestrial) Resources, Section 3.13 for a description of impacts on terrestrial wildlife resources in general, including threatened, endangered, candidate, sensitive, and management indicator species.

Detailed information for Section 3.3d came from Appendix A – Suitability Evaluation Reports, Summary of Outstanding Remarkable Values.

Affected Environment

There are 86 segments being considered statewide of which 19 have wildlife as an ORV (233 miles). The information in Table 3.3d.1 was derived from Appendix A – Suitability Evaluation Reports.

Table 3.3d.1. Description of Wildlife ORVs by forest.

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Ashley National Forest 24 segments of which 10 have Wildlife ORVs.			
Ashley Gorge Creek	10	Wild	3
Good wildlife habitat exists due to the diversity of vegetation and deciduous trees in the canyon corridor. Habitat exists for peregrine falcon. The corridor serves as an escape route for deer and elk. This segment also provides important habitat for raptors. It has potential for bats. The segment is valuable habitat for bobcat, cougar, and bear. The benches above the canyon bottom and within the corridor provide habitat for deer in the spring and fall.			
Black Canyon	10	Wild	3, 5
This area provides extremely important habitat for raptors, including peregrine falcon and northern goshawk. Bobcat, mountain lion and bear also inhabit the corridor. The upper portion of the canyon supports heavy use by elk and deer.			
Green River	13	Scenic	3, 5, 6, 7
The corridor encompasses a diversity of habitat types for wildlife such as river, riparian, wetland, cliff, pinyon/juniper, and sagebrush in the upland areas. These habitat-types provide excellent habitat for a high diversity of species including waterfowl, shorebirds, migratory birds, raptors, big game, small mammals (including bats), and water adapted mammals such as beaver and river otter. The Green River is the major source of water as well as riparian and wetland vegetation important for hiding, nesting, and foraging cover in this arid region. The steep cliffs provide nesting habitat for species such as raptors, swallow, small mammals, insects, and reptiles. Due to the topography and inaccessibility, these habitats have remained in an almost pristine condition. Diversity of species for the corridor is high since the diversity of habitats is also high, especially when compared to the surrounding xeric landscape. Several wildlife species that have been documented or are expected to occur in the corridor are considered briefly here. This is not intended to be an exhaustive list but to provide some insight into species diversity within the corridor. Waterfowl and shore birds known or expected based on wetland and riparian habitat types occurring in sections along the corridor or adjoining habitats include Canada geese, eared grebes, gadwalls, mallards, cinnamon teal, northern shovelers, pintails, Wilson's phalarope, long-billed curlews, sandhill cranes, and great blue herons. In addition to species like the bald eagle, golden eagle and peregrine falcon, several other species of raptors have been observed within the corridor including rough-legged hawks, red-tailed hawks, American kestrels, turkey vultures, prairie falcons, ospreys, and great horned owls. A number of passerines common to the intermountain west are expected to occur within the corridor at various times of the year. Including many migratory neo-tropical species. Known nesters in woodland or sagebrush types in the upland areas along the river include mourning doves, common nighthawks, kingbirds, wrens, mountain bluebirds, and western meadowlarks. Other birds include the Virginia's warbler, loggerhead shrike, black-throated gray warbler, burrowing owl, pinyon jay, and sage sparrow. Bighorn sheep, mule deer, and occasionally elk and moose are common big game species encountered within the corridor. Bighorn sheep use along the corridor has been occurring in recent years and is largely limited to the rocky cliffs. Other mammal species that depend on the corridor include mountain lions, bobcats, black bear, pygmy rabbits, muskrats, woodrats, marmots, and several species of squirrels and mice. Some other water-adapted mammals include the river otter and beaver.			
Lower Dry Fork Creek	7	Recreational	3
This area is important summer range and travel corridor for a variety of wildlife including deer. Mountain lions and bobcats prefer the steep rugged bedrock areas of the side tributaries and bears can be found along this segment. There is potential for bats in the limestone caves and outcrops, and a wide variety of birds occur. The corridor has diverse riparian vegetation. Flammulated owl habitat exists within the corridor, and bird population diversity is high. *Note: The Wildlife Value does not extend beyond the National Forest boundary on to land administered by the Bureau of Land Management.*			
Lower Main Sheep Creek	4	Recreational	3, 5
This area has one of the highest diversity of Neotropical-tropical migrants. The watercourse corridor is a critical wintering area for Rocky Mountain bighorn sheep and deer. Bats forage for insects in the watercourse. In addition, the area serves as habitat for bat roosting.			
Middle Main Sheep Creek	5	Recreational	3, 5
The Townsend's Big-Eared Bat is located in the Big Springs cave during winter months. Numerous other bat species utilize the canyon with a known variety of at least twelve species. The drainage is habitat for Rocky Mountain bighorn sheep. The drainage also provides habitat for Neotropical birds.			
Reader Creek	6	Scenic	3, 5, 6
Wildlife communities at this elevation are composed of alpine species usually not found at lower elevations. Ptarmigan may use the willows along the banks of this segment at certain times of the year. Ptarmigan were released in the Uinta Mountains some time ago and are stable or slowly increasing. The riparian vegetation also provides habitat for Neotropical birds, i.e., Lincolns and song sparrows. The watercourses cross through important summer range for both deer and elk, and the travel corridor for mountain goats.			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
South Fork Ashley Creek	15	Scenic	*
This segment provides high value summer range for deer, elk and moose. The corridor of the watercourse also traverses through potential lynx habitat. There is a high potential for amphibians in the numerous potholes geologic/hydrologic features within the watercourse corridor. In addition, Pine Martins are abundant in this drainage and northern goshawks frequent the corridor during summer months.			
Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw	40	Wild	3, 5, 6, 7
The watercourses have a "high" rating for winter range for mountain goat; and critical summer range for mountain goat and sheep, deer, elk, moose, beaver, raptors, grouse, and pine martin. Picas, ground squirrels, and marmots are also found in this high elevation area. Bear are found in the lower portion. Lincoln sparrow, song sparrows are also in the lower portion, and there is potential goshawk habitat in the lower portion.			
Upper Yellowstone Creek, including Milk Creek	33	Wild	5, 6
The watercourses have a "high" rating for winter and summer range for mountain goat; and critical summer range for big horn sheep. Valuable summer range exists for deer, elk, and moose, as well as picas, ground squirrels and marmots in the upper end of the watercourses. There is a large population of beaver and a high potential for amphibians, ptarmigan, and moose in the mid-section of each watercourse. Bear frequent the lower portions of the drainage. Lincoln sparrow, song sparrows are also in the lower portions. There is potential goshawk habitat in the lower portions.			
Dixie National Forest 10 segments of which 0 have Wildlife as an ORV.			
Fishlake National Forest 5 segments of which 2 have Wildlife as an ORV.			
Fish Creek	15	Wild (4.3 mi.); Recreational (10.5 mi.)	3, 5, 7
Dense riparian vegetation along with an intact watershed exists in the upper drainage. The Forest Service has designated the upper watershed as the Fish Creek Research Natural Area. The lower portion of the watershed has been impacted more by human intervention but still retains the important components to sustain ecological integrity. The entire watershed provides important habitat for neotropical and resident avifauna, deer and other mammals, amphibians, and reptile species.			
Pine Creek/Bullion Falls	4	Wild	5
Pine Creek flows support a quality riparian habitat zone along its course. The upper portion of the watershed (above Bullion Falls) is designated as a Research Natural Area.			
Manti-La Sal National Forest 10 segments of which 1 has Wildlife as an ORV.			
Fish Creek and Gooseberry Creek	21	Scenic (17.05 mi.); Recreational (3.6 mi.)	4, 6
Upper Fish Creek contains the largest breeding population of Willow Flycatchers known in the state. The area has been described as an "outstanding example of good riparian management" (1998 Southwestern Willow Flycatchers Surveys on U.S. Forest Service Lands in Utah). Good riparian habitat, as found in the Upper drainage, is important for this species. Willow Flycatchers can be found from the inlet into Scoffield Reservoir to the confluence with Gooseberry Creek. Riparian habitat, especially "good riparian habitat" is one of the rarest habitat types in Utah and currently occupies less than 1% of the state's land cover. However, 75% of Utah's bird species use riparian habitat to nest, forage, water, migrate and/or winter. As evidence of this, 54 species of birds have been observed in Fish Creek during the breeding season. Fish Creek contains extensive tracts of willow dominated habitat at least 100 meters wide and more than 500 meters long. This is one of the attributes that make it unique and contributes to its outstanding value as wildlife habitat. Upper Fish Creek contains numerous mammalian species including beavers, black bear, mule deer, and elk. The variety of vegetation, remoteness and large size of the Fish Creek area provides excellent habitat for elk parturition and rearing. The area also provides very high quality, relatively undisturbed, summer and fall habitat for mule deer and elk, including habitat for fawning, calving and rearing. Beaver use the riparian habitat for habitat, and bear frequent the corridors of the watercourses.			
Uinta National Forest 4 segments of which 0 have Wildlife as an ORV.			
Wasatch-Cache National Forest 33 segments of which 6 have Wildlife as an ORV.			
East Fork Smith's Fork: Red Castle Lake to Trailhead	12	Wild	3, 5
Deer, elk, moose, and Rocky Mountain big horn sheep inhabit the area. The corridor includes mountain goat habitat. Pika and			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
ptarmigan also inhabit the corridor. No threatened or endangered animal species occur in the area. The corridor contains habitat for the following sensitive species: wolverine, Canada lynx, and boreal owl. Diversity of wildlife species, including four large ungulates, and habitats are good. Unique species such as the ptarmigan and reintroduced big horn sheep are attractions people look for.			
Henry's Fork: Henry's Fork Lake to Trailhead	8	Wild	3, 5, 6
Diversity of wildlife species, including four large ungulates and habitats are good. Unique species such as the ptarmigan and reintroduced big horn sheep are attractions people look for. No threatened, endangered, or sensitive species have been identified in the corridor, although habitat is available for wolverine, Canada lynx, boreal owl, goshawk, and great gray owl, all sensitive species. Deer, elk, moose and Rocky Mountain big horn sheep inhabit the area. Habitat for mountain goats is also present. Smaller species include pika and ptarmigan.			
Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	11	Wild (6.9 mi.); Scenic (4.2 mi.)	3, 5, 6
Diversity of wildlife species, including four large ungulates, and habitats are good. Unique species such as the ptarmigan and reintroduced big horn sheep are attractions people look for. No threatened, endangered, or sensitive species have been identified in the corridor, although habitat is available for wolverine, Canada lynx, boreal owl, goshawk, and great gray owl, all sensitive species. Deer, elk, moose and rocky mountain big horn sheep inhabit the area. Habitat for mountain goats is also present. Smaller species include pika and ptarmigan.			
Thompson Creek: Source to Hoop Lake Diversion	5	Wild	5
Diversity of wildlife species, including four large ungulates, and habitats are good. Unique species such as the ptarmigan and reintroduced big horn sheep are attractions people look for.			
West Fork Beaver Creek: Source to Forest Boundary	10	Wild (4.6 mi.); Scenic (5.5 mi.)	3, 5, 6
Diversity of wildlife species, including four large ungulates, and habitats are good. Unique species such as the ptarmigan and reintroduced big horn sheep are attractions people look for. No threatened, endangered, or sensitive species have been identified in the corridor, although habitat is available for wolverine, Canada lynx, boreal owl, goshawk, and great gray owl, all sensitive species. Deer, elk, moose and rocky mountain big horn sheep inhabit the area. Habitat for mountain goats is also present. Smaller species include pika and ptarmigan.			
Willard Creek	4	Scenic	3, 5
The cottonwoods in the river corridor offer prime habitat for wintering bald eagles, an endangered species. Because of its inaccessibility the habitat can be considered a refuge from human intrusions.			

*Segment(s) only occur in Alternatives 1 and 2

Table 3.3d.2. Miles of segments with Wildlife ORVs found suitable by alternative and classification.

Segments with Wildlife ORVS		Alternatives						
		1	2	3	4	5	6	7
Total Segments	19	0	0	14	1	15	8	3
Total Miles	233	0	0	156	21	180	142	68
Recreational Miles	31	0	0	27	4	20	4	11
Scenic Miles	65	0	0	33	17	33	46	13
Wild Miles	138	0	0	96	0	128	93	44

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3d addresses one issue:

Issue 4 – Designation offers long-term protection of resource values. The measurement indicators are: miles of river by Wild, Scenic, and/or Recreational classification and the analysis of the impacts to Wildlife ORVs by river.

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification, and wildlife ORVs (see Table 3.1.2 for description of interim management). Of these 86 segments, wildlife ORVs would be preserved in 19 river segments or 233 miles of stream. Wildlife may be adversely affected by the projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant). If these projects were built they could change outstandingly remarkable wildlife values. Protection under eligibility on some segments will allow vegetation to progress towards climax. As it progresses, some habitat will be less suitable for wildlife species and more suitable for others.

Alternative 2 – No rivers recommended.

In this alternative a determination would be made that all 86 segments (840 miles) are found not suitable and released from Wild and Scenic River interim protection. Of these 86 segments, wildlife ORVs occur in 19 river segments or 233 miles of stream. Protection of river values would continue to be managed by existing laws and regulations and standards provided in Forest Plans. Choosing this alternative would not in itself initiate any changes to outstandingly remarkable wildlife values nor would it provide any additional protection for outstandingly remarkable wildlife values on the forest.

Over time, depending on area management standards, large-scale projects like dams, water projects and other activities such as timber harvest and road building could be approved for some segments, affecting outstandingly remarkable wildlife values. The combined effect of reasonably foreseeable water projects if managed to change the free-flow would be 3 segments, a total of 45 miles of stream (see Table 3.12.5).

Many segments will not be affected by water development projects or other large-scale activities and here outstandingly remarkable wildlife values will generally remain the same. Existing laws and regulations and Forest Plan standards would continue to be followed. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, the approximately 366 miles of segments which are located in Wilderness and Research Natural Areas will generally remain unaffected. Again protection from activities will allow vegetation to progress towards climax. As it does some habitat will become less suitable for some wildlife species and more suitable for others.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

Under Alternative 3, 14 rivers segments with wildlife ORVs (156 miles) would be determined suitable for designation. Those segments would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or Wildlife ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and Wildlife ORVs.

The five segments (78 miles) with Wildlife ORVs determined not suitable for wild and scenic designation would be released from interim protection (see Table 3.1.1) and effects on outstandingly remarkable wildlife values as discussed in Alternative 2 would apply. Segments determined not suitable that have proposed water projects on them which could change current outstandingly remarkable wildlife values (see Table 3.12.5). Under this alternative, most planned water projects might be able to move forward, and the change in outstandingly remarkable wildlife values is expected.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

In this alternative, one segment with a wildlife ORV (21 miles) would be found suitable for designation. The effects on outstandingly remarkable wildlife values are discussed in Alternative 3.

The 18 segments (212 miles) with Wildlife ORVs determined not suitable for wild and scenic designation would be released from interim protection (see Table 3.1.1) and effects on outstandingly remarkable wildlife values as discussed in Alternative 2 would apply. No segments determined not suitable have reasonably foreseeable water projects on them which could change current outstandingly remarkable wildlife values (see Table 3.12.5). Under this alternative, most planned water projects may not be able to move forward, and related changes in outstandingly remarkable wildlife values are not expected.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

Fifteen segments with wildlife ORVs (180 miles) would be found suitable. The effects on outstandingly remarkable wildlife values are discussed in Alternative 3.

The 4 segments with wildlife ORVs (53 miles) determined not suitable for wild and scenic designation would be released from interim protection and the effects on wildlife values as discussed in Alternative 2 would apply. Segments determined not suitable that have proposed water projects on them could change current outstandingly remarkable wildlife values (See Table 3.12.5).

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In this alternative, 8 segments with wildlife ORVs (142 miles) would be found suitable and effects on outstandingly remarkable wildlife values as discussed in Alternative 3 would apply.

The 11 segments with wildlife ORVs (91 miles) determined not suitable for wild and scenic designation would be released and the effects on outstandingly remarkable wildlife values as discussed in Alternative 2 would apply. No segments determined not suitable have reasonably foreseeable water projects on them which could change current outstandingly remarkable wildlife values (see Table 3.12.5). Under this alternative, most planned water projects may not be able to move forward, and related changes in outstandingly remarkable wildlife values are not expected (Table 3.12.5).

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In this alternative, 3 segments with wildlife ORVs (68 miles) would be found suitable and effects on outstandingly remarkable wildlife values as discussed in Alternative 3 would apply.

The 16 segments with wildlife ORVs (165 miles) determined not suitable for wild and scenic designation would be released and the effects on outstandingly remarkable wildlife values as discussed in Alternative 2 would apply. Segments determined not suitable that have proposed water projects on them could change current outstandingly remarkable wildlife values (See Table 3.12.5).

3.3e Historic and Cultural Values

Introduction

The Historic, Cultural, and/or Pre-history ORVs are applied to river segments that contain the following: The river, or area within the river corridor, contains important evidence of occupation or use by humans. Sites may have national or regional importance for interpreting history or prehistory.

a. History. Site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare or one-of-a-kind in the region. A historic site or feature, in most cases, is 50 years old or older.

b. Pre-history. Sites may have unique or rare characteristics or exceptional human interest value; represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare sacred purposes. (FSH 1909.12, Sec. 82.14a)

Detailed information for Section 3.3e came from Appendix A – Suitability Evaluation Reports, Summary of Outstandingly Remarkable Values.

Affected Environment

Twenty of the wild and scenic river study areas possess outstandingly remarkable cultural values and historic values totaling 244 miles. See Table 3.3e.1 for a list of those river segments with outstandingly remarkable Historic or Cultural values.

Table 3.3e.1. River segments with Historic and/or Cultural ORVs by forest. (This information came from Appendix A – Suitability Evaluation Reports).

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Ashley National Forest 24 segments of which 9 have Historic/Cultural ORVs.			
Ashley Gorge Creek	10	Wild	3
Historic: Red Pine Trail is an historic transportation route. Evidence of an old trail along canyon bottom, with several historic mining sites and writings on boulders. The springs in the lower area were used as water sources during early settlement days.			
Cart Creek Proper	10	Scenic	5
Cultural: Archaic, Fremont and late prehistoric sites (granary and rock shelters) have been located near the creek. The sites are eligible for listing to the National Register.			
Carter Creek	16	Scenic	5
Historic: The historic Carter Military Pass Road crosses through the upper portion of the segment. Some bedrock road cuts are evident. The upper portion of the drainage is also a significant historic district for work and facilities accomplished by the Civilian Conservation Corps. Cultural: Archaic, Fremont and late prehistoric sites exist within the corridor. Some of these sites are eligible for listing to the National Register. The Carter Creek granary at the mouth of the creek is a significant archaeological site. There are also significant rock shelters and storage features within the canyon areas of Carter Creek.			
Garfield Creek	17	Wild	5, 6
Cultural: There are prehistoric sites (archaic, Fremont and late prehistoric) in the upper lakes region of Garfield Creek.			
Green River	13	Scenic	3, 5, 6, 7
Historic: John Wesley Powell's journeys down the Green and Colorado Rivers were significant national events in the exploration and description of the West. His campsites at Little Hole and Red Creek can be identified from the photographs of the expedition. The large Ponderosa trees in Powell's photos at Little Hole are still living and help locate his campsite. The diaries and other accounts list the types of activities that transpired while the party was camped in those locations. These events and information provide a wealth of interpretive and educational opportunities. The watercourse corridor contains sites or features (John Wesley Powel camping sites) that are currently listed in, or is eligible for, the National Register of Historic Places, or has			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
been designated as a National Historic Landmark. This segment has three historic themes and periods, i.e., exploration, fur trapping, and homesteading. Cultural: An incredible number of prehistoric sites exist along this section of the river. The Bureau of Land Management is working on a cultural resource district for the Davenport Draw area and formally asked the Forest Service to include their portion of Little Hole in this designation. Multiple time periods are represented and a variety of site types have been recorded, with many sites in excellent condition. The Hayes Site contained storage pits still filled with the maize and other plant matter the Fremont people of 700 to 1500 years ago placed in them. The watercourse corridor has Paleo-Indian, archaic, Fremont, late-prehistoric, and historic cultures. The watercourse corridor represents "textbook" examples of the above mentioned cultures and provides one of the best examples of a culture or river-related event in the Region. The watercourse corridor contains sites or features that are currently listed in, or are eligible for, the National Register of Historic Places, or designated as a National Historic Landmark.			
Lower Dry Fork Creek	7	Recreational	3
Historic: There are old irrigation canals and remnants of a flume used in early timber harvesting activities. Historic gold mining activities and sheep use are evident throughout the segment. Note: The Historic Value does not extend beyond the National Forest boundary on to land administered by the Bureau of Land Management (BLM). Cultural: Cultural resources are significant, with uses by archaic, Fremont and prehistoric peoples. Several important sites are eligible for listing. Members of the Ute Tribe used the area during the 1940s and 1950s. Current use by Native Americans is known. Note: The Cultural Value does not extend beyond the National Forest boundary on to land administered by the BLM.			
Pipe Creek	6	Scenic	5
Cultural: Archaic, Fremont and late prehistoric sites have been found and inventoried. Some of these sites are eligible for listing on the National Register. Current Native American uses are unknown.			
Shale Creek and Tributaries	10	Wild	5, 6
Historic: Historic themes include water supply systems, forest management, dispersed recreation and hunting. The historic Fox and Crescent Reservoirs and Dams are located in the upper headwaters. Cultural: There are large numbers of prehistoric sites (archaic, Fremont and late prehistoric) in the upper area of Shale Creek.			
West Fork Rock Creek, including Fish Creek	13	Wild	5
Historic: The historic Rhodes Cabin and Mine exist within the corridor. The mine dump and mine adits remain in good condition.			
Dixie National Forest 10 segments of which 3 have Historic/Cultural ORVs.			
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	*
Cultural: The area has been used intermittently by Native Americans and pioneers.			
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	5
Cultural: The area has been used intermittently by Native Americans and pioneers. On top of Long Neck Mesa to the west there is a cabin near the beginning of the Long Neck Trail which is estimated to be over 50 years of age.			
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	3, 5
Cultural: The area has been used intermittently by Native Americans and pioneers.			
Fishlake National Forest 5 segments of which 1 has Historic/Cultural ORVs.			
Fish Creek	15	Wild (4.3 mi.); Recreational (10.5 mi.)	3, 5, 7
Prehistoric/Historic: Near the headwaters, Fish Creek flows near the edge of the Gold Mountain Mining District. Gold was first discovered in Fish Creek, but the only sizeable mine was the Trappers' Pride Lode was above Fish Creek. Fish Creek was the site of two hydroelectric power plants that supplied the Kimberly community with electricity. The volume of water in Fish Creek fluctuated, so the creek was supplemented with water from other creeks via a steel and wood penstock. These plants were built by Charles Skoogaurd who later built the Fish Lake Lodge. There was a sizeable sawmill near the confluence of Fish Creek and Clear Creek. Evidence exists that the area of Fish Creek was used historically by the Fremont Indian culture and more recently by the Utes.			
Manti-La Sal National Forest 10 segments of which 5 have Historic/Cultural ORVs.			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Chippean and Allen Canyons	21	Scenic: Chippean Canyon (2.6 miles); Recreational: Allen Canyon (19 miles)	*
Cultural: Evidence suggests these canyon areas were used for over 6,000 years attributable to Archaic, Ancestral Puebloan, Ute, and European-American cultures, although the majority of sites date to the Ancestral Puebloan era. Ancestral Puebloan cliff dwellings, granaries, rock art, and open air pueblo sites in these canyons are indicative of high altitude occupation of the forest, particularly during the Pueblo I period (A.D. 700-900). Sites from this period are important for understanding the early formative period of the Ancestral Puebloan culture. Culturally, these sites exhibit ties toward the Mesa Verde core area to the east and may provide important data on prehistoric social interaction, economy, and other aspects of Ancestral Puebloan prehistory. Many of these sites are eligible for the National Register of Historic Places and may yield important information about prehistory. Ninety sites have been documented within the ¼ mile buffer; 70 sites are of Ancestral Puebloan affiliation. Adjacent to the Forest boundary are Ute allotment lands that were occupied during the early 1900s; these lands are no longer occupied, but are visited occasionally by land owners. Numerous additional sites are known to exist immediately beyond the corridors. Current Native American uses are few in these canyons due to limited access.			
Hammond Canyon	10	Scenic	3, 6
Cultural: Hammond Canyon has prehistoric archaeological sites that span Archaic through Ancestral Puebloan times along with Historic period use by European-Americans and Utes. Recent work in the canyon has added eight prehistoric sites including an important village with two-story buildings, prehistoric road segments, and a great kiva indicative of a community center. There are many more sites that remain undocumented within the canyon. Documented prehistoric sites largely date to the Pueblo I-Pueblo III period and include cliff dwellings, isolated granaries, rock art sites, open air habitation sites, and other facets of the Ancestral Puebloan culture. None of the sites exhibit evidence of hydraulic agriculture. Most of the documented sites are high above the stream channel and are related to mesa top farming, not riverene adaptations. Site integrity is generally good. The documented sites are generally considered eligible to the National Register of Historic Places and are currently being included in the South Cottonwood Watershed Archaeological District nomination. If eligibility for listing or actual listing on the National Register is evidence of National significance, then these sites exceed local significance. These sites may contribute information important to understanding prehistory in the area and are eligible for listing on the National Register of Historic Places under Criterion D. These sites are important components of the Mesa Verde regions archaeological heritage. The identification of the large village in Hammond Canyon with community integrative features (roads and great kiva) suggests local and regional scale social integration commonly associated with the Chaco Regional system. Elements of the Chacoan Regional System are not positively identified to the west of Comb Ridge. This village provides an important link between the Milk Ranch Point community and the Red Knobs and Cottonwood Falls communities along South Cottonwood Wash and provides evidence of complex social processes developing in the area as early as the late A.D. 800s. There is White Mesa Ute Indian tribal land in the river corridor. There is may be gathering of sumac, pine nuts, etc. in the lower elevations of the segment by members of the Navajo Nation. The significance of these resources, therefore, is important at both local and regional scales providing important research and interpretive potential, indicating a high cultural value for this segment.			
Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	41	Wild	5, 6
Cultural: Evidence from Woodenshoe and Lower Dark Canyon suggest the canyon area was used for over 6,000 years. There are numerous prehistoric sites ranging from artifact scatters to cliff dwellings. Ancestral Puebloan cliff dwellings, granaries, rock art, and open air sites in Woodenshoe and Lower Dark Canyon are indicative of high altitude occupation of the forest, particularly during the late A.D. 1100s. Culturally, these sites exhibit ties toward the west and may provide important data on prehistoric social interaction, economy, and other aspects of late Ancestral Puebloan prehistory. Many of these sites are eligible to the National Register of Historic Places and may yield important information about prehistory. Many of the resources are within the ¼ mile buffer. These resources are not strongly associated with the stream segments, but rather the general canyon environment (e.g., topography). Several resources have significant research and interpretive potential suggesting this river segment has high cultural values.			
Miners Basin (Placer Creek)	2	Recreational	*
Historic: Historical mining operations (buildings, mine shafts, tailings), on private property, are highly visible in the headwaters. Miners Basin at one time supported a community of several hundred mineworkers and was one of the area's largest gold mining operations.			
Upper Dark, Horse Pasture, Peavine & Kigalia Canyons in Upper Dark Canyon	26	Recreational	5, 6
Cultural: Ample evidence from Upper Dark Canyon suggests the canyon area was used for over 6,000 years. There are numerous prehistoric sites ranging from artifact scatters to cliff dwellings. Many of these sites are eligible to the National Register of Historic Places and may yield important information about prehistory. Temporally, there are well preserved Archaic period sites and Ancestral Puebloan sites. There is a Historic period cultural landscape related to early 20th century European-American use of the canyon for livestock and early oil extraction activities. The Scorup cattle operation is significant in local history and the settlement of San Juan County. Most of the resources are within the ¼ mile buffer. These resources are not strongly associated with the stream segments, but rather the general canyon environment (e.g., topography). Ancestral			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Puebloan occupations in this area reach elevations exceeding 7,600 feet and represent prehistoric agricultural adaptations to high altitudes that are not found on surrounding BLM lands and few places in the region, such as Mesa Verde National Park. Early and Middle Archaic period sites found in this area contain cultural deposits that are of high research value for understanding this poorly understood period of prehistory. Several resources have significant research and interpretive potential suggesting this river segment has high cultural values.			
Wasatch-Cache National Forest 33 segments of which 2 have Historic/Cultural ORVs.			
Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	3	Recreational	*
Historic: The privately owned Old Blacks Fork Commissary is the most outstanding tie hack site in the Uintas. The historical tie hacking operations in the Uintas were river related since the rivers were the means of moving the timbers downstream. The ORV achieved by character, size, and condition of the commissary and its eligibility for inclusion on the National Register of Historic Places.			
West Fork Smiths Fork: Source to Forest Boundary	14	Wild (4 mi.); Scenic (10 mi.)	3
Historic: The Hewinta Guard Station is a historically significant log ranger station dating from the late 1920s. The historic Suicide Park Grave site is also in the corridor. The remains of several tie hack cabins are upstream from the guard station. There are some groups of up to five cabins. A relatively well-preserved splash dam is related to the cabins. This complex of structures is a significant remnant of the tie hack era and is eligible for the National Register of Historic Places. The presence and number of tie hack cabins, the graves in Suicide Park, the historic ranger cabin, and the eligibility for at least some of these for the National Register of Historic Places, makes the historic values of this stream outstandingly remarkable.			

* Segment(s) only occur in Alternatives 1 and 2

Table 3.3e.2. Miles of segments with Historic / Cultural ORVs found suitable by alternative and classification.

Segments with Historic / Cultural ORVS		Alternatives						
		1	2	3	4	5	6	7
Total Segments	20	0	0	7	0	12	6	2
Total Miles	244	0	0	71	0	171	117	28
Recreational Miles	70	0	0	20	0	39	26	11
Scenic Miles	68	0	0	33	0	45	23	13
Wild Miles	107	0	0	18	0	87	68	4

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3d addresses one issue:

Issue 4 – Designation offers long-term protection of resource values. The measurement indicators are: miles of river by Wild, Scenic, and/or Recreational classification and the analysis of the impacts to Historic and Cultural ORVs by river.

Alternative 1 – No action, maintain eligibility of all river segments.

The nature of this proposed undertaking will not affect archaeological or historic sites. Archaeological and historic sites are protected from looting, vandalism, and development by The National Historic Preservation Act; The Historic Sites Act of 1935; The Antiquities Act of 1906; and The Archaeological Resources Protection Act (ARPA).

In this alternative, all 86 river segments (840 miles) would continue to be managed as eligible for their

potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification, and historic / cultural ORVs (see Table 3.1.2 for description of interim management). Of these 86 segments, outstandingly remarkable historic / cultural values would be protected in 20 river segments or 244 miles of stream.

Alternative 2 – No rivers recommended.

The nature of this proposed undertaking will not affect archaeological or historic sites. Archaeological and historic sites are protected from looting, vandalism, and development by The National Historic Preservation Act; The Historic Sites Act of 1935; The Antiquities Act of 1906; and The Archaeological Resources Protection Act (ARPA).

In this alternative, a determination would be made that all 86 segments (840 miles) are found not suitable and released from Wild and Scenic River interim protection. Of these 86 segments, historic / cultural ORVs occur in 20 river segments or 244 miles of stream. Protection of river values would continue to be managed by existing laws and regulations and standards provided in Forest Plans. Choosing this alternative would not in itself initiate any changes to outstandingly remarkable historic / cultural values nor would it provide any additional protection for outstandingly remarkable historic / cultural values on the National Forests in Utah.

Under Alternative 2, existing laws and regulations would still be in place, however, heritage sites would be threatened at current rates from potential development and an increasing threat over time from motorized access. Over time, depending on area management standards, large-scale projects like dams, water projects and other activities such as timber harvest and road building could be approved for some segments, affecting outstandingly remarkable historic / cultural values. No reasonably foreseeable water projects affect stream segments with outstandingly remarkable historic/cultural values (see Table 3.12.4).

Most segments will not be affected by water development projects or other large-scale activities and the related outstandingly remarkable historic / cultural values will generally remain the same. Existing laws and regulations and Forest Plan standards would continue to be followed. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, the approximately 366 miles of segments which are located in Wilderness and Research Natural Areas will generally remain unaffected.

Impacts Common to Alternatives 3, 4, 5, 6, 7

There will be no ground disturbing activities associated with this project. Regardless of which alternative is selected, the nature of this proposed undertaking will not affect archaeological or historic sites. Archaeological and historic sites are protected from looting, vandalism, and development by The National Historic Preservation Act; The Historic Sites Act of 1935; The Antiquities Act of 1906; and The Archaeological Resources Protection Act (ARPA).

All alternatives protect historic, prehistoric, and cultural resources. However, designation and development of comprehensive river management plan will provide added protection through: likelihood of additional cultural surveys; development of an interpretive plan that would lead to improved cultural awareness and protection; and prohibition of dams and additional limitations on roads, stream crossings, motorized use, and mineral entry.

The following number of segments with historic / cultural ORVs would be found suitable:

- In Alternative 3, 7 river segments (71 miles).
- In Alternative 4, 0 river segments (0 miles).

- In Alternative 5, 12 river segments (171 miles).
- In Alternative 6, 6 river segments (117 miles).
- In Alternative 7, 2 river segments (28 miles).

Those segments found suitable would continue to receive interim protection (the effects of which are explained in Alternative 1 analysis), and could be congressionally designated. Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, or historic / cultural ORVs, and require a comprehensive river management plan be developed within three years of designation to protect free flow and historic / cultural ORVs.

The following number of segments with historic / cultural ORVs would be determined not suitable for wild and scenic designation:

- In Alternative 3, the 13 river segments (173 miles).
- In Alternative 4, 20 river segments (244 miles).
- In Alternative 5, 8 river segments (73 miles).
- In Alternative 6, 14 river segments (127 miles).
- In Alternative 7, 18 river segments (216 miles).

The segments determined not suitable would be released from interim protection (see Table 3.1.1) and effects on outstandingly remarkable historic / cultural values as discussed in Alternative 2 would apply.

3.3f Geologic and Hydrologic Values

Introduction

This section will first define and describe the Geologic and Hydrologic Outstandingly Remarkable Values (ORVs) of the study river segments. Then this section will discuss which streams in this study may be recommended for suitability in each alternative and then relate the affects of those recommendations to these stream related values. The Geologic and Hydrologic ORVs have been combined in this discussion and will be referred to as Geologic/Hydrologic ORVs.

The Geologic/Hydrologic ORVs are applied to stream segment corridors that contain an example of a geologic and/or hydrologic feature, a process or phenomena that is rare or unique to the region, or an outstanding example of a commonly occurring feature. The feature may be in an unusually active stage of development, represent a "textbook" example and/or represent a rare or unique combination of geologic or hydrologic landforms or features (erosional, volcanic, glacial, drainage patterns, etc.). The outstandingly remarkable Hydrologic values include exceptional water quality, unique regimes, critical hydrological related values, etc. (FSH 1909.12 Chapter 80).

Detailed information for Section 3.3f came from Appendix A – Suitability Evaluation Reports, specifically information from the physical descriptions of the river segments and the Summary of Outstandingly Remarkable Values.

Affected Environment

Outstandingly remarkably Geologic/Hydrologic values are found within 19 of the 86 river segment corridors. There are 231 river miles with a Geologic/Hydrologic ORV out of the 840 miles of river miles being studied. The National Forests in Utah described the Geologic/Hydrologic ORV to include river corridors with exceptional examples of: waterfalls; faulting and uplift, erosional and depositional glacial features such as U-shaped valleys, lateral and end moraines, glacial lakes, hummocky terrain, and heavily incised outwash plains; erosional and depositional landforms related to previous flooding events; karst

systems that include sinkholes, caves, and underground drainage, and artesian groundwater springs complexes, there are also instances of a collapsed salt dome and lava tubes in these stream corridors. These streams flow through many geologic formations including Missippian Limestone, Weber Sandstone, Uinta Mountain Quartzite, the upper Jurassic Morrison Formation, through the Jurassic-Triassic Glen Canyon Group (Navajo, Kayenta, Wingate) to the Triassic Chinle Formation, the Mancos shale, Dakota sandstone, Morrison formation, Summerville formation, Entrada sandstone, Chinle and Moenkopi sandstone formations.

Table 3.3f.1 lists the river segments, classification, mileage, and describes the outstandingly remarkable Geologic/Hydrologic ORVs by Forest. Table 3.3f.2 lists the river segments by classification with total mileage for all the alternatives.

Table 3.3f.1. River segments with Geologic/Hydrologic ORVs (this information was provided by the Forests and can also be found in Appendix A – Suitability Evaluation Reports).

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Ashley National Forest 24 segments of which 8 have Geologic/Hydrologic ORVs			
Ashley Gorge Creek	10	Wild	3
The upper portion of this segment flows between steep colluvial slopes underlain by Mississippian limestone. There are numerous palisade cliffs with talus piles beneath. There is active down slope movement of the colluviums, probably by creep. The stream at the bottom constantly removes material, thus keeping the slope movement active. Much of the valley bottom is filled with alluvium and glacial outwash, with numerous benches and debris flows below the side slopes. As opposed to the outwash, which is composed of Uinta Mountain quartzite, the slope wash is composed of material derived from the Morgan and Weber formations. The slope wash has built terraces and side valley fans which stand well above the glacial outwash. Flash floods carry sediment into the stream channels, but the numerous boulders in the material inhibits deep cutting. The lower gorge has exceedingly steep canyon sides and vertical cliffs, underlain by the Weber Sandstones. The vertical nature of these slopes is caused by the "jointing" in the Weber formation. In the process of down cutting the valleys, the stream also undercut the bottoms of the canyon thus removing support from the overlying rocks. The already existing "joint sets" create natural planes of weakness for rocks to fracture, break and fall. Thus, the process of canyon formation is accompanied by very impressive and spectacular rock falls. Whitewater and high flows occur in spring with snow and ice thaws. Duration of high flows is dependent on snow pack and summer storms. High flows and the rugged nature of the land provide the adventurous with unforgettable experiences. However, due to the isolation and rugged nature of the gorge, easy access is not possible. The springs in the lower portion of the gorge are charged by water entering a large karst system connected to the Dry Fork, Brownie Canyon, and other drainages. This limestone karst system (sinkholes, caves, and underground drainage) provides a significant amount of water for the Vernal Municipal Watershed. Water discharged from Oaks Park is diverted in a side drainage and enters Ashley Creek about 1/4 of the way down the drainage. Flows from this diversion add additional water in the fall when natural flows are reduced. As in other drainages along the Western Section, there is considerable loss of water to the underground karst system.			
Black Canyon	10	Wild	3, 5
Black Canyon begins on a nearly level plateau formed in the Bishop Conglomerate. It is an erosional surface that developed in a depositional environment prior to uplifting and down cutting of the Uinta Mountains. The colluviums of the Bishop Conglomerate overlay the lithology of other formations, including Mississippian limestones. The canyon bottoms are open and rounded at the weakly-dissected headwater area. There is little or no dissection of the side slopes, and few secondary tributaries exist. There are small meandering streams in the bottom, but they are not actively cutting or gulling at present. There are many sections that are intermittently dry, due to water entering or sinking in the underlying karst limestones system. The lower portion of this segment consists of exceedingly steep canyon sides and vertical cliffs underlain by Weber Sandstones. The vertical nature of these slopes is caused by "jointing" in the Weber formation. In the process of down cutting the valleys, the stream also undercut the bottoms of the canyons, thus removing support from the overlying rocks. The already existing "joint sets" create natural planes of weakness for rocks to break and fall. Thus, the process of canyon formation is accompanied by frequent spectacular rock falls. The jagged canyon sides of sandstone bedrock make access extremely limited. There are numerous boulders and down woody debris in the narrow canyon bottom, making access extremely difficult. These geological and natural features are important in a hydrologic sense, since they cause any precipitation that is rapidly discharged directly to the stream channel. Fossils can be found in various formations. The Bishop conglomerate over limestone has resulted in the karst system sinks system. There is a clear stratification of various sandstone and limestone formations exposed in canyon walls.			
Lower Dry Fork Creek	7	Recreational	3

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
Lower Dry Fork flows through a glacial outwash bottom with alluvial-colluvial side slopes. Many debris deposits occur along the drainage bottom. The outwash is predominantly quartzite of the Uinta Mountain group, but limestone colluvial, and debris also occur. The slope wash has built terraces and side valley fans which stand well above the glacial outwash. Flash floods carry sediment into the stream channel, and gullies have resulted where vegetation has been removed by fire and heavy summer storms. High intensity summer storms are common in this segment. Over 200 feet of alluvium and outwash near the canyon mouth has filled and broadened the Dry Fork Canyon bottom. The eastern canyons lack this fill and are much narrower than Dry Fork. Lower Dry Fork only flows after a large underground karst system is filled, and flows only through the month of June in most years. Water is diverted into the Mosby Cannel below Upper Dry Fork and reduces the duration of flows in Lower Dry Fork. Flows in this segment are dependent on spring melt and recharged karst systems. Much of the water entering the karst system flows underground to the Ashley Creek Drainage. Note: The Geologic/Hydrologic Value is the only value rated "High" that extends beyond the National Forest boundary on to land administered by the Bureau of Land Management.			
Middle Main Sheep Creek	5	Recreational	3, 5
Middle Main Sheep Creek has high-altered stream morphology due to flooding and debris flows. Flash flooding occurred in the 1960's from an ice jam that dammed water and then failed. In the 1980's, a large debris flow came out of Mahogany Draw, scoured the stream, and washed out the road in numerous places. The stream itself is relatively confined in a very steep canyon comprised of steep bedrock cliffs. Faulting has created some of the most spectacular bedrock exposures, and the area is part of the Sheep Creek National Geological Area. Big Spring within this segment contributes flows to the drainage, as is part of an underground karst system.			
Reader Creek	6	Scenic	3, 5, 6
This segment descends through a broad low relief upper glaciated basin in Uinta Mountain quartzite. The area contains hummocky ground moraine and wet meadows. Wet meadows dominate this segment, and numerous seeps and springs are located adjacent to the meadow areas. These meadows are former lakes filled in by sediments following glaciation. Organic soils are found along much of the wet meadow stream reaches. As the stream moves laterally across the meadow, large chunks of bank are undercut. The watercourse corridor exhibits an excellent geomorphic example of glaciation, both scour and deposition. There are natural waterfalls, bedrock at the surface, and lateral moraines along the watercourse corridor. The watercourse corridor reveals unique educational examples of glaciation and hydrologic actions.			
South Fork Ashley Creek	15	Scenic	*
South Fork Ashley Creek is located in a glaciated valley. Meadows occur along the drainage in the lower portion of the segment. These meadows have not been glaciated; rather they are filled in lakebeds from glacial melt. Shale outcrops of the Uinta Mountain Quartzite occur at the head of the drainage, and considerable cutting and erosion is taking place. Uinta Mountain Quartzite underlies the broad tree covered drainages. In addition to the mainstream channels through the canyon bottoms, there are numerous areas of underflow with short intermittent channels. The gross shape of the landform was probably formed during Browns Park time with minor modifications, such as the formation of the stone streams during the ice age. This area was not glaciated, but large ice sheets did cover much of the area. Meadows are dominant features in areas where they formed behind bedrock constrictions, and in areas where former lakes were filled in following melting of ice sheets. These meadows are extremely wet and boggy all or most of the year and have perched water tables. Runoff is high and disturbed soils are deposited in stream channels by overland flows during summer thunderstorms and late spring snowmelt periods. Headcuts and gullies are localized near stream channels where livestock grazing and watering have been excessive. The dominant process occurring in these meadows is a slow buildup of organic material, leaching of iron from the Uinta Mountain quartzite, and slow lateral migration of the stream channels with accompanying bank caving. These areas are snowbound by early November and sometimes earlier. Diverse glaciated features exist within the watercourse corridor, i.e., Lake Wilde, other alpine lakes, unaltered streams, lateral moraines, scour, hummocky frost boreal, landslides, and a fault at the head of Lakeshore Basin. The watercourse corridor is classified as a "reference condition" for the stream type.			
Upper Yellowstone Creek, including Milk Creek	33	Wild	5, 6
The main drainages are characterized by a relatively broad glacial canyon bottom covered by a think veneer of hummocky ground moraine and outwash, and a few wet meadows, seeps and springs. Throughout are thin hummocky ground moraines and outwash, with inner gorges cut deep into the underlying quartzite bedrock. In many places the segment flows over bedrock with gradients of 3% to15%.			
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	Wild	3, 5, 6, 7
The watercourses are located on the floor of the higher cirques, and have been affected by glacial scouring. There are areas of glacially polished bedrock. In most areas, the till is very thin, but it can be quite thick where glaciers have scoured out pockets. There is not much sediment in this segment, except where there are shale outcrops. There are numerous small lakes in the upper area, with bedrock lips from the glaciations. The broad glaciated basins below tree line occur in hummocky ground moraine along the glacial valley bottoms that exhibit a well-developed drainage pattern. The streams flow through three landform features in this area: wet meadows in the swales, dry meadows on the hummocks, and conifer-covered areas on the larger hummocks. The unit contains most of the larger glacial lakes and wet meadows in the Uinta Mountains, and consists predominantly of riparian features. The V-shaped canyons at mid elevation have many benches with bedrock outcrops of the Uinta Mountain quartzite. Frost action is active along the stream courses where the low cohesion and steep stream gradients have combined to form the V-shaped valley. The coarse material eroded from these slopes is deposited in the wider glacial bottom below. The wider canyon bottom below the above-described steep V-shaped canyon is characterized by thin veneer of hummocky ground moraine and outwash, which is located below moderately steep to very steep glacial valley walls of lateral moraines. Wet meadows, seeps and springs are located in the wide canyon bottom. Throughout much of the length, the streams have cut a gorge in the quartzite bedrock beneath the drift. However, there are locations where the streams are still			

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
flowing through the till and others where they are flowing over bedrock.			
Dixie National Forest 10 segments of which 3 have Geologic/Hydrologic ORVs			
North Fork Virgin River	1	Scenic	3, 5, 6, 7
The North Fork of the Virgin River begins at Cascade Falls, a spring that is fed by Navajo Lake through underground lava tubes and limestone solution channel. The river flows down the south face of the Markagunt Plateau through high elevation landscapes of Jurassic and Cretaceous sediment deposits, with extensive viewsheds and examples of stream erosion in Utah. The upper portions of the watershed are located amidst the pink cliffs of the Virgin River rim.			
Pine Creek	8	Wild	3, 5, 7
Pine Creek is a small, fast running creek that flows down a narrow tree lined canyon in the Box-Death Hollow Wilderness know as “The box”. The creek is predominantly a step-pool system that carves its way through the Escalante Monocline and into Navajo Sandstone. Pine Creek is part of the Escalante River System which is noted for colorful canyon walls composed of layers of limestone, siltstone and sandstone. The geologic record contained in these layers speaks volumes about past history of the area. Weathering and erosion have created a variety of unique features within the canyon.			
Moody Wash	5	Wild	3, 5, 6
Moody Wash’s close connectivity to a shallow alluvial groundwater table as well as its regular inundation by flood events play a primary role in the support of the riparian and aquatic ecosystem. The mainstem of Moody Wash from its beginning approximately 1 mile above the Racer Canyon confluence to near the Forest boundary is considered a mid-elevation, transitional reach characterized by regular upwelling and downwelling of surface flow. Because of these conditions, this kind of system is particularly sensitive to human disturbances such as dams, diversions, and groundwater pumping. Moody Wash is unique to other semi-arid streams in southwest Utah in that it is a rare system that has not been impaired by these common kinds of disturbances, and is still intact and functioning. In addition, Moody Wash is unique to the majority of other stream systems in southwest Utah draining into the Virgin River Basin in that it is dominated by volcanic geology versus the more typical sedimentary limestone and sandstone well known to the area.			
Fishlake National Forest 5 segments of which 0 have Geologic/Hydrologic ORVs			
Manti-La Sal National Forest 10 segments of which 4 have Geologic/Hydrologic ORVs			
Mill Creek Gorge	3	Wild	5
The watercourse descends through five different formations in the main canyon areas (Mancos shale, Dakota sandstone, Morrison formation, Summerville formation, and Entrada sandstone). The terminus of the watercourse ends in the Navajo, Chinle and Moenkopi sandstone formations. This geology is dipping to the west, with the western edges along a collapsed salt dome (Spanish Valley). The middle canyon area has moderately steep valley bottoms, while the lower canyon areas are within narrow and steep sandstone canyons. At mid elevation, the channel crosses bench lands and drops again along moderately steep gradients over sandstone bedrock. The channel is rocky with steep gradients in the headwaters and then levels out as it crosses through basin areas.			
Roc Creek	9	Wild	3, 5
Roc Creek descends through a geologic sequence beginning at the Forest boundary at the upper end of the canyon in the upper Jurassic Morrison Formation. The sequence continues through the Jurassic-Triassic Glen Canyon Group (Navajo, Kayenta, Wingate) to the Triassic Chinle Formation at the Forest boundary at the lower end. Massive sandstone cliffs vary from 1,500 to 1,800 feet in height. The canyon follows fault lines between two collapsed salt domes (Sinbad Valley and Paradox Valley), and terminates in the Dolores River Canyon area. The channel gradient is uniform for most of its length, with moderate gradients. Considerable alluvium has been deposited within the canyon due to uniformity of gradient. Faulting and erosion has created patterns of ledges, benches and slick rock aprons along Sinbad Ridge.			
Hammond Canyon	10	Scenic	3, 6
Hammond Canyon incises the eastern side of the Elk Ridge Anticline. The northern “lobe” of the canyon appears to have been influenced by the dominant fracture patterns of the rocks in the area. Most of the canyons coming off the southeastern portion of Elk Ridge trend NW-SE, as does the northern lobe of Hammond Canyon. The location of the stream forming the southern lobe of the canyon was probably heavily influenced by east-west trending faults. The canyon is up to approximately 1,000 feet deep, with steeply cut walls. In some places erosional remnants have produced spires and fins hundreds of feet high. The stratigraphy exposed in the canyon goes from late Pennsylvanian through the Triassic. Large expanses of the aeolian Wingate formation (large rounded fossil sand dunes) with contrasting ponderosa pine are located in the eastern (lower) portion of Hammond Canyon. The northern and western portion of the canyon has extensive exposures of white Cedar Mesa sandstone with dark green vegetation.			
Upper Dark Canyon	26	Recreational	5, 6

Eligible River Segment	Miles	Classification	Segment Suitable in Alternatives
These canyons are located on the northwestern flank of the Elk Ridge Anticline. The stratigraphic section shown goes from the Upper Pennsylvanian through the Triassic, with several prominent unconformities. The canyons are generally oriented northwest-southeast, probably due to the dominant fracture pattern in the area. Abandoned uranium mines are present along the upper canyon rims where they meet Elk Ridge. The uranium deposits are in the Moss Back Member of the Chinle Formation, where an unconformity overlies the Moenkopi Formation. These canyons contain the most striking example of the white Cedar Mesa sandstone with dark green vegetation in the area, which produces one of the most characteristic features of Dark Canyon. The bottom of the canyon also contains green vegetation (grass, sagebrush, and mountain brush), contrasted with most of the canyon country in the area. In the area of the intersection of Peavine Canyon with Dark Canyon, the Cedar Mesa has weathered to form spires, fins, and arches.			
Uinta National Forest 4 segments of which 1 has Geologic/Hydrologic ORVs			
Little Provo Deer Creek	3	Recreational	3, 6, 7
Cascade Springs is a big perennial spring complex that significantly augments water flows to the stream, and has interesting geological and hydrologic characteristics. The springs form an unusual environment for the area. Several levels of naturally developed cascading pools with clear spring waters and wetlands are inhabited by a wide variety of flora (cattails, watercress, and wildflowers) and fauna. This is a very unusual environment for the area. The springs' cool riparian setting makes them a popular attraction, and an interpretive site has been developed here because of this character. Cascade Springs was developed in the 1980's as an environmental education site and is a popular attraction for local users. Its boardwalks, bridges, paved paths, and interpretive signing make this unusual setting a very pleasant and popular destination. Educational groups use the springs as a teaching site, and it is a designated wildlife viewing area.			
Wasatch-Cache National Forest 33 segments of which 3 have Geologic/Hydrologic ORVs			
Left, Right, and East Forks Bear River	13	Wild	3, 6
The stream originates from intensively glaciated headlands and alpine settings in the Uinta Mountains and extends to broader floodplains, braided reaches, forests, and meadows at its lower elevations. These two forks of the Bear lie in textbook classic narrow U-shaped valleys formed by the northward movement of Pleistocene glaciers from their origins at higher elevations. The geological setting in the upper basins of the Left and Right Hand Forks of the Bear provides students of glacial geomorphology a fine example of the glacial trough shaped valleys.			
Little Cottonwood Creek	8	Recreational	3
The geologic landscape in this segment is that of a heavily glaciated valley, with steep gray granite walls. The cirques in the upper basin offer an excellent example of past glaciations. As background views from the corridor, the features reveal a story of earth's history.			
Logan River	19	Recreational	3, 6
In broad scale, the entire river corridor presents an unparalleled cross section of the geologic structure and middle and lower Paleozoic carbonate stratigraphy of the west flank of the Bear River Range. A myriad of smaller geologic features fall within the confines of the corridor which contains the geologically-interesting meanders of the Logan River. The geological features most apparent along the course of the river are some of the karst features, notably Ricks Springs Cave, Logan Cave, and Wind Cave. Other caves also exist, and undoubtedly many more remain to be discovered. Ordovician quartzite strata near Right Fork contain unusually well formed and preserved fucoidal structures (fossilized casts of ancient worm borrows which appear like seaweed mats frozen in the stone). At the west end of the corridor, lake terrace gravel deposits of prehistoric Lake Bonneville perch above the river bed and mark the upper level of a lake with enormous significance in the Great Basin. Well-defined faults and shear zones cut and displace the sedimentary strata in several road cuts along the corridor, some of which also show geologically interesting small-scale folding of the strata.			

* Segment(s) only occur in Alternatives 1 and 2

Table 3.3f.2. Stream Segment Miles with Geologic/Hydrologic ORVs by Wild, Scenic, or Recreational Classification by Alternative (Source: Appendix A – Suitability Evaluation Reports and List of Rivers)

Geologic/ Hydrologic ORV	Classification	Miles in Alt. 1 & 2	Miles in Alt. 3	Miles in Alt. 4	Miles in Alt. 5	Miles in Alt. 6	Miles in Alt. 7
	Recreational	**68**	**42**	**0**	**31**	**48**	**1**
	Scenic	**32**	**17**	**0**	**7**	**17**	**1**
	Wild	**131**	**95**	**0**	**108**	**91**	**48**
	Totals	**231**	**154**	**0**	**146**	**156**	**50**

Environmental Consequences

Impacts to the 86 Wild and Scenic study segments will be discussed in terms of which stream segments will be recommended as suitable and not suitable by alternative, the implications of managing those stream segments free-flowing condition and ORVs, and the expected impacts to those segments found not suitable by alternative.

Classification of the stream segments describes the existing level of development within the stream corridor and also relates to how National Forest System lands within suitable stream corridors will be managed in the future. See Table 3.1.1 for restrictions to activities within stream corridors based on classification of suitable stream segments.

For Alternatives 1 through 7, each alternative selects a different set of stream segments and has different implications for the future management of activities within the 86 Wild and Scenic study segment corridors. Refer to Table 3.1.2 for a list of basic assumptions about how each alternative may influence Forest management and activities allowed within these stream corridors.

The effects analysis in Section 3.3f will address one issue:

> Issue 4 – Designation offers long-term protection of resources values. The measurement indicator for the long-term protection of stream related Geologic/Hydrologic ORVs is miles of river by Wild, Scenic, and Recreational classification. Miles of river with Geologic/Hydrologic ORVs by alternative will also be used to analyze the possible impacts to the stream related ORVs that may result if streams are not recommended for suitability.

The information used in this analysis is from Appendix A – Suitability Evaluation Reports, Summary of ORV and physical description of the river segment sections.

General Environmental Impacts

Table 3.3f.3 lists the stream segments with Geological/Hydrological ORVs and mileages by alternative (source information from Appendix A – Suitability Evaluation Reports). The list of segments and mileages from this table and the list of streams by classification in Table 3.3f.2 will be used in combination to discuss the impacts of Alternatives 3 through 7 on the ORV. Stream segments selected in an alternative may be found suitable and managed to protect the Geologic/Hydrologic ORVs and free-flowing condition within the Wild and Scenic River system.

Stream segments determined not suitable would not be managed to protect the ORVs or the free-flowing condition within the wild and scenic river system. Geologic/Hydrologic ORVs may be impacted by this lack of protection due to large-scale projects that change the landscape such as mining, road building, or water resource development projects. The impacts of these landscape changing activities are related to development within the stream corridor and can be managed to limit the impacts to the free-flowing condition and the river related ORVs, except for instance of water development projects. If a stream segment is determined not suitable under the Wild and Scenic River Act, there is no other protection available to protect the free-flowing condition of a stream. The free-flowing condition is crucial to sustain a Geologic/Hydrologic ORV. Therefore, stream segments with Geologic/Hydrologic ORVs that are not suitable, which are also identified as having reasonable foreseeable water development projects related to them may be impacted by those water projects. Stream segments that fall into this category will be listed in the following alternative discussions, please see Table 3.12.4 for the complete list of all the ORVs that may be impacted by reasonably foreseeable water developments.

Alternative 1 – No action, maintain eligibility of all river segments.

In Alternative 1, Table 3.3f.2 shows that all of the 231 miles of river with Geologic/Hydrologic ORVs would be managed by the Forest Service to protect as eligible for inclusion into the Wild and Scenic River system to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2). The stream segments would continue to be managed based on the classification criteria for 131 miles of Wild, 32 miles of Scenic, and 68 miles of Recreational river (see Table 3.3f.2); free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant).

Table 3.3f.3. Stream segments with Geologic/Hydrologic ORVs by Alternative.

Eligible Segments with Geologic / Hydrologic ORVs	Miles	Class.	Segment Found Suitable in Alternatives	Miles by Alt. 3	Miles by Alt. 4	Miles by Alt. 5	Miles by Alt.6	Miles by Alt. 7
Ashley National Forest								
Ashley Gorge Creek	10	Wild	3	10	0	0	0	0
Black Canyon	10	Wild	3, 5	10	0	10	0	0
Lower Dry Fork Creek	7	Rec.	3	7	0	0	0	0
Middle Main Sheep Creek	5	Rec.	3, 5	5	0	5	0	0
Reader Creek	6	Scenic	3, 5, 6	6	0	6	6	0
South Fork Ashley Creek	15	Scenic	0	0	0	0	0	0
Upper Yellowstone Creek, including Milk Creek	33	Wild	5, 6	0	0	33	33	0
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	Wild	3, 5, 6, 7	40	0	40	40	40
Total Miles by Alternative for the Ashley National Forest				78	0	94	79	40
Dixie National Forest								
North Fork Virgin River	1	Scenic	3, 5, 6, 7	1	0	1	1	1
Pine Creek	8	Wild	3, 5, 7	8	0	8	0	8
Moody Wash	5	Wild	3,5,6	5	0	5	5	0
Total Miles by Alternative for the Dixie National Forest				14	0	14	6	9
Manti-La Sal National Forest								
Mill Creek Gorge	3	Wild	5	0	0	3	0	0
Roc Creek	9	Wild	3, 5	9	0	9	0	0
Hammond Canyon	10	Scenic	3, 6	10	0	0	10	0
Upper Dark Canyon	26	Rec.	5, 6	0	0	26	26	0
Total Miles by Alternative for the Manti-La Sal National Forest				19	0	38	36	0
Uinta National Forest								
Little Provo Deer Creek	3	Rec.	3, 6, 7	3	0	0	3	1
Total Miles by Alternative for the Uinta National Forest				3	0	0	3	1
Wasatch-Cache National Forest								
Left, Right, and East Forks Bear River	13	Wild	3, 6	13	0	0	13	0
Little Cottonwood Creek	8	Rec.	3	8	0	0	0	0
Logan River (Lower)	19	Rec.	3, 6	19	0	0	19	0
Total Miles by Alternative for the Wasatch-Cache National Forest				40	0	0	32	0
Total Miles of Stream with Geologic/Hydrologic ORVs:	231	Total Miles of Stream by Alternative:		154	0	146	156	50

Rivers which are determined eligible or suitable for the National System through agency planning

processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

There may also be road construction associated with mining activities that may be restricted due to a no action decision. These streams with Geologic/Hydrologic ORVs have been identified as having the potential mining or oil and gas potential within the corridor: Lower Dry Fork, Pine Creek, Left, Right and East Forks Bear River, Hammond Canyon, Moody Wash and Roc Creek (for more detailed information about these projects see Section 3.6, Mineral Resources, and Appendix A – Suitability Evaluation Reports). Stream segments with Geologic/Hydrologic ORVs are not related to any reasonably foreseeable water projects. Please refer to Table 3.12.4 to see the entire list of all of the potential water development projects.

Stream segments with Geologic/Hydrologic ORVs are not related to any reasonably foreseeable water projects. Please refer to Table 3.12.4 to see the entire list of all of the potential water development projects.

Alternative 2 – No rivers recommended.

In Alternative 2, Table 3.3f.2 shows that all of the 231 miles of river with Geologic/Hydrologic ORVs would not be protected by the Forest Service to maintain the free-flowing condition, the ORVs, and the classification criteria (see Table 3.1.1 and 3.1.2). Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

There are no new transportation corridors identified within any of the streams segment corridors that have Geologic/Hydrologic ORVs. There may be localized road building associated with potential timber management projects on these segments with Geologic/Hydrologic ORVs: Reader Creek, Lower Dry Fork, South Fork Ashley Creek, Black Canyon, North Fork Virgin River, Upper Dark Canyon, and Roc Creek (for more detailed information about these projects see Section 3.11 – Timber Resources and Appendix A – Suitability Evaluation Reports).

There may also be road construction associated with mining activities. These streams with Geologic/Hydrologic ORVs have been identified as having the potential mining or oil and gas potential within the corridor: Lower Dry Fork, Pine Creek, Left, Right and East Forks Bear River, Hammond Canyon, Moody Wash and Roc Creek (for more detailed information about these projects see Section 3.6 – Mineral Resources, and Appendix A – Suitability Evaluation Reports). Stream segments with Geologic/Hydrologic ORVs are not related to any reasonably foreseeable water projects. Please refer to Table 3.12.4 to see the entire list of all of the potential water development projects.

Alternative 2 would allow for the most impacts to stream related ORVs to occur. This alternative would ensure access and the removal of restrictions related to Wild and Scenic River management for development of water projects, mining, oil and gas activities, and road building activities within the stream corridors with Geologic/Hydrologic ORVs.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other

developmental activities.

In Alternative 3, Table 3.3f.2 shows that 154 miles of river with Geologic/Hydrologic ORVs would be found suitable in the National System to maintain the free-flowing condition, the Geologic/Hydrologic ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). Free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). The stream segments would continue to be managed based on the classification criteria for 95 miles of Wild, 17 miles of Scenic, and 42 miles of Recreational river (see Table 3.3f.2). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 3, 77 miles of river with Geologic/Hydrologic ORVs would be determined not suitable. Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

Mill Creek Gorge is the only stream segment that has a road right of way or an easement related to it that has a Geologic/Hydrologic ORV. There may also be road construction associated with mining activities. There are streams with Geologic/Hydrologic ORVs that have been identified as having the potential mining or oil and gas potential within the corridor (Lower Dry Fork Creek, Pine Creek, Moody Wash, Roc Creek, Hammond Canyon, Left, Right, and East Forks Bear River and Little Cottonwood Canyon). There are no streams identified with any reasonably foreseeable water projects.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

In Alternative 4, Table 3.3f.2 shows that there are no river segments with Geologic/Hydrologic ORVs. Therefore, no river segments with Geologic/Hydrologic ORVs would be found suitable to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). Free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 4, 231 miles of river segments with Geologic/Hydrologic ORVs would be determined not suitable. Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

In Alternative 5, Table 3.3f.2 shows that 146 miles of river with Geologic/Hydrologic ORVs would be found suitable to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). Free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). The stream segments would continue to be managed based on the classification criteria for 108 miles of Wild river, 7 miles of Scenic river, and 31 miles of Recreational river (see Table 3.3f.2). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 5, 85 miles of river with Geologic/Hydrologic ORVs would be determined not suitable. Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

There are right of ways or easements that may be associated with new transportation corridors identified on the Mill Creek Gorge and Roc Creek stream segment corridors that have Geologic/Hydrologic ORVs in Alternative 5. There are no reasonably foreseeable timber projects planned within these stream corridors, so no timber harvest related road building is expected on these segments with Geologic/Hydrologic ORVs.

There may also be road construction associated with mining activities. These streams with Geologic/Hydrologic ORVs have been identified as having the potential mining or oil and gas potential within the corridor: Lower Dry Fork, Left, Right and East Fork Bear River, and Hammond Canyon (for more detailed information about these projects see Section 3.6 – Mineral Resources and Appendix A – Suitability Evaluation Reports). These are no stream segments with Geologic/Hydrologic ORVs that are related to reasonably foreseeable water projects.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In Alternative 6, Table 3.3f.2 shows that 156 miles of river with Geologic/Hydrologic ORVs would be found suitable in the National System to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). Free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). The stream segments would continue to be managed based on the classification criteria for 91 miles of Wild river, 17 miles of Scenic river, and 48 miles of Recreational river (see Table 3.3f.2). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However,

the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 6, 75 miles of river with Geologic/Hydrologic ORVs would be determined not suitable. Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

There are no new transportation corridors identified within any of the streams segment corridors that have Geologic/Hydrologic ORVs. There are right of way claims and easements associated with the Logan River and Little Provo Deer Creek segments. There are no reasonably foreseeable timber projects proposed for any segment with Geologic/Hydrologic ORVs. There may be road construction associated with mining activities. These streams with Geologic/Hydrologic ORVs have been identified as having the potential mining or oil and gas potential within the corridor: Moody Wash, Hammond Canyon, Left, Right and East Fork Bear River (for more detailed information about these projects see Section 3.6 – Mineral Resources and Appendix A – Suitability Evaluation Reports). There are no streams with Geologic/Hydrologic ORVs are related to reasonably foreseeable water projects.

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In Alternative 7, Table 3.3f.2 shows that 50 miles of river with Geologic/Hydrologic ORVs would be found suitable to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). Free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). The stream segments would continue to be managed based on the classification criteria for 48 miles of Wild river, 1 mile of Scenic river, and 1 mile of Recreational river (see Table 3.3f.2). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 7, 181 miles of river with Geologic/Hydrologic ORVs would be determined not suitable. Therefore all of the reasonably foreseeable future large-scale or landscape changing projects would not be further restricted within these stream corridors (these types of projects include water development projects, mining activities, and road construction). These river segments would continue to be managed under Forest Plan direction, regulations and law, and any future projects would be analyzed in a separate, site-specific NEPA document.

There is a right of way for a transportation corridor identified along the Little Provo Deer Creek segment which has Geologic/Hydrologic ORVs, but this segment is classified as Recreational there would be minimal restrictions associated with this existing road. There are no proposed timber projects on any of the segments found suitable in Alternative 7 so there will not be any conflicts with road building. There may also be road construction associated with mining activities. One segment, Pine Creek has the Geologic/Hydrologic ORV and has also been identified as having the potential mining or oil and gas potential within the corridor (for more detailed information about these projects see Section 3.6 – Mineral Resources and Appendix A – Suitability Evaluation Reports). There are no projects with Geologic/Hydrologic ORVs that are associated with reasonably foreseeable water developments.

3.3g Ecological Values

Introduction

While no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of additional river-related values consistent with the foregoing guidance may be developed, including, but not limited to, hydrology, paleontology, and botany resources. (FSH 1909.12, Sec. 82.14a) Forests in Utah universally identified ecological values in their assessments, referring to them with different terminology including; Other Similar Values, Ecology, Ecological, and Wildlife/Ecology. For the purposes of this analysis they will all be referred to as Ecological values.

This section discusses the affected environment and environmental impacts on outstandingly remarkable ecological values. Ecological values include components of fish, wildlife, and plants. For a description of impacts on threatened, endangered, candidate, sensitive, and management indicator species refer to: Section 3.4 – Botanical Resources, Section 3.5 – Fish and Other Aquatic Species, and Section 3.13 – Wildlife (Terrestrial) Resources.

Detailed information for Section 3.3g came from Appendix A – Suitability Evaluation Reports, Summary of Outstandingly Remarkable Values.

Affected Environment

Twenty-seven river segments (223 miles) possess outstandingly remarkable ecological values.

Table 3.3g.1 summarizes the ecological values from Appendix A – Suitability Evaluation Reports. It also provides a list of segments with ecological ORVs as well as mileage, classification, whether or not they are in an area that offers some protections by an other type of designation (Wilderness, Research Natural Area (RNA)), and suitability by alternative.

Table 3.3g.1. Segments with Ecological Outstandingly Remarkable Values.

Eligible Segment	Miles	Classification	Ecological Value Referred to in SER as:	Other Designations	Segment Found Suitable in Alternatives
Ashley National Forest 24 segments of which 3 have Ecological ORVs					
Ashley Gorge Creek	10	Wild	Other Similar Value	RNA	3
The Research Natural Area within the corridor is a good representation of local undisturbed community types: riparian, cottonwood, dogwood and blue spruce understory communities. Aspen/snowberry community occurs, with mixed conifer on numerous debris fans and on lower canyon sloes. Mountain brush occurs on the south facing slopes on the east side of the canyon and Douglas-fir on north facing slopes. Shrubs associated with bottomlands occupy the canyon bottoms. Dogwood, aspen, narrowleaf cottonwood, snowberry and mountain ash are also present. Engelmann spruce also intermingles in the canyon bottom. Everet Spring Parsley is found in riparian areas along the canyon bottom.					
Lower Main Sheep Creek	4	Recreational	Other Similar Values	NRA	3, 5
Lower Main of Sheep Creek has mixed narrow leaf cottonwood, blue spruce with alder, birch, willow as a mid story with sedges and grasses and forbs as a ground layer. The unit provides high structural diversity which supports high numbers of species, including bird species. The watercourse is an important area for species migration and genetic interaction of both Kokanee salmon and Neotropical birds.					
Reader Creek	6	Scenic	Other Similar Values	No	3, 5, 6
Reader Creek cuts through glacial moraines with an overstory cover of subalpine fir and Engelmann spruce. The riparian vegetation consists of cinquefoil meadows with sedges, grasses and low growth willows. Marsh Marigold and elephant head are common forbs in wet areas. The corridor is the epicenter for Colorado River cutthroat reintroduction, and is essential for genetic interaction. There are good examples of permafrost and sphagnum moss within the watercourse corridor. Reader Creek corridor is a textbook example of plant and animal associations.					

Eligible Segment	Miles	Classification	Ecological Value Referred to in SER as:	Other Designations	Segment Found Suitable in Alternatives
Dixie National Forest 10 segments of which 4 have Ecological ORVs					
Moody Wash	5	Wild	Ecological	No	3, 5, 6
Moody Wash is a semi-arid desert stream system that is very closely connected to and dependant upon a shallow alluvial groundwater table. Summer low flows become intermittent, with areas of downwelling and upwelling that support and maintain a cottonwood and willow riparian plant community. Flows also support year-round populations of Virgin spinedace, speckled dace, and desert sucker, and amphibians such as the Arizona toad and canyon treefrog. The shallow groundwater table is recharged from winter-spring flows and summer thunderstorm flows, which also provide periods of perennial flow throughout the drainage, connecting populations of fish species during these high flows. Unlike the majority of similar systems in southwest Utah and the southwest U.S. that have been affected by development, groundwater pumping, channel modifications, and invasive species such as tamarisk, Moody Wash is still a fully functioning semi-arid desert stream system. Moody Wash supports healthy, self-sustaining populations of native wildlife, including State of Utah sensitive species, and diverse, resilient riparian communities.					
Pine Creek	8	Wild	Ecological	Wilderness	3, 5
Pine Creek supports a self-sustaining trout fishery that is dominated by brown trout, and native Colorado River cutthroat trout.					
Slickrock Canyon – (On Dixie NF, but administered by Fishlake NF)	2	Wild	Ecological	No	5
The stream (although intermittent) and associated riparian areas are vital to an otherwise desert ecosystem.					
Steep Creek – (Located on the Dixie NF, but administered by Fishlake NF)	7	Wild	Ecological	No	3 (4 mi), 5
The area provides vital riparian areas within an otherwise desert ecosystem.					
Fishlake National Forest 4 Segments of which 2 have Ecological ORVs					
Fish Creek	15	Wild (4.3 mi.); Recreational (10.5 mi.)	Wildlife/Ecology	RNA	3, 5, 7
Dense riparian vegetation along with an intact watershed exists in the upper Fish Creek drainage. The Forest Service has designated the upper watershed as the Fish Creek Research Natural Area. The lower portion of the watershed has been impacted more by human intervention but still retains the important components to sustain ecological integrity. The entire watershed provides important habitat for neotropical and resident avifauna, deer and other mammals, amphibians, and reptiles.					
Pine Creek / Bullion Falls	4	Wild	Wildlife/Ecology	RNA	5
Pine Creek flows support a quality riparian habitat zone along its course. The upper portion of the watershed (above Bullion Falls) is designated as a Research Natural Area.					
Manti-La Sal National Forest 10 segments of which 1 has Ecological ORVs					
Mill Creek Gorge	3	Wild	Other Similar Values	RNA	5
Mill Creek Gorge is part of the Mill Creek Gorge Research Natural Area exhibiting dense, vigorous riparian and woody shrubs in a wet environment. The narrow and deep canyon is unique to the surrounding xeric ecosystems.					
Uinta National Forest 4 segments of which 1 has Ecological ORVs					
Little Provo Deer Creek	3	Recreational	Ecological	No	3, 6, 7
This stream corridor was determined to have moderately high value for the ecological function and rare communities, and a high value for species diversity, and ecological-related educational/scientific use and value the area affords.					
Wasatch-Cache National Forest 33 segments of which 16 has Ecological ORVs					
Boundary Creek	4	Wild	Ecology	No	6
Boundary Creek is a river and corridor which has not been modified by man. This spruce/fir and lodgepole ecological setting is at a somewhat lower elevation than some others compared in this inventory of rivers in the Uinta Mountains. As such it contains qualities that are distinct from the alpine river settings. Added to this distinction, the Boundary Creek drainage has escaped heavy recreation pressure, timber harvest and grazing over recent decades, making the area nearly pristine ecologically.					
East Fork Blacks Fork	10	Wild	Ecology	Wilderness	5
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV. Wildlife is typical of that found across the north slope of the Uintas. The sensitive Colorado cutthroat trout is present.					
East Fork Smiths Fork	12	Wild	Ecology	Wilderness	3, 5
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV. Uplands vegetation consists of lodgepole pine and aspen in the lower elevations, changing to spruce-fir forests at higher elevations. The upper cirque basin is characterized by Krummholz spruce-fir communities, alpine meadows, and scattered low-growing upland willows. Extensive willow stands grow in the broader riparian areas, while conifers often abut the channel in narrower valley bottoms.					
Hayden Fork: Source to Mouth	12	Recreational	Ecology	No	3, 6
Because riparian communities along the lower Hayden Fork are diverse and represent near potential climax vegetation the					

Eligible Segment	Miles	Classification	Ecological Value Referred to in SER as:	Other Designations	Segment Found Suitable in Alternatives
ecological system is functioning without impairment. Species diversity is high.					
Henry's Fork	8	Wild	Ecology	Wilderness	3, 5, 6
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV. Upland vegetation consists of lodgepole pine and aspen at lower elevations, grading into spruce-fir forest at higher elevations. Krummholz spruce-fir communities and true alpine vegetation grow near the upper cirque basin. Diversity of riparian communities including broad meadows and narrow conifer communities, with a variety of willows and associated understory species are relatively stable.					
High Creek	7	Wild (4) Recreational (3)	Ecology	Wilderness	*
The ecological setting at High Creek is near potential natural condition, and is functioning in a close to optimal manner. This value, when compared to nearby adjacent drainages and areas can be considered outstandingly remarkable.					
Left, Right, and East Forks Bear River	13	Wild	Ecology	Wilderness	3, 6
The interdependency of plant, vertebrate and invertebrate species in these narrow river valleys offers a wonderful look at the unique ecological systems that have evolved here over long periods of time.					
Little Cottonwood Creek	8	Recreational	Ecology	Wilderness	3
Uplands are characterized by aspen with conifers dominating north facing slopes. At lower elevations, oak-maple communities dominate the south facing slopes. The riparian ecosystems are characterized by cottonwood, birch, box elder, and dogwood at lower elevations, giving way to aspen, alder, willows and dogwood at higher portions of this segment. The upper watershed within the corridor has significant tall forb communities of those remaining along the Wasatch Front providing spectacular wildflower displays. The rocky slopes probably support Wasatch jamesia and Garretts bladderpod, both sensitive species.					
Little East Fork: Source to Mouth	9	Wild	Ecology	Wilderness	3, 5
Upland vegetation consists of lodgepole pine and aspen at lower elevations, grading into spruce-fir forest at higher elevations. Krummholz spruce-fir parklands and true alpine vegetation grow near the upper cirque basin. Diversity of riparian communities including broad meadows and narrow conifer communities, with a variety of willows and associated understory species are in relatively stable condition. Deer, elk, and moose inhabit the area. Habitat for mountain goats is also present. Smaller species include pika and ptarmigan. Fish species include Colorado cutthroat trout (a sensitive species), brook trout and rainbow trout.					
Logan River: Beaver Creek Guinavah-Malibu Campground	19	Recreational	Ecology	No	3, 6
Ecologically, this segment contains a wide variety of plant, animal, and aquatic communities that are functioning in a relatively healthy manner, especially when compared to the proximity to local urban populations. The use of the corridor as a setting for education for local schools and the university community has been appreciated for many decades. Due to the close proximity of the river to Utah State, more is known and written about the local natural setting than for most areas of the western U.S.					
Middle Fork Beaver Creek	11	Wild (6.9 Mi.); Scenic (4.2)	Ecology	Wilderness	3, 5, 6
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV. Diversity of communities and species is, however, high throughout the segment with willow bottoms and narrow conifer bottoms. The upland vegetation consists of lodgepole pine and aspen at lower elevations, grading into spruce-fir forest at higher elevations. Krummholz spruce-fir parklands and true alpine vegetation grow near the upper cirque basin.					
Ostler Fork	4	Wild	Ecology	Wilderness	3, 5, 6,7
This ecological setting is as near to "pristine" as there is on the North Slope of the Uintas. No cattle are grazed in the drainage, resulting in an ecosystem that is not affected by non-native species. Vegetation on the uplands is characterized by aspen and lodgepole at lower elevations, grading into spruce-fir forests at upper elevations. The upper cirque basin is surrounded by spruce-fir krummholz with alpine meadows at the highest elevations. Riparian communities consist of willows with grass and sedge openings. Deer, elk, moose, and possibly mountain goats inhabit the area.					
Red Butte Creek	3	Scenic	Ecology	RNA	*
The stream through Red Butte Research Natural Area has been protected from impacts and development for over 30 years; it provides an important ecological context for university research. The river and its context in the ecosystem contribute significantly to the research value of the area. One species of interest, Cypripedium calceolus, occurs within the quarter mile corridor. Only one population of this species occurs in the area and it is the only known natural population in the State of Utah. There is a naturally reproducing population of Bonneville cutthroat trout.					
Stillwater Fork: Source to Mouth	14	Wild (6.1 Mi); Scenic (8 Mi)	Ecology	Wilderness	3, 6,,7
This ecological system is fine example of a functioning system with a variety of components. Vegetation diversity is high along the corridor. At high elevation there is alpine species predominate, while forested areas and extensive riparian and meadowland communities are present below. These communities are tied together along the river. For an area so close to development they are relatively unimpaired by use but are still highly accessible. Intact habitats exist for a wide variety of species: avian, terrestrial, and aquatic, and the overall representation of these species are high.					
West Fork Beaver Creek: Source to Forest Boundary	10	Wild (4.6 mi); Scenic (5.5 mi)	Ecology	Wilderness	3, 5, 6

Eligible Segment	Miles	Classification	Ecological Value Referred to in SER as:	Other Designations	Segment Found Suitable in Alternatives
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV.					
West Fork Blacks Fork: Source to Trailhead	12	Wild (8 Mi.); Scenic (3.9 Mi.)	Ecology	Wilderness	3, 5
Diversity of riparian communities, including broad meadows and narrow conifer communities with a variety of associated understory species in relatively stable condition constitute an ORV. The upper portion of this segment is typical of the alpine and subalpine communities of the Uinta Mountains. Krummholz spruce communities occur at higher elevations, while Engelmann spruce, subalpine fir, and lodgepole pine dominate at mid to lower elevations along this segment. Aspen communities and aspen/conifer communities also occur at lower elevations. Riparian communities typically occur as broad meadows dominated by tall and low growing willows with herbaceous undergrowth.					

*segment(s) only occur in Alternatives 1 and 2

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.3g addresses one issue:

Issue 4 – Designation offers long-term protection of resource value. The measurement indicator for ecological ORVs is miles of miles of river by Wild, Scenic, and/or Recreational classification and analysis of the effects to ORVs by river.

Table 3.3g.1 summarizes the effects showing miles of river segments with Ecological ORVs recommended as suitable in each alternative by classification.

Table 3.3g.1. Miles of segments with Ecological ORVs found suitable, by classification and alternative.

		Alternatives						
Segments with Ecological ORVs		**1**	**2**	**3**	**4**	**5**	**6**	**7**
Total # of Segments	27	0	0	20	0	17	12	5
Total Miles	223	0	0	190	0	130	110	44
Recreation Miles	60	0	0	56	0	14	34	14
Scenic Miles	30	0	0	28	0	20	24	8
Wild Miles	145	0	0	104	0	86	51	22

Alternative 1 – No action, maintain eligibility of all river segments.

Under the No Action Alternative, all 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, ORVs and recommended classification. Refer to Table 3.1.2 for specifics on interim management. Ecological resources would continue to be managed by standards set forth in Forest Plans and existing laws and regulations. Ecological resources may be adversely affected by the projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant.) If these projects were built they would dramatically change segment ecology, however none of the reasonably foreseeable water projects are planned on segments with outstandingly remarkable ecological values.

Alternative 2 – No rivers recommended.

Under this alternative, a determination is made that all 86 segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. Protection of river values would continue to be

managed by the standards provided in the underlying Forest Plans for the area, which can be amended as needs emerge, possibly changing ecological protection for the segments. Choosing this alternative would not in itself initiate any changes to riparian ecology and it would not provide any additional protection for ecological values on the forest.

Over time dams, water projects and other activities such as timber harvest or road building could be approved for some segments, depending on area management standards. No reasonably foreseeable water projects are proposed for segments with ecological outstanding remarkable values.

Many segments will not be affected by water development projects or other activities. Segments would be managed as per Forest Plan ecological objectives. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, the approximately 366 miles segments located in Wilderness and Research Natural Areas will generally remain unaffected.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

Under this alternative, 20 segments (190 miles) with Ecological ORVs would be recommended for designation. These segments would continue to receive interim protection the effects of which are explained in Alternative 1 analysis and Table 3.1.2, and could be congressionally designated which would then require a comprehensive river management plan be developed within three years of designation. Those segments with ecological ORVs would be managed to protect their ecological values as well as other ORVs if applicable.

The seven segments (33 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic interim protection and effects on ecological values as discussed in Alternative 2 would apply. Of the seven remaining segments five are at least partially in Wilderness or a research natural area and ecological values would generally remain unaffected in areas with those designations. Under this alternative, planned water projects would be able to move forward on zero segments with ecological ORVs (see Table 3.12.5) and therefore no change to outstandingly remarkable ecological values is expected.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

No segments (0 miles) with Ecological ORVs would be recommended as suitable in Alternative 4. In this alternative most segments with major water projects planned would be recommended as suitable, the water projects would not be built and no major ecological changes, as referenced above in Alternative 3, would occur on these segments, however these segments do not have outstandingly remarkable ecological values.

The 27 segments (223 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic interim protection and effects on ecological values as discussed in Alternative 2 would apply. Of the 27 segments, 20 are at least partially in Wilderness or a research natural area and ecological values would generally remain unaffected in areas with those designations. Reasonably foreseeable water projects do not affect segments with outstandingly remarkable Ecology ORVS.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to

community economic development.

Seventeen segments (130 miles) with ecological ORVs would be found suitable and would continue to receive interim protection the effects of which are explained in Alternative 1 and Table 3.1.2, and could be congressionally designated. Congressional action would then require a comprehensive river management plan be developed within three years of designation. Those segments with ecological ORVs would be managed to protect ecological values.

The ten segments (93 miles) with ecological values found not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects on ecological values as discussed in Alternative 2 would apply. Of these ten segments five are at least partially in Wilderness or a research natural area and ecological values would generally remain unaffected in areas with those designations. Under this alternative, none of the reasonably foreseeable planned water projects are on segments with outstandingly remarkable ecological values (See Table 3.12.8).

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In Alternative 6, twelve segments (110 miles) with ecological ORVs would be found suitable and would continue to receive interim protection the effects of which are explained in Alternative 1 and Table 3.1.2, and could be congressionally designated.

Of the fifteen segments (113 miles) with ecological ORVs remaining, eleven are at least partially in Wilderness or a research natural area and ecological values would generally remain unaffected in areas with those designations.

Alternative 7 – Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In Alternative 7, five segments (44 miles) with ecological ORVs would be found suitable and would continue to receive interim protection the effects of which are explained in Alternative 1 and Table 3.1.2, and could be congressionally designated.

Of the 22 segments (179 miles) with ecological ORVs remaining, fourteen are at least partially in Wilderness or a research natural area and ecological values would generally remain unaffected in areas with those designations.

3.4 Botanical Resources

Introduction

The botanical resources section describes the rare plants (threatened, endangered, sensitive, and watchlist), noxious weeds, and plants used as management indicator species. This section discusses the affected environment and environmental impacts of designation on botanical resources. Section 3.3g, Ecological Values describes impacts on outstandingly remarkable ecological values some of which include general descriptions of vegetation.

Affected Environment

Rare Plants (Threatened, Endangered, and Proposed Plant Species)

Federal land-managing agencies are responsible for implementing the Endangered Species Act (ESA) within their authorities. These responsibilities include, but are not limited to, efforts to promote the conservation and recovery of listed species and provisions to conserve the ecosystems upon which listed species depend. The U.S. Fish and Wildlife Service (USFWS) monitors and prescribes management for federally listed threatened and endangered plant species. The National Forest Management Act (1976) and Forest Service policy (FSH 2609.25 and FSM 2670 and FSM 2609) require that National Forest System land be managed to maintain populations of all existing native animal and plant species at or above minimum viable populations levels. A viable population is the maintenance of enough individuals throughout their range to perpetuate the existence of the species in natural, self-sustaining populations.

The USDA Forest Service, in implementing the ESA, must ensure efforts to promote the conservation and recovery of listed species and provisions to conserve the ecosystems upon which listed species depend. Table 3.4.1 provides a list of those species that have state or federal status as endangered, threatened or candidate.

Table 3.4.1. Endangered, threatened, and candidate plant species on the five National Forests in Utah (from regional list (12/03) (technical edits 7/04). Known/suspected distribution by forest.

Plant Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
ENDANGERED						
San Rafael cactus ***Pediocactus despainii***			x			
Clay phacelia ***Phacelia argillacea***				?	x	
THREATENED						
Deseret milkvetch ***Astragalus desereticus***				?		
Heliotrope milkvetch ***Astrgalus montii***				x		
Winkler cactus ***Pediocactus winkleri***				?		
Maguire's primrose **Primula maguirei**						x
Last chance townsendia ***Townsendia aprica***		x	x			
Ute ladie's tresses ***Spiranthes diluvialis***	?	?	?	?	x	?
CANDIDATE						
N/A.						

x = known distribution species and/or habitat
? = suspected or potential habitat

Sensitive Species and Species at Risk

The current or proposed sensitive or plant species at risk inhabit a diverse array of habitat and vary in their distribution across the landscape. These species are faced with a variable range of threats and differ in the degree to which Forest Service management and other management may affect their status. The amount of current scientific information and distribution data available also varies greatly among species, thus often limiting the assessment of the cumulative effects of all management activities and environmental consequences on the long-term viability of such species. Table 3.4.2 is a list of sensitive

plant species and known/suspected distribution on the five National Forests in Utah.

Table 3.4.2. Forest Service sensitive plant species on the five National Forests in Utah (from regional list (12/03) (technical edits 7/04). Known/suspected distribution by forest.

Sensitive Plant Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Chatterley onion *Allium geyeri chatterleyi*				x		
Sweet-flowered rock jasmine *Andorsace chamaejasme carinata*				x		
Link Trail columbine *Aquilegia flavescens rubicunda*				x		
Graham columbine *Aquilegia grahamii*	x					
Petiolate wormwood *Artemisia campestris petiolata*	x					
Bameby woody aster *Aster kingii var. bamebyana*			x		x	
Bicknell milkvetch *Astragalus consobrinus*			x	?		
Dana milkvetch *Astragalus henrimontanensis*		x				
Starvling milkvetch *Astragalus jejunus jejunus*						x
Navajo Lake milkvetch *Astragalus limnocharis var. limnocharis*		x				
Table Cliff milkvetch *Astragalus limnocharis var. tabulaeus*		x				
Guard milkvetch *Astragalus zionis vigulus*		x				
Dainty moonwort *Botrychium crenulatum*	x				x	
Paradox moonwort *Botrychium paradoxum*		x				
Slender moonwort Botrychium lineare	x	?	?	?	?	x
Aquarius paintbrush *Castilleja aquariensis*		x				
Tushar paintbrush *Castilleja parvula var. parvula*		x	x			
Reveal paintbrush *Castilleja parvula var. revealii*		x				
Creutzfeldt-flower cryptanth *Cryptantha cruetzfeldtii*				x		
Yellow-white catseye *Cryptantha ochroleuca*		x				
Pinnate spring-parsley *Cymopterus beckii*		x		x		
Cedar Breaks biscuitroot *Cymopterus minimus*		x				
Brownie ladyslipper *Cypripeduim fasciculatum*	x					x
Rockcress draba *Draba densifolia apiculata*					x	x
Maguire draba *Draba maguirei*						x
Creeping draba *Draba sobolifera*		x	x			

Sensitive Plant Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Abajo daisy *Erigeron abajoensis*				x		
Carrington daisy *Erigeron carringtonae*				x		
Cronquist daisy *Erigeron cronquistii*						x
Kachina daisy *Erigeron kachinensis*				x		
Maguire daisy *Erigeron maguirei*			x			
LaSal daisy *Erigeron mancus*				x		
Untermann daisy *Erieron untermannii*	x					
Widtsoe buckwheat *Eriogonum aretioides*		x				
Elsinore buckwheat *Eriogonum batemanii var. ostlundii*			x			
Logan buckwheat *Eriogonum brevicaule var. loganum*						x
Wonderland Alice flower *Gilia caespitosa*		x	x			
Pine Valley goldenweed *Haplopappus crispus*		x				
Canyon sweetvetch *Hedysarum occidentate var. canone*				x		
Jones goldenaster *Heterotheca jonesii*		x				
Wasatch jamesia *Jamesia Americana macrocalyx*					x	x
Zion jamesia *Jamesia Americana zionis*		x				
Neeses' peppergrass *Lepedium montanum var. neeseae*		x				
Garrett bladderpod *Lesquerella garrettii*					x	x
Canyonlands lomatium *Lomatium latilobum*				x		
Goodrich stickleaf *Mentzelia goodrichii*	x					
Fish Lake naiad *Najas caespitosa*			x			
Arctic poppy *Papaver radicatum var. pygmaeum*	x					x
Paria breadroot *Pediomelum pariense*		x				
Stemless beardtongue *Penstemon acaulis var. acaulis*	x					
Red Canyon beardtongue *Penstemon bracteatus*		x				
Cache beardtongue *Penstemon conpactus*						x
Little penstemon *Penstemon parvus*		x	x			
Pinyon penstemon *Penstemon pinorum*		x				
Ward beardtongue *Penstemon wardii*			x			

Sensitive Plant Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Angell cinquefoil *Potenitilla angelliae*		x				
Cottam cinquefoil *Potenitilla cottamii*						x
Arizona willow *Salix arizonica*		x	x	x		
Beaver Mountain groundsel *Senecio castoreus*			x			
Podunk groundsel *Senecio malmstenii*		x				
Musinea groundsel *Senecio musiniensis*				x		
Maguire campion *Silene petersonii*		x	?	x		
Rock-tansy *Sphaeromeria caplata*		x				
Caespitose greenthread *Thelesperma caespitosa*	x					
Uinta greenthread *Thelesperma pubescens*						x
Bicknell thelesperma *Thelesperma subnuda var. alpina*		x	x			
Sevier townsendia *Townsendia jonesii var. lutea*			x			
Smith violet *Viola franksmithii*						x

x = known distribution species and/or habitat
? = suspected or potential habitat

Noxious Weeds

Noxious weed establishment is dependent on two main factors, weed seed dispersal and potential habitat. The literature lists numerous vectors for weed seed dispersal. Humans, animals both wild and domestic, wind and water have all been identified as having the ability to transport weeds seed. Potential habitat is dependent on the type of weed and its life history. The majority of the weeds that are documented on National Forest System lands are considered "rangeland weeds" that can establish and thrive in several vegetation types. Once established, rangeland weeds can displace native vegetation altering habitat for native plants and animals. Problems created from noxious weed infestations range from reduced or eliminated recreational potential to increased erosion potential. Known to a lesser degree are aquatic weeds, which are plants that grow wholly or partially in water. They can grow in ponds, lakes streams or rivers and once established can create problems ranging from unsightly growth and nuisance odors to clogging waterways, damaging equipment, impairment of water quality and displacement of natural aquatic plants and animals.

The rate of spread and magnitude of the impacts is also variable and depends on several-site specific conditions. The characteristics of the establishing weed, health of the ecosystem, micro-climate all combine to effect the outcome.

Management Indicator Species

Management Indicator Species (MIS) are select species that are monitored and results of which would indicate the health of the ecosystem. The only MIS plant identified and included in the Riparian guild of

Management indicator species of the Fishlake National Forest is Rydberg's milkvetch *Astragalus perianus*. As outlined in the summary of the Life History and Analysis of Endangered, Threatened, Candidate, Sensitive and Management Indicator Species of the Fishlake National Forest. (Version 2.0 December 12, 2002 [http://www.fs.fed.us/r4/fishlake/publications/Life_History/v2/index.shtml]) The objective was to select species that through monitoring populations and habitat relationships the effects of Forest Service management activities could be measured. Trend studies annotated in the same document indicate a stable trend for Rydberg's milkvetch.

Table 3.4.3. Plant management indicator species of the five National Forests of Utah.

Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Rydberg's milkvetch *Astragalus perianus*			x			

Environmental Consequences

General Environmental Impacts

Following designation, development of a comprehensive river management plan provides additional emphasis on inventory and protection of diverse plant communities.

Rare Plants

The viability of rare plant species and their respective habitats will be promoted with implementation of standards and guidelines, inventory and monitoring, and adherence to Forest Service directives for threatened, endangered, proposed, and sensitive plant species and the Endangered Species Act (ESA). Consistent implementation of standards and guidelines and adherence to Forest Service Management Policy across all National Forest System lands for all alternatives is mandatory for threatened, endangered, or sensitive (TES) plant species conservation.

Evaluation of Risk and Uncertainty

Causes of rarity can vary greatly for individual species. Species may be intrinsically rare or rare as a result of anthropogenic interference (Kruckeberg and Rabinowitz 1985). Other plant species may be rare due to their population ecology, evolutionary history, or basic reproductive biology. Historical or current anthropogenic activities may also contribute to the current distribution of these rare species.

This environmental impact study (EIS) does not directly authorize ground disturbing or habitat altering projects, the effects would be the same across all alternatives. Implementation of the preferred alternative in this EIS would not directly impact any rare plant or rare plant habitat. Designations as a wild and scenic river would provide another layer of protection should any rare plant occur, or have potential habitat, within ¼ of a mile of any one of the 86 proposed river segments.

If rivers or segments are not selected for designation, the above mentioned laws, policy and directives would still exist to protect rare plants or rare plant habitat. Should potentially ground disturbing, or habitat altering projects be proposed within the river corridor, they would have to undergo further analysis under the National Environmental Protection Act.

Sensitive species will be managed to ensure their population viability and preservation. The Forest Service management policy (FSH 2609.25, 1.25, 1988 and FSM 2670) ensures that for all TEPS plant

species, the following measures will be taken: (1) biological evaluations will be written for all activities that may impact sensitive species and their habitat; (2) "effects" of activities will be determined as similar to those for threatened, endangered, or proposed species; and (3) sensitive species must receive special management emphasis to ensure their viability and to preclude trends toward endangerment that would result in the need for federal listing. This Forest Service management policy will be employed at a species level in all alternatives to ensure its mandates are achieved and that sensitive species are conserved.

Noxious Weeds

Invasive species have been identified as a significant threat to forest and rangeland ecosystems. A national strategy has been developed to guide the Forest Service as it takes on this threat. (USDA 2004). The national strategy outlines four areas of concentration when it comes to noxious weeds; Prevention, Early Detection Rapid Response, Control and Management, and Rehabilitation and Restoration. Manual direction (FSM 2080) – dictates that all units stop the spread of existing noxious weeds and prevent invasion of new sites or new noxious weeds by applying prevention and control mitigation measures where applicable and appropriate.

The risk for weed introduction and establishment exists for all alternatives. Alternatives that would favor recreation and potential ground disturbing projects would be at a higher risk due to increased vectors for weed seed distribution and increased habitat that favors weed establishment. Noxious weeds can get established in remote areas with little or no disturbance and few vectors and areas of high use and numerous ground disturbing activities can remain weed free. Management actions for noxious weeds would be similar across all alternatives with an emphasis on education and early detection and rapid response (treatment).

Management Indicator Species

The only MIS plant identified and included in the Riparian guild of Management indicator species of the Fishlake National Forest is Rydberg's milkvetch (*Astragalus perianus)*. Rydberg's milkvetch habitat as listed in A Utah Flora is described as "…often on barrens in alpine or montane sites in tundra and spruce-fir communities, but also in sagebrush stands at 2135 to 3480 m." Trend studies completed by the Fishlake National Forest indicate a stable trend. There would be no effect to the trend of this species under any proposed alternative. Designation would provide an added layer of protection for the species should it, or its habitat, occur within the corridor of the proposed river segment. Should potentially ground disturbing, or habitat altering projects be proposed within the corridor, they would have to undergo further analysis under the National Environmental Protection Act.

3.5 Fish and Other Aquatic Species

Introduction

Section 3.5 will provide a brief description of the aquatic species (including threatened, endangered, candidate, sensitive, and management indicator species) found in eligible stream segments being reviewed for inclusion into the Wild and Scenic River System. The eligibility of these rivers was conducted on a forest-by-forest basis previously.

For a description of the impacts on outstandingly remarkable fish and aquatic values, refer to Section 3.3c.

This section will review the key assumptions and methodologies used in the analysis; identify existing inventories, monitoring, and research literature review used in the analysis; describe the site-specific resource conditions; discuss effects of the alternatives; and document conclusions regarding direct and indirect effects for each alternative.

Existing Inventories, Monitoring, and Research Literature Review

Material listed in this section came from Appendix A – Suitability Evaluation Report (cited as "SER"), information provided by the fish biologists on the individual forests (cited as personal communication), or other reports. If information was missing to conduct the analysis the forest biologist was contacted, the material requested, and inserted into the document.

Affected Environment

The existing condition for species found in the segments being considered for inclusion into the Wild and Scenic River System has been reviewed (Table 3.5.1). Cutthroat trout are found in most of the river segments (Table 3.5.1). Fine spotted or Snake River (Raft River Drainage), Bonneville (Bonneville Basin) and Colorado River cutthroat trout were the native trout found in the state. Yellowstone cutthroat trout have been brought into the state and used in many drainages to enhance sport fishing opportunities. Other species that have been brought into the state that compete directly with the native fish includes rainbow trout (originally from the West Coast), brook trout (originally from the eastern United States), and German brown trout (originally from Germany). These non-native species have spread through a number of the segments being reviewed (Table 3.5.1).

The native cutthroat trout is the primary species impacted by these introduction species. The Yellowstone cutthroat trout along with rainbow trout have in some cases interbred with the native trout. The primary way to distinguish between the genetically mixed stock and the pure fish is through genetic analysis. For many populations this work has not been done or done on just a very limited number of fish. Therefore streams containing cutthroat trout will just be listed as cutthroat trout and no separation of subspecies will be made (Table 3.5.1). Once tested and when the testing has been verified, one should be able to determine to which subspecies is in each individual segment be they Bonneville or Colorado River cutthroat trout.

Some of the key streams with unique fish assemblages or characteristics are listed in Table 3.5.1.

Table 3.5.1. Stream segments identified as eligible for inclusion in the Wild and Scenic River System in the State of Utah, 2007. (Note: Only species verified as being present are listed in the table. Other species may be present but have not been found during surveys.)

Eligible River Segment	Miles	TES Aquatic Species	Other Fish Species	Other Amphibian Species	Notes
Ashley NF					
Middle Main Sheep Creek	5	CT	RBT, BKT	BCF, LF	
Lower Main Sheep Creek	4	--	KS, RBT, BNT	BCF, LF	Major fish viewing area for Kokanee
Carter Creek	16	CT	RBT, BKT, SMB	BCF, LF	
Cart Creek Proper	10	--	RBT, SMB	BCF, LF	
Green River	13	--	RBT, MWF, BNT	BCF, LF	National Fishing Draw

Eligible River Segment	Miles	TES Aquatic Species	Other Fish Species	Other Amphibian Species	Notes
Pipe Creek	6	--	RBT, BKT	BCF, LF	
Upper Whiterocks River	4	--	RBT, BKT	BCF, LF	
East Fork Whiterocks River	4	--	RBT, BKT	BCF, LF	
West Fork Whiterocks River	11	CT	BKT	BCF, LF	Possible restoration site for CRCT
Reader Creek	6	CT	BKT	BCF, LF	Currently being treated to remove brook trout
Middle Whiterocks River	8	CT	RBT	BCF, LF	Possible restoration site for CRCT
Lower Dry Fork Creek	7	--	--	BCF, LF	
South Fork Ashley Creek	15	CT	RBT, BKT	BCF	
Black Canyon	10	CT	RBT, BKT	BCF	
Ashley Gorge Creek	10	CT	RBT, BKT	BCF	
Upper Rock Creek	21	CT	BKT, MS	BCF	
Fall Creek	6	CT	MS	BCF	
West Fork Rock Creek, including Fish Creek	13	CT	BKT, MS	BCF	
Oweep Creek	20	CT	RBT, BKT, MS	BCF	
Upper Lake Fork River, including Ottoson and East Basin Creeks	35	CT	RBT, BKT, MS	BCF	
Upper Yellowstone Creek, including Mill Creek	33	CT	RBT, BKT, MS	BCF	
Garfield Creek	17	CT	BKT	BCF	
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	CT	RBT, BKT, MS	BCF	
Shale Creek and Tributaries	10	CT	RBT, BKT, MS	BCF	
Dixie NF					
North Fork Virgin River	2	--	--	TS, GBS	Upstream of Virgin Spindace a FWS Species of Concern
East Fork Boulder Creek	3	CT	BKT	BT	
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	--	--	GBS, WHT, BCF	
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	--	--	GBS, WHT, BCF, RST	
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	--	--	GBS, WHT, BCF, RST	
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	--	--	GBS, WHT, BCF	
Pine Creek	8	CT	BNT	GBS, WHT, BCF	
Mamie Creek	2	--	--	GBS, WHT, BCF, RST	
Death Hollow Creek	10	--	--	GBS, WHT, BCF, RST	

Eligible River Segment	Miles	TES Aquatic Species	Other Fish Species	Other Amphibian Species	Notes
Moody Wash	5	VS	SPD, DS	AT, RST, CTF, WHT	Virgin Spindace a FWS Species of Concern
Fishlake NF					
Salina Creek	7	CT	BNT, RBT, BKT	TS, BCF	
Fish Creek	15		RBT, BNT, MS, SPD, SU	LF	Planned for treatments beginning in 2008 to restore native CT.
Corn Creek	2	--	BNT, RBT	GBS	
Pine Creek / Bullion Falls	4	CT	RBT		Treated in 2007 to remove non-native CT, will be planted with Bonneville in fall 2008.
Manning Creek	4	CT			
Manti-La Sal NF					
Miners Basin (Placer Creek)	2	--	--	TS, BCF	
Mill Creek Gorge	3	--	BNT	ND	
Roc Creek	9	CT	--	ND	
Huntington Creek	19	CT	BKT, RBT, BNTxBKT, SC, MWT, SU	ND	(Note 5 miles of the 19 are private/BLM).
Fish Creek and Gooseberry Creek	21	CT	RBT	ND	
Lower Left Fork of Huntington Creek	5	CT	BKT, RBT, SC, SU	ND	
Hammond Canyon	10	--	--	WHT, RST, CTF, RST, GPT	
Chippean and Allen Canyons	21	--	--	ND	
Upper Dark, Horse Pasture, Peavine & Kigalia Canyons in Upper Dark Canyon	26	--	MIN	LF	
Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	41	--	MIN, Trout	LF	
Uinta NF					
North Fork, Provo River	1	SPF	--	BCF, BT,GBS, TS, WHT	
South Fork, American Fork River	1	--	--	LF, TS, BGS, BT, BCF, WHT, GPT	CT downstream
Little Provo Deer Creek	3	--	MS, SPD, BNT, RBT	LF, TS, GBS, BT, BCF, WHT, GPT	
Fifth Water Creek	8	CT,	MS, SPD, BNT, RBT	LF, TS, GBS, BT, BCF, WHT, GPT, SPF	
Wasatch-Cache NF					

Eligible River Segment	Miles	TES Aquatic Species	Other Fish Species	Other Amphibian Species	Notes
Henry's Fork: Henry's Fork Lake to Trailhead	8	CT	SC	ND	
West Fork Beaver Creek: Source to Forest Boundary	9	CT	BKT	ND	
Middle Fork Beaver Creek: Beaver Lake to confluence with East Fork Beaver Creek	10	CT	BKT, SC	ND	
Thompson Creek: Source to Hoop Lake Diversion	5	CT	SC	ND	
West Fork Blacks Fork: Source to Trailhead	11	CT	BKT, MWF, SC	ND	
East Fork Blacks Fork: Headwaters to confluence with Little East Fork	10	CT	BK, WF	ND	
Little East Fork: Source to Mouth	9	CT	MWF	ND	
Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	3	CT	MWF, MS, MTS	ND	
West Fork Smiths Fork: Source to Forest Boundary	14	CT	MTS, SC	ND	Brood source for native Colorado River production.
East Fork Smiths Fork: Red Castle Lake to Trailhead	12	CT	RBT, BKT, MWF, SC	ND	
Hayden Fork: Source to Mouth	12	CT	RBT, BKT, MWF, MS, MTS	BT	(Note 4 miles are private).
Stillwater Fork: Source to Mouth	14	CT	BKT, MWF	ND	Currently stocked with sterile rainbow trout.
Ostler Fork: Source to Mouth	4	CT	BKT	ND	
Left, Right, and East Forks Bear River: Alsop Lake and Norice Lake to near Trailhead	13	CT	SC	BT	A large water slide separate/prevent upstream migration into the Left Hand Fork of the East Fork.
Boundary Creek: Source to Confluence with East Fork Bear River	4	CT	BKT	BT	
High Creek: High Creek Lake to Forest Boundary	7	--	RBT, BNT	ND	
Left Hand Fork Blacksmiths Fork: Source to Mouth	15	CT	BNT, BKT, SC	ND	
Logan River: Idaho State line to confluence with Beaver Creek	7	CT	SC, BNT, BKT	TS, BCF	Logan River Metapopulation cutthroat trout.
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	CT	SC, BNT, BKT, MWF, RBT	ND	Logan River Metapopulation cutthroat trout.
Beaver Creek: South Boundary of State Land to Mouth	3	CT	BKT, MSC	TS, BCF	Logan River Metapopulation cutthroat trout.
White Pine Creek: Source to Mouth	1	CT	--	TS, BCF	Logan River Metapopulation cutthroat trout.
Temple Fork: Source to Mouth	6	CT	BNT, SC	BT, TS	Logan River Metapopulation cutthroat trout.
Spawn Creek: Source to mouth.	4	CT	BKT, BNT, SC	BT, TS	Logan River Metapopulation cutthroat

Eligible River Segment	Miles	TES Aquatic Species	Other Fish Species	Other Amphibian Species	Notes
					trout.
Bunchgrass Creek: Source to Mouth	5	CT	--	TS, BCF	Logan River Metapopulation cutthroat trout.
Little Bear Creek: Little Bear Spring to Mouth	1	CT	BNT	TS	Logan River Metapopulation cutthroat trout.
Main Fork Weber River: Source to Forest Boundary	6	ND	ND	ND	
Middle Fork Weber River: Source to Forest Boundary	6	CT	CTxRBT, BKT	ND	
Beaver Creek: Source to Forest Boundary	6	CT	MWF, MTS, SC, LND	ND	
Provo River: Trial Lake to U35 Bridge	20	CT, SPF	RBT, BKT, BNT, SC	SF	
Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	5	CT	SC	ND	
Willard Creek: Source to Forest Boundary	4	--	--	ND	
Red Butte Creek: Source to Red Butte Reservoir	3	CT, JS	--	ND	June Sucker (Endangered) in Red Butte Reservoir.
Little Cottonwood Creek: Source to Murray City Diversion	8	CT	BKT, RBT	BT	

TES: CT=cutthroat trout identified in the table may or may not have been genetically tested to determine purity. Once tested it may be determined that these are Bonneville cutthroat trout, Colorado River cutthroat trout, Yellowstone cutthroat trout or a combination of two or three of these subspecies or have rainbow trout influence. SF=Spotted Frog, VS=Virgin Spinedace, ND=No Survey Data, -- = No TES Fish or Amphibians found during surveys

Other Fish: BNT=brown trout, BKT=brook trout, CTxRBT=cutthroat, BNTxBKT=tiger trout, SPD=speckled dace, DS=desert sucker, MS=mottled sculpin, SC=sculpin, SU=sucker, MIN=minnows, ND=No Survey Data, -- = No Fish found during surveys

Other Amphibians: SPF=spotted frog, GBS=Great Basin spadefoot toad, WHT=woodhouse toad, BCF=boreal chorus frog, TS=tiger salamander, LF=leopard frog, RST=red spotted toad, AT=Arizona toad, CTF=Canyon tree frog, TS=tiger salamander, SPF=spotted frog, GPT=Great Plains toad, ND=No Survey Data, -- = No Amphibians found during surveys

Aquatic Management Indicator Species

Aquatic Management Indicator Species (MIS) vary by forest and are listed in Table 3.5.2.

Table 3.5.2. Management indicator species of the five National Forests of Utah.

Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Macro Invertebrates	x		x	x		
Bonneville cutthroat trout *Orcorhynchus clarki utah*		x	x		x	x
Colorado cutthroat trout *Orcorhynchus clarki pleuriticus*	x		x		x	x
Rainbow trout *Orcorhynchus mykiss*		x	x			

Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Cutthroat trout *Orcorhynchus clarki*		x	x			
Brown trout *Salmo trutta*		x	x			
Brook trout *Salvelinus namaycush*		x	x			
Lake trout *Salvelinus namaycush*			x			

*The species listed in Table 3.5.2 are all found within river corridors of at least one of the 86 eligible river segments. They are all dependent on the river for survival.

Endangered, Threatened, Proposed, Candidate, and Sensitive Species

Aquatic endangered, threatened, and Forest Service sensitive species (TES) varied by forest see Table 3.5.3. No water withdrawals or alteration of habitat is proposed with this project.

Table 3.5.3. Five National Forests in Utah proposed, endangered, threatened and sensitive species (from regional list (12/03) (technical edits 7/04). Known/suspected distribution by forest.

	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
ENDANGERED						
Fish						
June sucker *Chasmistes liorus*					o	o
Bonytail chub *Gila elegans*	o	o	o	o	o	o
Humpback chub *Gila cypha*	o	o	o	o	o	o
Colorado squawfish *Ptychochelius luciys*	o	o	o	o	o	o
Razorback sucker Xyrauchen texanus	o	o	o	o	o	o
FOREST SERVICE SENSITIVE						
Reptiles/Amphibians						
Columbia spotted frog *Rana luteiuentris*	?			x	x	x
Fish						
Colorado River cutthroat trout *Onocorhynchus clarki pleuriticus*	x	x		x	x	x
Bonneville cutthroat trout *Onocorhynchus clarki utah*		x	x	?	x	x

x = known distribution species and/or habitat ? = suspected or potential habitat
o = offsite impacts (e.g., downstream)
*The species listed in Table 3.5.3 are all found within river corridors of at least one of the 86 eligible river segments. They are all dependent on the river for survival.

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.5 addresses one issue:

Issue 4 – Designation offers long-term protection of resource values. The measurement indicator for Fish and Other Aquatic values is miles of river by Wild, Scenic, and Recreational classification.

To conduct this analysis segments that were given two different designations were split and treated as

independent segments in the analysis. Two segments with two designations that were only 1 mile long were split and each given 1 mile of length. This increase causes the miles of streams to be increased by two miles which overall is insignificant in view of the overall range of miles of stream protected.

Each alternative was analyzed to determine the miles of stream in each category that would be protected for those identified as having ORVs of Fish and the total miles of stream protected. Its important to realize that just because a stream segment did not list fish as an ORV its selection for protection as Wild, Scenic and/or Recreational could protect the fish in that segment. For streams like the West Fork Smiths Fork where a brood sources for Colorado River cutthroat trout this protection could provide some long-term benefits for cutthroat trout conservation by protecting the brood fish that is planned to be used for creating/restoring populations across the north slope of the Uinta Mountains.

Twelve stream segments are known to be fishless (Table 3.5.4). These may still be very important to protect because they may provide habitat for other species including aquatic insects, amphibians, etc. They also provide water to downstream fish populations. One such segment is the North Fork Virgin River. The North Fork Virgin River was treated as having fish because it has the Virgin spinedace (*Lepidomeda mollispinis mollispinis*), a Federal Species of Concern (Fish and Wildlife Service 1996), downstream. These segments are spread throughout the alternatives with most being protected in Alternative 1 and 5 (Table 3.5.5).

Table 3.5.4. Segments of stream that contain no fish species in the State of Utah that are eligible for designation as Wild, Scenic or Recreational under the Wild and Scenic River Act.

Forest	No fish segments	Miles
Dixie	Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2
Dixie	Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6
Dixie	The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2
Dixie	Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7
Dixie	Mamie Creek	2
Dixie	Death Hollow Creek	10
Manti-La Sal	Miners Basin (Placer Creek)	2
Manti-La Sal	Chippean and Allen Canyons	21
Uinta	North Fork, Provo River	1
Uinta	South Fork, American Fork River	1
W-C	Willard Creek: Source to Forest Boundary	4
	Total	58

Table 3.5.5. Stream segment and their mileages in the individual alternatives that are fishless segments in the State of Utah.

		Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7
Fishless Protected	Stream Segments	11	0	6	0	7	2	3
	Miles of Stream	58	0	26	0	28	11	14

Effects Common to All Alternatives

A large variety of species probably live in all of 86 eligible river segments (840 miles) as identified in Chapter 3, Table 3.2.1. Threats to the species that inhabit these segments include not only habitat alteration from water development, grazing, timber harvest, fire, recreation, but also from competition and predation from non-native fish and other native and exotic species. Natural and human created impacts

will continue to shape species composition and habitats in many of these segments with or without designation as Wild, Scenic, or Recreational. Even if a stream segment is protected this does not mean that other natural forces will not be occurring.

This environmental impact study (EIS) does not directly authorize ground disturbing or habitat altering projects so there will be no change in existing conditions unless additional analysis is completed and the effects disclosed. It does however identify miles of stream that will be protected from ground disturbing activities in the future. This protection provides long-term habitat stability for aquatic species. Designation of any of the proposed rivers would give additional protection to aquatic habitat that is now or may be in the future occupied "Endangered," "Threatened," or Forest Service Sensitive species. If rivers or segments are not selected for designation, laws, policy and directives would still exist to protect currently designated species or their habitat but will do nothing for those species that may need such habitat in the future. Mere protection of the habitat may not be sufficient for long-term conservation of aquatic and semi-aquatic species. Active removal of non-endemic species may be necessary to conserve native fish in these segments.

Management indicator species (MIS) are listed by Forest are found in Section 3.5 in Table 3.5.2 (aquatic species only). With no ground disturbing activities there is no change expected in population trends for any aquatic species as a result of this project. Terrestrial species are discussed in the terrestrial section and the plant species is discussed in the botany section of this document.

Federally listed species and Forest Service sensitive species are listed in Chapter 3.5 in Table 3.5.3 (aquatic species only). It has been determined that there will be no effect/no impact on aquatic TES species because there are no ground disturbing activities proposed in this action. Determinations for terrestrial and botanical species will be discussed in their appropriate sections of this document.

Alternative 1 – No action, maintain eligibility of all river segments.

Alternative 1 would require the Forest Service to manage all 86 river segments (840 miles) to continue to be "eligible" for their potential inclusion into the National Wild and Scenic River System, and the Forest Service would continue to use it existing authorities to protect free flow, water quality, ORVs, and recommended classification (interim management outlined in FSH 1909.12, Chapter 80 – Wild and Scenic River Evaluation). There would be a total of 840 miles of stream protected.

Table 3.5.6. Miles of streams that are identified as Recreational, Scenic and Wild by alternative that are identified as having fish ORVs and for all segments.

Segments with FISH ORV [1]				
Alternatives	**Recreational (miles)**	**Scenic (miles)**	**Wild (miles)**	**Total (miles)**
1	37	43	20	100
2	0	0	0	0
3	37	43	9	89
4	0	0	0	46
5	15	19	20	54
6	22	43	9	74
7	11	13	4	28

All Segments [1]				
Alternatives	**Recreational (miles)**	**Scenic (miles)**	**Wild (miles)**	**Total (miles)**
1	196	201	457	854
2	0	0	0	0
3	94[2]	97	179	370
4	23[3]	22	0	45
5	49	88	394	531
6	113	112	217	442
7	12	22	74	108

[1] Segments that were given two different designations were split and treated as independent segment in the analysis. Two segments with two designations that were only 1 mile long were split and each given 1 mile of length.
[2] Alternative 3 includes 4 miles of stream identified here are recreational that are private and will not be designated (Hayden Fork).
[3] Alternative 4 includes 5 miles of stream identified here are recreational that are private and will not be designated (Huntington Creek).

Alternative 2 – No rivers recommended.

Under Alternative 2 no segments would be selected as suitable. In this case all 86 segments or 840 miles of stream would be managed under the existing direction as identified in the Forest's Forest Plans. Segments in wilderness, proposed wilderness and in designated "Roadless" areas would continue to get the greatest protection while stream segments in roaded areas may or may not be impacted based on existing standards and guidelines and the management direction in the individual forest plans.

Effects Common to Alternatives 3 through 7

Aquatic Management Indicator Species (MIS) vary by forest (Table 3.5.2). With no ground disturbing activities this proposal would not affect population trends of these species or their habitat.

Aquatic endangered, threatened, and Forest Service sensitive species (TES) varied by forest (Table 3.5.3). No water withdrawals or alteration of habitat is proposed. With no ground disturbing activities occurring, this project should have no effect and no impact on federally listed or Forest Service Sensitive species, respectively.

Aquatic endangered, threatened, and Forest Service sensitive species (TES) varied by forest (Table 3.5.3). No water withdrawals or alteration of habitat is proposed. With no ground disturbing activities occurring, this project should have no effect and no impact on federally listed or Forest Service Sensitive species, respectively.

The Forest Service would continue to use its existing authorities and interim protection of free flow, water quality, ORVs, and recommended tentative classifications as provided by direction in Forest Plans, and existing laws and regulations.

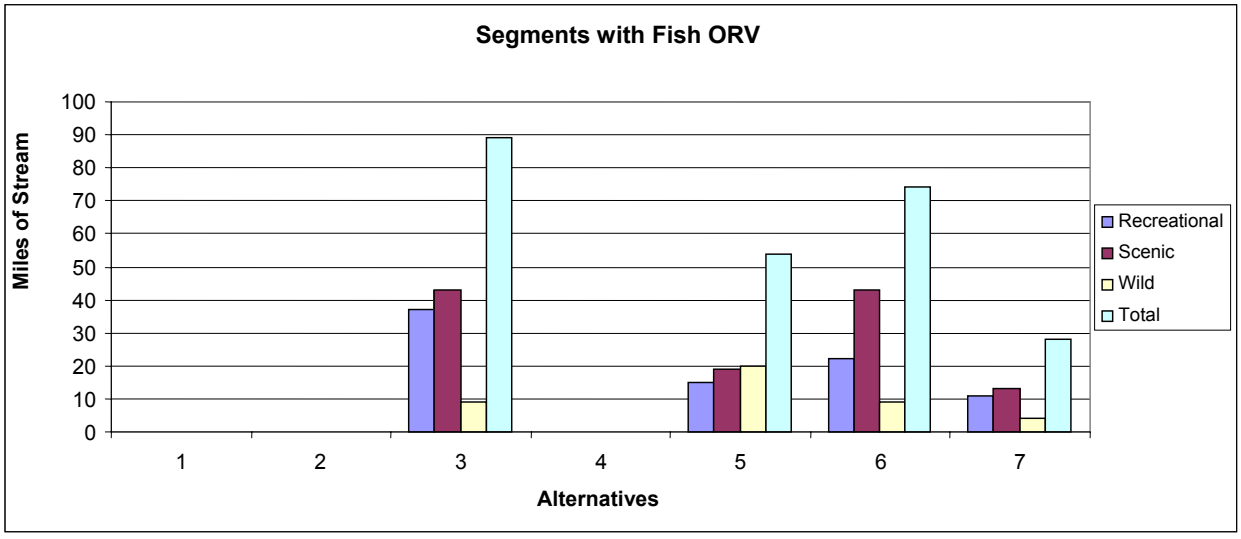
Site-specific activities may be authorized as long as they are consistent with activities listed in Table 3.1.1, existing laws, regulations, and Forest Plans. Proposed site-specific activities will be analyzed in a separate NEPA document.

Summary Comparison of the Alternatives

As all alternatives are compared, the No Action Alternative (1) provides the greatest protection for aquatic resources. All sections would have to remain free flowing and the outstanding fish and other ORVs would have to be protected (Figure 3.5.1). Alternative 3 provides the next greatest level of absolute protection when you consider that because a great number of the "Wild" designated streams are currently and would continue to be protected by some other designation like Wilderness. Alternative 3 would also protect the greatest number of streams with fish ORVs (Figure 3.5.1). Alternative 6 next provides more protection to more miles of stream than Alternatives 5 or 7 but Alternative 5 provide more protection to those streams which have fish identified as an ORV than Alternative 7 (Figure 3.5.1). Alternatives 3 and 5 protect the same Scenic and Wild fish ORVs segments with Alternative 3 protecting more Recreational segments. Alternative 2 provides no protection above what currently exists as outlined in individual forest plans, and existing laws and regulations. Of those alternatives selecting streams segments for designation, with fish ORVs, Alternative 7 provides the least protection.

Should potentially ground disturbing, or habitat altering projects be proposed within the corridor, they would have to undergo further analysis under the National Environmental Policy Act.

Sensitive species will be managed to ensure their population viability and preservation. The Forest Service management policy (FSH 2609.25, 1.25, 1988 and FSM 2670) ensures that for all TEPS aquatic and semi-aquatic species, the following measures will be taken: (1) biological evaluations will be written for all activities that may impact sensitive species and their habitat, (2) effects of activities will be determined as similar to those for threatened, endangered, or proposed species, and (3) sensitive species must receive special management emphasis to ensure their viability and to preclude trends toward endangerment that would result in the need for federal listing. This Forest Service management policy will be employed at a species level in all alternatives to ensure its mandates are achieved and that sensitive species are conserved.



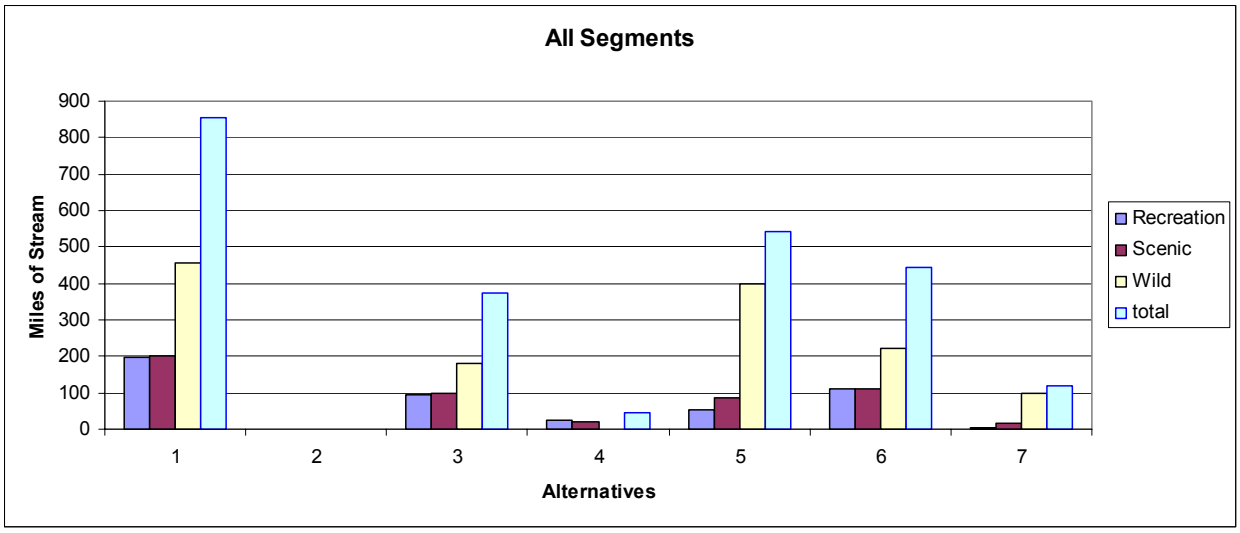


Figure 3.5.1. Stream segments identified as having fish ORVs and all segments being analyzed by alternative to be identified as Recreational, Scenic, or Wild.

3.6 Mineral Resources

Introduction

Detailed information for Section 3.6 came from Appendix A – Suitability Evaluation Reports, Mineral and Energy Resource Activities as well as from geocommunicator.gov, the Bureau of Land Management's database of mining and oil and gas claims.

Affected Environment

The BLM manages the federal mineral estate on both public lands and National Forest System lands with the exception of mineral materials (common varieties of sand, gravel, topsoil, fill dirt, stone, etc.) that the Forest Service has sole authority to manage on National Forest System lands (NFS). Authority to dispose of federal minerals, whether on BLM administered lands or on NFS lands is derived from three principal laws which have been amended many times since first passed but which maintain their essential character:

1. 1872 Mining Law (30 U.S.C. 22, et seq) – Provides for a system whereby lands containing so-called 'hard rock' or 'locatable' minerals such as gold, silver, lead, zinc, copper, and others can be purchased once claim is asserted by staking a lode or placer mining claims and the claim is determined to be valid within the context of the statute. The statute provides for the guaranteed right of access on land open to mining under the statute.

2. Mineral Leasing Act (30 U.S.C. 181, et seq) – Removes from disposal authority under the 1872 Mining Law several minerals commodities and adds several others under a leasing system managed by the BLM through the Department of the Interior. Leasing is discretionary and the lessee cannot gain title to the lands but can obtain mining rights through a system that may involve payment of rentals and royalties. Commodities such as oil and gas, coal, phosphate, sodium, and several other minerals are so-called 'leasable minerals'.

3. Materials Act of 1947 (30 U.S.C. 601, et seq) – Provides for a system of discretionary disposals by

free use or sale for common varieties of sand, gravel, stone, pumice, pumicite and clay as well as many other common mineral commodities generally used in construction, building, and landscaping.

On NFS lands open to operation under the 1872 Mining Law, the Forest Service is required to provide reasonable access and manage effects to surface resources through Forest Service mining regulations. On lands subject to leasing by the BLM, the Forest Service must provide advice regarding mitigation of effects to surface resources associated with leasing. Forest Service input is derived from environmental analysis and is included in leases as lease stipulations. On NFS lands where disposal of mineral materials may be appropriate, the Forest Service has sole authority to decide whether to dispose of commodities determined to be common variety minerals and how to manage the effects associated with such disposals.

On so-called 'split estate' lands, the mineral estate and the surface may be split between the Government and another party, usually a private interest. In cases where the mineral estate is owned by the Government, the three Acts noted above usually apply but there may be exceptions. Where the mineral estate is owned by a party other than the Government and the surface is NFS lands, none of the Acts cited apply and access and mining rights are usually controlled by language in the mineral deed and Forest Service Special Use regulations.

Table 3.6.1 displays the level of known locatable mineral and oil and gas activity of the 86 segments. Forty-six (46) of the eligible segment corridors have produced, or have the potential to yield, locatable minerals, salable minerals or oil and gas. Forty-four (44) river segments are considered to have either no mineral potential or a low mineral potential. Active oil and gas operations (generally undeveloped leases only) currently exist within the corridors of 13 of the river segments. Active coal mining leases (generally undeveloped) currently exist on the Huntington Creek, and Fish Creek and Gooseberry Creek segments.

Table 3.6.1 also displays the status of mineral development for segments grouped by special designations (e.g., Wilderness) which are currently withdrawn from locatable mineral entry. Claims may not be staked in areas closed to mineral entry by a special act of Congress, regulations implementing withdrawals, or public land orders. These areas are withdrawn from the operation of the mining laws. Areas withdrawn from location of mining claims include lands designated by Congress as part of the National Wilderness Preservation System. Research Natural Areas are withdrawn from mineral entry only upon request of the regional forester. Only the Red Butte Canyon Research Natural Area has been withdrawn. Lands withdrawn for power development may be subject to mining location and entry only under certain conditions. The data shows that parts of 29 segments, approximately 355 segment miles and the ½ mile river corridor have been withdrawn from mineral entry. This represents about 42% of the total miles.

Table3.6.1. Mineral development status.

Eligible Segment	Miles	Classification	Other Designation	Level of Past or Present Mineral Development (1)	Found Suitable in Alts
Ashley National Forest					
Ashley Gorge Creek	10	Wild	RNA (2.3 mi)	No past or present activity	3
Black Canyon	10	Wild	No	No past or present activity	3, 5
Cart Creek Proper	10	Scenic	No	No past or present activity	5
Carter Creek	16	Scenic	No	No past or present activity	5
East Fork Whiterocks River	4	Scenic	No	No past or present activity	5, 6
Fall Creek	6	Wild	Wilderness	No past or present activity	5
Garfield Creek	17	Wild	Wilderness	No past or present activity	5, 6
Green River	13	Scenic	No	No past or present activity	3, 5, 6,7
Lower Dry Fork Creek	7	Recreational	No	Existing undeveloped mining claims in corridor	3

Eligible Segment	Miles	Classification	Other Designation	Level of Past or Present Mineral Development (1)	Found Suitable in Alts
Lower Main Sheep Creek	4	Recreational	No	2 Phosphate leases inactive	3, 5
Middle Main Sheep Creek	5	Recreational	No	No past or present activity	3, 5
Middle Whiterocks River	9	Wild	No	No past or present activity	6
Oweep Creek	20	Wild	Wilderness	No past or present activity	5
Pipe Creek	6	Scenic	No	No past or present activity	5
Reader Creek	6	Scenic	No	No past or present activity	3, 5, 6
Shale Creek and Tributaries	10.3	Wild	Wilderness	No past or present activity	5, 6
South Fork Ashley Creek	14.5	Scenic	No	No past or present activity	*
Upper Lake Fork River, including Ottoson and East Basin Creeks	35	Wild	Wilderness	No past or present activity	5
Upper Rock Creek	21	Wild	Wilderness	No past or present activity	5
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	Wild	Wilderness	No past or present activity	3, 5, 6,7
Upper Whiterocks River	4	Scenic	No	No past or present activity	5, 6
Upper Yellowstone Creek, including Milk Creek	33	Wild	Wilderness	No past or present activity	5, 6
West Fork Rock Creek, including Fish Creek	13	Wild	Wilderness	No past or present activity	5
West Fork Whiterocks River	11	Scenic	No	No past or present activity	5, 6
Dixie National Forest					
Death Hollow Creek	10	Wild	Wilderness	2 O&G leases suspended, PSJ-UT oil basin within 1/4 mile corridor	3, 5, 6,7
East Fork Boulder Creek	3	Wild	No	1 active lease	5
Mamie Creek	2	Wild	Wilderness	2 O&G leases suspended, Oil basin PSJ-UT not within corridor	3, 5,7
Moody Wash	5	Wild	No	1 lease active (below segment)	3, 5, 6
North Fork Virgin River	1	Scenic	No	No past or present activity, coal reserves	3, 5, 6,7
Pine Creek	8	Wild	Wilderness	O&G active	3, 5,7
Fishlake National Forest					
Corn Creek	2	Scenic	No	Past mining exploration	*
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	No	No past or present activity	*
Fish Creek	15	Wild (4.3 mi.); Rec (10 mi.)	RNA (4.3)	Past mining exploration	3, 5,7
Manning Creek	4	Wild	No	1 inactive mining claim	5, 6
Pine Creek / Bullion Falls	4	Wild	RNA (2)	Past, active mining claims outside of corridor	5
Salina Creek	7	Wild	No	No past or present activity, coal reserves	5
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	No	No past or present activity	5
Steep Creek 4miles in Alt 3 – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	No	No past or present activity	3, 5
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	No	No past or present activity	3, 5
Manti-La Sal National Forest					
Chippean and Allen Canyons	21	Scenic: Recreational:	No	Old mining claims no current, 1 O&G lease on BLM	*
Fish Creek and Gooseberry Creek	21	Scenic (17 mi.); Rec (3.6 mi.)	No	Potential Coal, 1 O&G lease	4, 6

Eligible Segment	Miles	Classification	Other Designation	Level of Past or Present Mineral Development (1)	Found Suitable in Alts
Hammond Canyon	10	Scenic	No	Old mining claims no current, 1 O&G lease on BLM	3, 6
Huntington Creek	19	Recreational	No	Active, Potential, Hunter #4, 2 Coal leases, 1 O&G lease, 1 exploratory	4, 6
Lower Dark Canyon	41	Wild	Wilderness	Past mining claims, uranium	5, 6
Lower Left Fork of Huntington Creek	5	Scenic	No	Coal reserves	4, 6
Mill Creek Gorge	3	Wild	RNA	No past or present activity	5
Miners Basin (Placer Creek)	2	Recreational	No	Subsurface ownership of minerals 2 active lode claims 2 active placer claims	*
Roc Creek	9	Wild	No	1 active mining claim, O&G development contract	3, 5
Upper Dark Canyon	26	Recreational	Wilderness	Old Uranium mines. No current mining claims or leases exist in corridor.	5, 6
Uinta National Forest					
Fifth Water Creek	8	Scenic	No	O&G Active,	3
Little Provo Deer Creek	3	Recreational	No	No past or present activity	3, 6
North Fork, Provo River	1	Wild (0 .9 mi); Rec (0.4 mi.)	Wilderness (.9 mi)	No past or present activity	3, 6, 7
South Fork, American Fork River	1	Wild (1.1 mi.); Rec (0.3 mi)	Wilderness (1.1 mi)	No past or present activity	5
Wasatch-Cache National Forest					
Beaver Creek (Kamas)	6	Recreational	No	O&G Potential	6
Beaver Creek (Logan)	3	Recreational	No	No past or present activity	3, 6
Blacks Fork	3	Recreational	No	O&G Potential	*
Boundary Creek	4	Wild	No	O&G Active -3 leases, Potential,	6
Bunchgrass Creek	5	Scenic	No	No past or present activity	3, 6
East Fork Blacks Fork	10	Wild	Wilderness (8.4 mi)	O&G Potential	5
East Fork Smiths Fork	12	Wild	Wilderness (11.2 mi)	O&G Potential	3, 5
Hayden Fork: Source to Mouth	12	Recreational	No	O&G Active, Potential, 2 active lode claims	3, 6
Henry's Fork	8	Wild	Wilderness	O&G Potential	3, 5, 6
High Creek	7	Wild (4 mi.); Rec (3 mi.)	Wilderness	No past or present activity	*
Left Fork South Fork Ogden	5	Wild	No	Past mining claims	5
Left Hand Fork Blacksmiths	15	Recreational	No	Past, active lode claim	*
Left, Right, and East Forks Bear River	13	Wild	Wilderness (9.4)	O&G Active, 4 active leases	3, 6
Little Bear Creek: Little Bear Spring to Mouth	1	Scenic	No	No past or present activity	3, 6
Little Cottonwood Creek	8	Recreational	No	Past, active lode claim	3
Little East Fork: Source to Mouth	9	Wild	Wilderness (7.2 mi)	O&G Potential	3, 5
Logan River: Beaver Creek to Guinavah-Malibu CG	19	Recreational	No	No past or present activity	3, 6
Logan River: Idaho State line to Beaver Creek	7	Scenic	No	No past or present activity	3, 6
Main Fork Weber River	6	Scenic	No	O&G Potential, active lode claim	*

Eligible Segment	Miles	Classification	Other Designation	Level of Past or Present Mineral Development (1)	Found Suitable in Alts
Middle Fork Beaver Creek	11	Wild (6.9 mi.); Scenic (4.2 mi.)	Wilderness (6.9 mi)	O&G Potential	3, 5, 6
Middle Fork Weber River	6	Wild	No	O&G Potential	5
Ostler Fork	4	Wild	Wilderness	No past or present activity	3, 5, 6,7
Provo River: Trial Lake to U35	20	Recreational	No	O&G Potential	3, 6
Red Butte Creek	3	Scenic	RNA	No past or present activity	*
Spawn Creek	4	Scenic	No	No past or present activity	3, 6
Stillwater Fork	14	Wild (6.1 mi.); Scenic (8 mi.)	Wilderness (6.1)	4 O&G leases Active	3, 6,7
Temple Fork	6	Scenic	No	No past or present activity	3, 6
Thompson Creek	5	Wild	Wilderness (4 mi)	O&G Potential	5
West Fork Beaver Creek: Source to Forest Boundary	10	Wild (4.6 mi.); Scenic (5.5 mi.)	Wilderness (4.6 mi)	O&G Potential	3, 5, 6
West Fork Blacks Fork: Source to Trailhead	12	Wild (8 mi.); Scenic (3.9 mi.)	Wilderness (8mi)	2 O&G leases, 1 pending	3, 5
West Fork Smiths Fork: Source to Forest Boundary	14	Wild (4 mi.); Scenic (10 mi.)	Wilderness (4 mi)	4 O&G leases Active	3
White Pine Creek	1	Scenic	No	No past or present activity	3, 6
Willard Creek	4	Scenic	No	Past	3, 5

(1) "Active" means the presence of recorded mining claims or mineral leases but does not imply actual on-going extractive mineral operations.
*Segment(s) only occur in Alternatives 1 and 2

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.6 addresses one issue:

> Issue 2- Activities could be enhanced, foreclosed, or limited if the river segment and its corridor were included in a National System. The measurement indicator for mineral development is miles of river by Wild, Scenic, and/or Recreational classification and a list of reasonably foreseeable multiple use activities affected by designation.

Table 3.6.2 lists by alternative, the total miles of segments recommended as suitable, the miles of Wild segments recommended as suitable, the miles and acreage that would be required to be newly withdrawn from all forms of mineral entry, and the miles and percent of the total recommended as suitable where existing mining claims and oil and gas leases ("active mineral development") would be affected per classification. All miles and acreages are approximate.

Table 3.6.2. Summary of miles and acreage classified Wild, and miles in all classifications with active mineral development.

	Miles found suitable per classification per alternative.				Wild miles and acres not already withdrawn (1)		Miles with active mineral development as % of total determined suitable(2)		
	Total Miles	Rec. Miles	Scenic Miles	Wild Miles	Miles	Acres	Wild Miles (%)	Scenic Miles (%)	Rec. Miles (%)

	Miles found suitable per classification per alternative.				Wild miles and acres not already withdrawn (1)		Miles with active mineral development as % of total determined suitable(2)		
	Total Miles	Rec. Miles	Scenic Miles	Wild Miles	Miles	Acres	Wild Miles (%)	Scenic Miles (%)	Rec. Miles (%)
Alt. 1	0	0	0	0	0	0	0	0	0
Alt. 2	0	0	0	0	0	0	0	0	0
Alt. 3	370	93.9	97.6	178.7	51.5	16480	64.9(18%)	51.5(14%)	43(12%)
Alt. 4	45	22.6	22.05	0	0	0	0	22 (49%)	22.6 (50%)
Alt. 5	530	48	89	394	77.5	24800	28 (5%)	4 (0.08%)	0
Alt. 6	441	112	113	216	25.6	8190	23 (5%)	25 (6%)	35 (8%)
Alt.7	108	11.5	22	74	4.3	1376	8 (7%)	8 (7%)	0

(1) Not already withdrawn means not withdrawn from mineral entry, for example, a segment classified as Wild located outside of a designated Wilderness.
(2) "Active" means the presence of recorded mining claims or minerals leases but does not imply on-going extractive mineral development.

General Environmental Impacts

The withdrawal of lands from all forms of mineral entry (subject to valid existing rights) for Wild rivers is an irretrievable commitment if a given river is recommended, classified and designated as Wild. Alternatives 1 and 2 would have no irretrievable commitment of resources because no rivers would be recommended as Wild. Alternative 5 would have the largest irretrievable commitment because it includes the highest number of miles and largest acreage of Wild rivers that would be recommended.

Alternative 1 – No action, maintain eligibility of all river segments.

Under the No Action Alternative, no suitability decisions would be made and current management practices would continue. All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, ORVs and recommended classification. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Act are not withdrawn from the mining or mineral leasing laws. Protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts. For those segments in areas where there are projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant) the potential for these projects continues to exist. These projects could prevent the extraction of mineral resources.

Alternative 2 – No rivers recommended.

Under this alternative, a determination would be made that all 86 segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. Protection of river values would continue to be managed by the standards provided in the underlying Forest Plans for the area, which can be amended as needs emerge. Existing mining and mineral leasing would continue and future development of mining claims and mineral leases could occur in areas outside of Wilderness. Choosing this alternative would not in itself initiate any changes to mineral development

Over time dams and other water projects could be approved for some segments, depending on area management standards, resulting in the creation of reservoirs and associated facilities. If reservoirs are developed on some of the rivers such as the Left Hand Fork of Huntington Creek the ability to develop

mining claims may be limited by the water projects.

Not all segments will be affected by water development projects or other activities. Segments would be managed as per land management and subsurface management plans. Segments without water resource potential may remain undeveloped. Mining generally occurs in rugged, inaccessible areas.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

The 43 segments (370 miles) recommended as suitable for wild and scenic designation in Alternative 3 would continue to receive interim protection, as protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Act are not withdrawn from the mining or mineral leasing laws. Protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts.

If the segments are congressionally designated a comprehensive river management plan would be developed within three years and the 51.5 miles (16,480 acres) of segments classified as Wild and not already withdrawn from all forms of mineral entry due to Wilderness or other, would be withdrawn effectively preventing future mineral resource development but subject to valid existing rights. With regard to the mining laws, "valid existing rights" would have to be proved prior to approval of any mining plan that would conflict with the purposes of the withdrawal. Holders of mining claims with valid existing rights are allowed to conduct operations necessary for the development, production, and processing of the mineral resource. Mechanical transport, motorized equipment, and access to utility corridors may be used after a determination that they are the minimum necessary. However, these activities and the reclamation of all disturbed lands must minimize the effect on the surrounding character of the Wild river. Any mining claim with valid existing rights that might eventually be perfected would result in patent only to the mineral deposit along with such rights to the use of the surface and surface resources as are reasonably required for mining. Holders of valid mineral leases retain the rights granted by the terms and conditions of the specific leases. Mineral leases are subject to regulations issued by the Secretary of the Interior to protect water quality and scenic values (43 CFR 3809).

If designated, on miles classified as Scenic (97.6 miles) or Recreational (93.9 miles), mineral development would be managed according to language in the Wild and Scenic Rivers Act. New mining claims can be located and new mineral leases can be issued but both are subject to reasonable access and regulations that minimize effects to surface resources. The 23 segments (470 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects on mining as discussed in Alternative 2 would apply.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

The 3 segments (45 miles) recommended as suitable for wild and scenic designation in Alternative 4 would continue to receive interim protection the effects of which are explained in Alternative 1 analysis. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Act are not withdrawn from the mining or mineral leasing laws.

Protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts. If the segments are congressionally designated a comprehensive river management plan would be developed within three years of designation and 0 miles (0 acres) of segments with Wild classifications not already withdrawn from mineral entry would be withdrawn. Segments would be managed to protect their ORVs possibly limiting operations of existing mineral claims and oil and gas leases, subject to valid existing rights.

Affects of withdrawal on mineral development is the same as described in Alternative 3. With regard to the mining laws, "valid existing rights" would have to be proved prior to approval of any mining plan that would conflict with the purposes of the withdrawal. Holders of mining claims with valid existing rights are allowed to conduct operations necessary for the development, production, and processing of the mineral resource. Mechanical transport, motorized equipment, and access to utility corridors may be used after a determination that they are the minimum necessary. However, these activities and the reclamation of all disturbed lands must minimize the effect on the surrounding character of the wild river. Any mining claim with valid existing rights that might eventually be perfected would result in patent only to the mineral deposit along with such rights to the use of the surface and surface resources as are reasonably required for mining. Holders of valid mineral leases retain the rights granted by the terms and conditions of the specific leases. Mineral leases are subject to regulations issued by the Secretary of the Interior to protect water quality and scenic values (43 CFR 3809).

If designated, on segments with miles classified as Scenic (22 miles) or Recreational (22.6 miles), mineral development would be managed according to language in the Wild and Scenic Rivers Act. New mining claims can be located and new mineral leases can be issued but both are subject to reasonable access and regulations that minimize effects to surface resources.

The 83 segments (795 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to mineral development as discussed in Alternative 2 would apply.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

The 50 segments (530 miles) recommended as suitable for wild and scenic designation would continue to receive interim protection the effects of which are explained in Alternative 1 analysis. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Wild and Scenic Rivers Act are not withdrawn from the mining or mineral leasing laws. Protective management requirements for eligible river areas recommended as suitable for designation are subject to existing laws and agency guidance until Congress acts. If congressionally designated a comprehensive river management plan would be developed within three years of designation and those segments would be managed to protect their ORVs possibly limiting mineral development, subject to valid existing rights.

In this alternative, 77.5 miles classified as Wild (24,800 acres) would be withdrawn from mineral entry the effects of which are the same as described under Alternative 3. With regard to the mining laws, "valid existing rights" would have to be proved prior to approval of any mining plan that would conflict with the purposes of the withdrawal. Holders of mining claims with valid existing rights are allowed to conduct operations necessary for the development, production, and processing of the mineral resource. Mechanical transport, motorized equipment, and access to utility corridors may be used after a determination that they are the minimum necessary. However, these activities and the reclamation of all

disturbed lands must minimize the effect on the surrounding character of the Wild river. Any mining claim with valid existing rights that might eventually be perfected would result in patent only to the mineral deposit along with such rights to the use of the surface and surface resources as are reasonably required for mining. Holders of valid mineral leases retain the rights granted by the terms and conditions of the specific leases. Mineral leases are subject to regulations issued by the Secretary of the Interior to protect water quality and scenic values (43 CFR 3809).

If designated, on segments with miles classified as Scenic (89 miles) or Recreational (48 miles), mineral development would be managed according to language in the Wild and Scenic Rivers Act. New mining claims can be located and new mineral leases can be issued but both are subject to reasonable access and regulations that minimize effects to surface resources.

The 36 segments (310 miles) determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to minerals as discussed in Alternative 2 would apply.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

The 40 segments (441 miles) found suitable for wild and scenic designation would continue to receive interim protection the effects of which are explained in Alternative 1 analysis. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Wild and Scenic Rivers Act are not withdrawn from the mining or mineral leasing laws. Protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts. If congressionally designated a comprehensive river management plan would be developed within three years of designation and lands would be withdrawn as required to limit mineral entry on segments designated as Wild. Those segments would be managed to protect their ORVs possibly limiting mineral development, subject to valid existing rights.

In this alternative, if designated, 25.6 miles classified as Wild (8,190 acres) would be withdrawn from mineral entry the effects of which are the same as described under Alternative 3. With regard to the mining laws, "valid existing rights" would have to be proved prior to approval of any mining plan that would conflict with the purposes of the withdrawal. Holders of mining claims with valid existing rights are allowed to conduct operations necessary for the development, production, and processing of the mineral resource. Mechanical transport, motorized equipment, and access to utility corridors may be used after a determination that they are the minimum necessary. However, these activities and the reclamation of all disturbed lands must minimize the effect on the surrounding character of the wild river. Any mining claim with valid existing rights that might eventually be perfected would result in patent only to the mineral deposit along with such rights to the use of the surface and surface resources as are reasonably required for mining. Holders of valid mineral leases retain the rights granted by the terms and conditions of the specific leases. Mineral leases are subject to regulations issued by the Secretary of the Interior to protect water quality and scenic values (43 CFR 3809).

If designated on segments with miles classified as Scenic (113 miles) or Recreational (112 miles), mineral development would be managed according to language in the Wild and Scenic Rivers Act. New mining claims can be located and new mineral leases can be issued but both are subject to reasonable access and regulations that minimize effects to surface resources. The 46 segments (399 miles) not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to roads and rights of way as discussed in Alternative 2 would apply.

Alternative 7 – Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

The 10 segments (108 miles) found suitable for wild and scenic designation would continue to receive interim protection the effects of which are explained in Alternative 1 analysis. Lands would continue to be available for mineral development and mining claims and leases would continue to be handled under current policy and regulations in areas outside of Wilderness. Rivers being studied under Section 5(d)(1) of the Wild and Scenic Rivers Act are not withdrawn from the mining or mineral leasing laws. Protective management requirements for eligible river areas determined suitable are subject to existing laws and agency guidance until Congress acts. If congressionally designated a comprehensive river management plan would be developed within three years of designation and lands would be withdrawn as required to limit mineral entry on segments designated as wild. Those segments would be managed to protect their ORVs possibly limiting mineral development, subject to valid existing rights.

In this alternative, if designated, 4.3 miles classified as Wild (1,376 acres) would be withdrawn from mineral entry the effects of which are the same as described under Alternative 3. With regard to the mining laws, "valid existing rights" would have to be proved prior to approval of any mining plan that would conflict with the purposes of the withdrawal. Holders of mining claims with valid existing rights are allowed to conduct operations necessary for the development, production, and processing of the mineral resource. Mechanical transport, motorized equipment, and access to utility corridors may be used after a determination that they are the minimum necessary. However, these activities and the reclamation of all disturbed lands must minimize the effect on the surrounding character of the wild river. Any mining claim with valid existing rights that might eventually be perfected would result in patent only to the mineral deposit along with such rights to the use of the surface and surface resources as are reasonably required for mining. Holders of valid mineral leases retain the rights granted by the terms and conditions of the specific leases. Mineral leases are subject to regulations issued by the Secretary of the Interior to protect water quality and scenic values (43 CFR 3809).

If designated on segments with miles classified as Scenic (22 miles) or Recreational (11.5 miles), mineral development would be managed according to language in the Wild and Scenic Rivers Act. New mining claims can be located and new mineral leases can be issued but both are subject to reasonable access and regulations that minimize effects to surface resources. The 76 segments (732 miles) not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to roads and rights of way as discussed in Alternative 2 would apply.

3.7 Range

Introduction

During the eligibility determination, the National Forests in Utah used classification criteria to determine classification as Wild, Scenic, or Recreational rivers. One attribute, among many, was to look at shoreline development and past or ongoing grazing and agricultural production. In general, for a Wild classification a limited amount of domestic livestock grazing or hay production is acceptable. For a Scenic classification, the presence of grazing, hay production, or row crops is acceptable. For a Recreational classification, lands may have been developed for the full range of agricultural and forestry uses. (FSH 1909.12, Sec. 82.3 – Exhibit 01). There are 45 Wild, 30 Scenic, and 22 Recreational total classifications for the 86 river segments totaling 840 miles.

Detailed information for Section 3.7 came from Appendix A – Suitability Evaluation Reports, under "Grazing Activities."

Affected Environment

A moderate number of domestic livestock, primarily cattle and sheep, graze range allotments within and adjacent to the river segment corridors. Past, present, and/or reasonably foreseeable livestock grazing occurs in 65 segments (727 miles) in all classification types (i.e., Wild, Scenic, or Recreational) of the 86 eligible river segment corridors. Of those 65 segments, only 59 segments (683 miles) have reasonably foreseeable grazing. Livestock grazing is managed in accordance with existing laws and regulations, each forest's land and resource management plan's standards and guidelines, individual allotment management plans, and annual operating instructions or plans.

The river segments listed in Table 3.7.1 have past, present, or reasonably foreseeable domestic livestock grazing in or adjacent to the river corridor. All 86 eligible river segments were reviewed. If a river segment did not have past, present, or reasonably foreseeable grazing, it was not listed in the table. The information was obtained from Appendix A – Suitability Evaluation Reports.

Table 3.7.1. River segments with domestic livestock grazing in or adjacent to the river corridor. (Source: Appendix A – SERs).

River Segment with Grazing	Miles	Classification	Summary of Past, Present, and Reasonably Foreseeable Grazing Activities	Segment Suitable in Alternatives
Ashley NF				
Ashley Gorge Creek	10	Wild	Segment creates a boundary between two allotments, but due to the rugged and inaccessible nature of the canyon, no grazing occurs along the river corridor.	3
Black Canyon	10	Wild	The majority of grazing occurs on an allotment in the upper two miles of the segment, downstream the canyon becomes too rugged and remote.	3, 5
Cart Creek Proper	10	Scenic	Segment creates a boundary between grazing allotments, but due to the rugged topography and limited access, no grazing use occurs in the river corridor. There is an allotment in the headwaters of Cart Creek, but it has been vacant for four years, and use is not expected in the future.	5
Carter Creek	16	Scenic	Allotments located upstream and downstream, but due to the rugged nature of the canyon, there is no grazing along the corridor.	5
Garfield Creek	17	Wild	The upper half of Garfield basin is within an allotment which is rotated on two year intervals with another allotment.	5, 6
Green River	13	Scenic	No grazing permitted on National Forest System lands along river corridor. On lands administered by the Utah Division of Wildlife Resources grazing is allowed on a limited basis. On lands administered by the BLM, the river corridor is fenced, and livestock are kept ¼ mile away from the river. Limited grazing within the river corridor may be allowed at times.	3, 5, 6, 7
Lower Dry Fork	7	Recreational	A portion of an allotment is within segment.	3
Pipe Creek	6	Scenic	One allotment on the Flaming Gorge District portion of segment, with grazing use upstream and in the vicinity of the Pipe Creek road. One allotment on the Vernal District side of segment with use mainly in the headwaters and not in confined canyon sections.	5
South Fork Ashley Creek	15	Scenic	Creek borders an allotment and includes portions of another allotment.	*
Upper Lake Fork and Oweep	55	Wild	Upper Lake Fork River from Moon Lake to the confluence with Oweep Creek is within an	5

River Segment with Grazing	Miles	Classification	Summary of Past, Present, and Reasonably Foreseeable Grazing Activities	Segment Suitable in Alternatives
			allotment that has been vacant around 15 years. Ottoson Creek and the headwaters of Upper Lake Fork River and Oweep Creek are within two allotments. No allotments in East Basin Creek.	
Upper Rock Creek and Fall Creek	27	Wild	One allotment along Upper Rock Creek from Stillwater Reservoir to the confluence with Fall Creek. Above the confluence with Fall Creek, there is no permitted livestock use. In the Fall Creek drainage, there is a free use permit with the Ute Indian Tribe for Sheep grazing, but it has been vacant around 30 years.	5
Upper Uinta River including Gilbert Creek, Center Fork and Painter Draw	40	Wild	Allotment in the headwaters of the Uinta River, in the Painter Basin.	3, 5, 6, 7
Upper Yellowstone Creek, including Milk Creek	33	Wild	Segment located within two allotments. One within Upper Yellowstone Creek, from the wilderness boundary to the Swasey Hole Creek Confluence and the other within the headwaters of Upper Yellowstone Creek, upstream of the confluence with Milk Creek.	5, 6
West Fork Rock Creek, including Fish Creek	13	Wild	A minor amount of grazing occurs at the confluence of West Fork Rock Creek and Upper Rock Creek, from one allotment.	5
Dixie NF				
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	Segment located within an allotment.	*
East Fork Boulder Creek	3	Wild	Segment located within an allotment.	5
Moody Wash	5	Wild	Segment located within two allotments.	3, 5, 6
North Fork Virgin River	1	Scenic	Entire segment located on a currently vacant allotment.	3, 5, 6, 7
Pine Creek	8	Wild	Segment located within an allotment. Although the river corridor is within the allotment, there is no grazing within the Box-Death Hollow Wilderness and therefore no grazing on the riverbanks.	3, 5, 7
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	Segment located within an allotment.	5
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	Segment located within an allotment.	3, 5
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	Segment located within an allotment.	3, 5
Fishlake NF				
Corn Creek	2	Scenic	Segment located within an allotment. Receives a moderate level of livestock activity.	*
Fish Creek	15	Wild (4.3 mi.); Recreational (10.5 mi.)	Segment passes through two allotments. Receives a moderate level of livestock use.	3, 5, 7
Manning Creek	4	Wild	Segment passes through one allotment. Actual livestock use along segment is very low.	5, 6
Pine Creek / Bullion Falls	4	Wild	Segment passes through one inactive allotment.	5
Salina Creek	7	Wild	This segment passes through one allotment. Receives moderate level of livestock.	5
Manti-La Sal NF				
Chippean and Allen Canyons	21	Scenic (2.6 mi.); Recreational (19 mi.)	Allen Canyon located within an allotment. Chippean Canyon is not within an allotment and is not currently grazed.	*
Fish Creek and Gooseberry Creek	21	Scenic (17.05 mi.); Recreational (3.6 mi.)	Cattle graze outside of the area under study, upstream of the Lower Gooseberry segment. Sheep graze throughout the area under study.	4, 6
Hammond Canyon	10	Scenic	Entire corridor is grazed and is within an	3, 6

River Segment with Grazing	Miles	Classification	Summary of Past, Present, and Reasonably Foreseeable Grazing Activities	Segment Suitable in Alternatives
			allotment.	
Huntington Creek	19	Recreational	Grazing occurs within ten allotments in Huntington Canyon.	4, 6
Lower Dark Canyon including Poison Canyon, Deadman Canyon, Woodenshoe and Cherry Canyons	41	Wild	Segments within an allotment. Wooden Shoe Canyon and Lower Dark Canyon closed to grazing.	5, 6
Lower Left Fork Huntington Creek	5	Scenic	Segment within two different allotments.	4, 6
Mill Creek Gorge	3	Wild	Entire segment within allotment, however due to the ruggedness of the terrain, very little actual grazing occurs within the corridor.	5
Miners Basin (Placer Creek)	2	Recreational	Segment located within an allotment.	*
Roc Creek	9	Wild	Roc Creek is a boundary between two allotments. Due to the rugged terrain only incidental grazing occurs along the creek.	3, 5
Upper Dark Canyon Including Horse Pasture Canyon, Peavine & Kigalia Canyon	26	Recreational	Segment located within two allotments. The permittee is also authorized to graze Horse Pasture Canyon.	5, 6
Uinta NF				
Fifth Water Creek	8	Scenic	Located within an allotment.	3
Little Provo Deer Creek	3	Recreational	Northern portion of the segment and corridor are within a vacant allotment, which is shared with Wasatch Mountain State Park. No known proposals or plans to reopen this allotment to grazing exist.	3, 6, 7
Wasatch-Cache NF				
Beaver Creek: Source to Forest Boundary	6	Recreational	Entire corridor in an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	6
Beaver Creek: South Boundary of State Land to Mouth	3	Recreational	Segment within two allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	3	Recreational	Segment within three allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	*
Boundary Creek: Source to Confluence with East Fork Bear River	4	Wild	A small portion of this stream corridor is grazed by cattle on an allotment near the confluence of Boundary Creek and the East Fork Bear River, with the majority of the grazing occurring near the boundary of the private land; this allotment does not extend upstream into the headwaters of Boundary Creek. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	6
Bunchgrass Creek: Source to Mouth	5	Scenic	A portion of the segment flows through one allotment. While a majority of the segment flows through two allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
East Fork Blacks Fork: Headwaters to confluence with Little East Fork	10	Wild	Segment within one allotment in the upper part of the drainage. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	5
East Fork Smiths Fork: Red Castle Lake to Trailhead	12	Wild	Grazing occurs in the upper part of the stream corridor and along the lower section within an allotment. River corridor is used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 5
Hayden Fork: Source to Mouth	12	Recreational	The area is in an allotment.	3, 6
Henry's Fork: Henry's Fork Lake to Trailhead	8	Wild	Grazing occurs in the upper part of the drainage on two allotments and in the lower part of the valley on one allotment. River	3, 5, 6

River Segment with Grazing	Miles	Classification	Summary of Past, Present, and Reasonably Foreseeable Grazing Activities	Segment Suitable in Alternatives
			corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	
High Creek: High Creek Lake to Forest Boundary	7	Wild (4 mi.); Recreational (3 mi.)	Entire segment runs through an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	*
Little Bear Creek: Little Bear Spring to Mouth	1	Scenic	Grazing occurs within corridor. Upper 2/3 of stream in one allotment, and the lower portion in another allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Little East Fork: Source to Mouth	9	Wild	Entire segment within an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 5
Left Hand Fork Blacksmiths Fork: Source to Mouth	15	Recreational	Segment within valley bottom portions of three allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	*
Left, Right, and East Forks Bear River: Alsop Lake and Norice Lake to near Trailhead	13	Wild	The area is in an allotment.	3, 6
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	Recreational	Segment is within the valley bottom portion of two allotments. River corridor used by permitted livestock for short periods while trailing or herding.	3, 6
Logan River: Idaho State line to confluence with Beaver Creek	7	Scenic	Segment is within the valley bottom portion one allotment. Corridor is used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	11	Wild (6.9 mi.); Scenic (4.2 mi.)	The Scenic section is within an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 5, 6
Ostler Fork: Source to Mouth	4	Wild	There is no grazing except for recreational stock use (horses, llamas) along the majority of this segment. The lower portion of this corridor is within an allotment, where the river corridor is used by permitted livestock for short periods while trailing or herding.	3, 5, 6, 7
Provo River: Trial Lake to U35 Bridge	20	Recreational	The area is in an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Spawn Creek: Source to Mouth	4	Scenic	The upper and lower parts of the segment are within two allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Stillwater Fork: Source to Mouth	14	Wild (6 mi.); Scenic (8 mi.)	The area is in an allotment.	3, 6, 7
Temple Fork: Source to Mouth	6	Scenic	The upper north part of corridor, the middle southern 2/3 of the stream corridor, and the lower portion of this stream is located within three allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
Thompson Creek: Source to Hoop Lake Diversion	5	Wild	One allotment overlaps the end of the stream corridor. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	5
West Fork Beaver Creek: Source to Forest Boundary	10	Wild (4.6 mi); Scenic (5.5 mi.)	Two allotments on the Scenic portion of segment. There is a closed sheep allotment in the Wild section. Corridor used by permitted livestock for short periods while trailing or	3, 5, 6

River Segment with Grazing	Miles	Classification	Summary of Past, Present, and Reasonably Foreseeable Grazing Activities	Segment Suitable in Alternatives
			herding and occasionally by recreation stock.	
West Fork Blacks Fork: Source to Trailhead	12	Wild (8 mi.); Scenic (3.9 mi.)	Segment within two allotments. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 5
White Pine Creek: Source to Mouth	1	Scenic	Majority of segment within the valley bottom portion of an allotment; a small section near the bottom of segment is within an allotment. Corridor used by permitted livestock for short periods while trailing or herding and occasionally by recreation stock.	3, 6
65 Total Number of Segments	727 Total Miles			

*All river segments listed in Table 3.7.1 also occur under Alternatives 1 and 2. Those with an asterisk only occur in Alternatives 1 and 2.

Table 3.7.2. Miles of segments found suitable with past present, and reasonably foreseeable grazing activities, by classification and alternative.

Segments with Grazing		Alternatives						
		1	2	3	4	5	6	7
Total # of Segments	65	0	0	35	3	38	36	8
Total Miles	727	0	0	320	45	458	386	96
Recreational Miles	173	0	0	77	23	39	112	12
Scenic Miles	151	0	0	78	22	60	88	22
Wild Miles	403	0	0	165	0	360	187	62

Environmental Consequences

See Table 3.1.1 for restrictions to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.7 addresses one issue:

Issue 2 – Uses and activities may be precluded, limited or enhanced if the river segment and its corridor were included in the National System. The measurement indicator for Range is miles of river and existing and reasonably foreseeable multiple use activities affected by designation.

General Environmental Impacts

Guidelines issued by the Secretary of Agriculture and the Secretary of the Interior indicate that livestock grazing and agricultural practices should be similar in nature and intensity to those present in the area at the time of designation. Grazing is permitted under Wild, Scenic, or Recreational classification, but will be managed to maintain the values for which the river was designated. (Marsh 2006).

Grazing activities and practices on Federal lands located within Wild and Scenic River corridors are dependent on the type of classification (Wild, Scenic, and/or Recreational), the values for which the river was designated, and land use management objectives. The level of protection should be commensurate with the identified river values. (Marsh 2006).

Livestock grazing is managed in accordance with each Forest Plan's standards and guidelines, individual allotment management plans, and annual operating instructions or plans. Current levels of livestock grazing are generally considered compatible with Wild and Scenic River designation. Generally, existing

agricultural practices (e.g., livestock grazing activities) and related structures would not be affected by designation. However, if a river segment is designated, grazing is subject to evaluation (in addition to other resource uses) during the development of the Comprehensive River Management Plan.

Evaluation of livestock grazing on Federal lands prior to WSR designation is subject to evaluation during development of the comprehensive river management plan. River-administering agencies have an "affirmative" duty to evaluate pre-existing uses and determine whether such uses are diminishing the values for which the WSR was designated. Livestock grazing and agricultural activities (except those grandfathered specifically by statute) do not necessarily continue at levels practiced at the time of river designation. Grazing and other uses can continue if and when consistent with protecting and enhancing river values. River-administering agencies must evaluate activities under the comprehensive river management plan and NEPA in order to determine whether such uses and activities are consistent with protecting and enhancing the ORVs. If these activities or uses are determined inconsistent, then changes in livestock and/or grazing practices may be required. (Marsh 2006).

If a river is recommended for designation, grazing is not grandfathered in. Grazing must protect river values. Grazing does not have to be eliminated if current grazing is consistent with the protection and enhancement standard, under which ORVs are to be managed. This standard requires the assessment of uses, activities and actions which may degrade river values. Grazing will be assessed to determine if there is any need for change in grazing to protect river values. The Act gives river-administering agencies authority to adjust or eliminate livestock grazing, if doing so is necessary to meet the protection and enhancement standard.

Grazing Practices on Private Land

Since the Act does not give federal agencies authority to regulate private land, any affect to agricultural practices would be through technical assistance or compensation by purchase of easements, unless otherwise regulated by local zoning ordinances. (Marsh 2006).

Alternative 1 – No action, maintain eligibility of all river segments.

Under the No Action Alternative, All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow water quality, recommended classification, and ORVs. Refer to Table 3.1.2 for a description of interim management. There would be no impact to grazing practices or activities on 65 river segments (727 miles). Grazing would continue to be permitted under river segments with a Wild, Scenic, or Recreational classification, but it would be managed to maintain the values for which the river was designated. Livestock grazing would continue to be managed in accordance with existing laws and regulations, each Forest Plan's standards and guidelines, individual allotment management plans, and annual operating instructions or plans.

Alternative 2 – No rivers recommended.

Under Alternative 2, a determination would be made that all 86 river segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. There would be no impact to grazing practices or activities on 65 river segments (727 miles). Livestock grazing would continue to be managed in accordance with each Forest Plan's standards and guidelines, individual allotment management plans, and annual operating instructions or plans.

Impacts Common to Alternatives 3, 4, 5, 6, and 7

The following number of miles and river segments with past, present, or reasonably foreseeable grazing would be found suitable (see Chapter 3, Table 3.7.2):

- 35 river segments (320 miles) under Alternative 3;
- 3 river segments (45 miles) under Alternative 4;
- 38 river segments (458 miles) under Alternative 5;
- 36 river segments (386 miles) under Alternative 6;
- 8 river segments (96 miles) under Alternative 7.

Following selection of any of the action alternatives, and designation of a river segment, grazing would be evaluated during comprehensive river management plan by the river administering agency to determine whether such uses and activities are consistent with protecting and enhancing the ORVs. Grazing and other uses would continue if and when consistent with protecting and enhancing river values. If these activities or uses are determined inconsistent, then changes in livestock and/or grazing practices may be required.

3.8 Recreation

Introduction

Section 3.8 describes recreation and the impacts of designation on recreational activities in general. For a description of impacts related to the Recreation ORV, see Section 3.3b.

Detailed information for Section 3.8 came from Appendix A – Suitability Evaluation Reports, Summary of Outstanding Remarkable Values.

Affected Environment

Recreation visits to the five National Forests in Utah exceed 11 million and is growing. The settings along the segments range from primitive to a rural development scale. The activities on each segment vary from primitive hiking experiences with no established trails to campgrounds and boat ramps specifically designed to accommodate large volumes of recreation participation. The major activities that occur along the study segments with the outstanding remarkable value of recreation are: hiking, fishing, backpacking, horseback riding, all terrain vehicle use, developed and dispersed camping, scenic driving, hunting, rock climbing; and wildlife, cultural, geologic or hydrologic feature viewing. In the northern and mountainous portions of the state the segments support activities such as rafting, canoeing, and kayaking. None of the segments under study support motorized water craft. Viewing scenery, which is a major contribution to the recreation experience, varies from the more arid segments containing red rock geologic formations and desert riparian vegetation in the southern portion of the state to the high alpine river segments with spruce/fir forests in the northern portion of Utah.

Statewide the recreation activity most common to the segments rated high for the recreation outstanding remarkable value, is fishing. Five of the river segments in this study; the Green River, Huntington Creek, Left Fork Huntington Creek, the Logan River: Confluence with Beaver Creek to bridge at Guinavah – Malibu Campground and the Logan River: Idaho State Line to confluence with Beaver Creek support Blue Ribbon fisheries identified by the State of Utah Natural Resources Division of Wildlife Resources (although of those five, only Huntington Creek, the Green River and the Logan River: Confluence with Beaver Creek to bridge at Guinavah – Malibu Campground are recognized in eligibility for the recreation ORV). Forty-three percent of visitors to the Ashley National Forest participate in fishing activities on

streams or lakes. Fishing is rated as the primary activity that people participate in on the Ashley National Forest. The Wasatch-Cache and Uinta National Forests are located in close proximity to the state's population center of Salt Lake where day use activities are the predominant use and fishing is within the top four primary activities for which people visit each of those forests. One river segment in particular, the Green River, supports a number of recreational fishing and boating outfitter guide businesses. Recreation activities throughout the arid state center around water for the activities and scenery it supports.

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.8 addresses one issue:

Issue 2 – Activities could be enhanced, foreclosed, or limited if the river segment and its corridor were included in a National System. The measurement indicators for recreation are: miles of river by Wild, Scenic or Recreational classification and a list of reasonably foreseeable recreational activities affected by designation.

General Environmental Impacts

National designation would increase publicity of the river segments and may create more public interest, there by initially increasing use. Recreation trends on nationally recognized areas indicate that recreation use generally increases for a few years, then tapers down and gradually levels off to pre-designation conditions. Rivers designated near the major population areas or other national attractions would receive more exposure and subsequent use.

Comprehensive River Management Plans developed for designated rivers address user capacity, and balance the quantity and quality of recreation activities and facilities to protect the desired recreation experience and non-recreation ORVs. Recreation activities and level of use are likely to continue post designation to the extent they protect recreation as an ORV and do not adversely affect non-recreation ORVs. If recreation is not an ORV, recreation activities and level of use are likely to continue post designation to the extent they do not adversely affect non-recreation ORVs. Designated segments that already have National Forest permitted recreation activities such as fish guiding, etc. could continue and would be further addressed in the comprehensive river management plan developed for that segment. Eligible river segments were assigned a classification of wild, scenic or recreational based on the existing level of access (trails/roads) and facility development along the segment. See Table 3.1.1 for activity/ facility restrictions based on segment classification.

Segments that are found suitable would continue to receive interim protection and could be designated as part of the National Wild and Scenic River system by congress. Segments that are designated would be protected in the future from water development projects that would adversely affect a river's free-flowing condition, water quality or ORVs. Designation would preserve those recreation activities currently available for future generations through the development of a comprehensive river management plan that includes direction and mitigation measures to protect natural resources from increasing recreation use and to protect the desired recreation experience. River segments not designated would be subject to dams or other developments which could substantially change the current recreation opportunities and activities. Segments designated in Wilderness or other special legislative management prescription would continue to carry those management guidelines, along with Wild and Scenic River Act and comprehensive river management plan prescriptions. See Table 3.12.6 – River segments with reasonably foreseeable water developments.

Alternative 1 – No action, maintain eligibility of all river segments.

All of the 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, ORVs, and recommended classification (interim management outlined in FSH 1909.12 Chapter 80-Wild and Scenic River Evaluation). Management would continue to be in accordance with existing laws and regulations and Forest Plans.

Alternative 2 – No rivers recommended.

In this alternative, a determination would be made that all 86 segments (840 miles) are not suitable and released from Wild and Scenic interim protection. Segments would not have the interim protection of "eligibility" (protection of free flow, ORVs, and water quality) or protection by designation and would continue to be managed under general guidance of Forest Plan direction and in accordance with existing laws and regulations. Without the development of a comprehensive river management plan recreation may be affected by unmanaged activities and amounts of use.

Over time, depending on area management standards, large-scale projects like dams, water projects, and other activities could be approved for some segments, affecting the current recreation opportunities and experience.

Segments without water resource potential, in extremely rugged or inaccessible areas, or located in a Wilderness or Research Natural Area may remain undeveloped and recreation opportunities would remain relatively unaffected.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

This alternative recommends rivers that support a full range of recreation activities to be available on segments that are located across the state and on each National Forest in Utah except the Manti-La Sal. The settings range from primitive with no facilities to recreational with facilities such as boat ramps and roads. This alternative includes two Blue Ribbon Fisheries (32 miles), the Green River, and the Logan River: Confluence with Beaver Creek to bridge at Guinavah-Malibu Campground.

The segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in the General Environmental Impacts section. Huntington Creek has reasonably foreseeable water projects on it which if developed would change the current recreation opportunities/experience, see Table 3.12.5.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

This alternative has a reduced representation of the range of recreation activities from Alternatives 3, 5, 6, and 7. Whitewater rafting on a designated segment would not be an available activity in this alternative. Two Blue Ribbon Fisheries would be recommended as suitable in this alternative: they include Huntington Creek and the Lower Left Fork of Huntington. Of those two, only Huntington Creek is noted for the Outstanding Remarkable Value of Recreation.

The segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in the General Environmental Impacts section. No segments determined not suitable in this alternative has reasonably foreseeable water projects on it which if developed would change the current recreation opportunities/experience, see Table 3.12.5.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

A range of landscapes (arid desert to mountain landscapes) would be available for river related recreation. The settings range from primitive with no facilities to rural with facilities such as boat ramps and roads. Rivers classified as Wild, Scenic, and Recreational would all be represented in this alternative. One Blue Ribbon Fishery (13 miles) with the outstanding remarkable recreation value would be recommended as suitable for designation, the Green River.

The segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in the above General Environmental Impacts section. Huntington Creek has reasonably foreseeable water projects on it which if developed would change the current recreation opportunities/experience, see Tables 3.12.5.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

This alternative includes recreation representative segments from the Ashley, Dixie, Manti-La Sal and Wasatch-Cache National Forests. The settings range from primitive with no facilities to rural with facilities such as boat ramps and roads. A range of landscapes (arid desert to mountain landscapes) would be available for river related recreation. Rivers classified as Wild, Scenic, and Recreational would all be represented in the designation of rivers in this alternative. Four Blue Ribbon Fisheries (63 miles) would receive WSR designation in this alternative, including: Huntington Creek, Green River, Lower Left Fork of Huntington, the Logan River: Idaho State line to confluence with Beaver Creek, and the Logan River: Confluence with Beaver Creek to bridge at Guinavah-Malibu Campground. Of these five segments, Huntington Creek, the Green River, and the Logan River: Confluence with Beaver Creek to bridge at Guinavah-Malibu Campground are noted for the Outstanding Remarkable Value of Recreation.

The segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in the General Environmental Impacts section.

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

This alternative recommends rivers that support a full range of recreation activities to be available on segments that are located across the state and on each National Forest in Utah except the Manti-La Sal. In this alternative, a suitable determination would be made for 10 river segments including 74 miles classified as Wild, 22 miles classified as Scenic, and 12 miles classified as Recreational. Of the 10 segments, five have outstandingly remarkable values of recreation including the Green River, a Blue Ribbon Fishery.

The segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and impacts on recreation may occur as discussed in the above General Environmental Impacts section.

3.9 Roads/Rights of Way

Introduction

Detailed information for Section 3.9 came from Appendix A – Suitability Evaluation Reports, Transportation/Facilities/Other Developments as well as from Geocommunicator.gov, the Bureau of Land Managements Lands Record Database.

Affected Environment

Three national scenic byways, several state scenic byways, several county roads and numerous Forest Service roads parallel, cross and or are within the corridor of many of the eligible waterways being considered. The existing bridges, abutments, culverts, rip-rap, and guard rails did not preclude finding adjacent waterways eligible for Wild and Scenic River consideration. These road systems provide access points to the river wherever they cross and multiple access points when they parallel a river like Highway 89 along the Logan River or Highway 31 along Huntington Creek. Over time, these roads will continue to receive maintenance, and bridges will be replaced and or upgraded as necessary.

At eligibility Forests determined a temporary classification for each segment, with the existence of roads as one of the determination factors. Thirty-seven full segments and eight partial segments were classified as Wild being generally inaccessible except by trail (no roads), among other requirements. Twenty-three full segments and six partial segments were classified as Scenic having shorelines largely undeveloped, but accessible in places by roads (i.e., roads may cross but generally not parallel the river). Fifteen full and six partial segments were classified as Recreational being readily accessible by road or railroad. Most roads on the forest are maintained by the Forest Service. Other routes are county or state roads and have an established right of way. Sixteen of the segments have roads with rights of way within the ¼ mile river corridor. Eight of these segments are classified as Recreational, five are classified as Scenic, and three are classified as Wild.

Many rights of way exist in the segment corridors as well, not only for roads, but utility corridors, irrigation ditches, oil and gas pipelines. Other types of rights of way are granted based on need and filed with the Bureau of Land Management. Table 3.9.1 shows current rights of way, including road rights of way, by segment. Segments not appearing in the table do not have existing rights of way. It is important to note that it is possible for a road right of way to exist in Bureau of Land Management records, without actual physical evidence of a road on the ground. It is also possible for a road to exist on the ground without a right of way filed with the Bureau of Land Management. Thus the following table does not show all existing roads.

Table 3.9.1. Segments with existing Rights of Way.

Eligible Segment	Miles	Classification	Road Rights Of Way	Other Rights Of Way	Found Suitable in Alternatives
Ashley NF 24 segments of which 3 have existing rights of ways					
Ashley Gorge Creek	10	Wild	none	1 phone, 2 water facilities	3
Green River	13	Scenic	1	2 phone, 2 pipelines, 1power, 1 reservoir	3, 5, 6,7
Lower Main Sheep Creek	4	Recreational	2	none	3, 5
Dixie NF 10 segments of which 0 have existing rights of way					
Fishlake NF 4 segments of which 0 have existing rights of way					

Eligible Segment	Miles	Classification	Road Rights Of Way	Other Rights Of Way	Found Suitable in Alternatives
Manti-La Sal NF 10 segments of which 6 have existing rights of way					
Chippean and Allen Canyons	21	Scenic: (2.6 mi); Recreational: (19 mi.)	1	none	*
Fish Creek and Gooseberry Creek	21	Scenic (17.05 mi); Recreational (3.6 mi.)	none	1 irrigation facility, 1pipeline, 1 reservoir	4, 6
Huntington Creek	19	Recreational	1	3 power, 1 phone, 1 water facility	4, 6
Mill Creek Gorge	3	Wild	1	none	5
Miners Basin (Placer Creek)	2	Recreational	1	1 mineral surface right	*
Roc Creek	9	Wild	1	none	3, 5
Uinta National Forest 4 segments of which 1 has existing rights of way					
Little Provo Deer Creek	3	Recreational	1	none	3, 6,7
Wasatch-Cache NF 33 segments of which 13 have existing rights of way					
Beaver Creek: boundary of SITLA land to mouth	3	Recreational	1	none	3, 6
Blacks Fork	3	Recreational	1	none	*
Boundary Creek	4	Wild	2	1 utility	6
Little Cottonwood Creek	8	Recreational	3	1 utility	3
Lower Logan River	19	Recreational	2	1 utility	3, 6
Upper Logan River: State line to Beaver	7	Scenic	1	none	3, 6
Main Fork Weber River	6	Scenic	none	1 irrigation facility	*
Middle Fork Beaver Cr	11	Wild (6.9 Mi.); Scenic(4.2mi)	1	none	3, 5, 6
Middle Fork Weber	6	Wild	none	1 irrigation facility	*
Provo River: Trial Lake to U35 Bridge	20	Recreational	none	1 ditch	6
Temple Fork	6	Scenic	none	1 utility	3, 6
West Fork Blacks Fork	12	Wild (8 Mi); Scenic (3.9 Mi)	2	none	3, 5
West Fork Smiths Fork	14	Wild (4 mi); Scenic (10 mi)	3	none	3

* Segments only occur in Alternatives 1 and 2

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.9 addresses one issue:

> Issue 2 – Activities could be enhanced, foreclosed, or limited if the river segment and its corridor were included in a National System. The measurement indicator for roads/rights of way resources is miles of river by Wild, Scenic, and/or Recreational classification and a list of reasonably foreseeable roads/rights of way activities affected by designation.

Table 3.9.2 summarizes miles of segments found eligible per classification per alternative.

Table 3.9.2. Miles of segments found suitable per classification per alternative.

	Recreational	Scenic	Wild	Approx. Wild miles not already in Wilderness or RNA
Alternative 1	0	0	0	0
Alternative 2	0	0	0	0
Alternative 3	94 miles	98 miles	179 miles	45 miles
Alternative 4	23 miles	22 miles	0 miles	0
Alternative 5	48 miles	89 miles	394 miles	68 miles
Alternative 6	112	113 miles	216 miles	26 miles
Alternative 7	12	22	74	0

General Environmental Impacts

Overall there is not expected to be any significant consequences on the existing roads, bridges, highways or rights of way with any of the alternatives recommending river designations. Alternative 2 may affect existing roads depending on what water projects are developed. Regardless of designation, there is the possibility that bridges or highway design could be modified to avoid effects to the free-flowing character of recommended rivers or to address fish passage issues. Wild rivers preclude future road building within their corridors, including logging roads. Alternatives with more Wild river recommendations (outside areas previously designated as Wilderness or Research Natural Area) would preclude more future road building proposals in those corridors.

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, ORVs, and recommended classification including road development (see Table 3.9.1). The identified ORVs are afforded adequate protection, subject to valid existing rights (when eligible). Table 3.1.1 shows what activities are compatible with each classification specifically; in corridors around segments classified as Wild no new roadways would be built. In corridors around segments classified as Scenic existing roads would be maintained and new roads would rarely be built. In segments classified as Recreational new roads could be built. No withdrawal or comprehensive river management plans would be created allowing rights of way, and easements to occur in accordance with current Forest Plans and existing laws and regulations. Existing roads, rights of way or future rights of way may be adversely affected by the projects of others for which the Forest Service has no or limited authority (e.g., development of a federal dam, or licensing of a hydropower plant.) If these projects were built they may or may not affect the current roads and rights of way in the area.

Alternative 2 – No rivers recommended.

Under this alternative, a determination would be made that all 86 segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. Protection of river values would continue to be managed by the standards provided in the underlying Forest Plans for the area, which can be amended as needs emerge, with roads and existing rights of way allowed in all areas, and future development of rights of way or roads allowed in areas outside of Wilderness or RNAs and consistent with Forest travel management plans. Choosing this alternative would not in itself initiate any changes to roads or rights of way.

Over time dams and water projects could be approved for some segments, depending on area management

standards, resulting in the creation of reservoirs and associated facilities. If reservoirs are developed on some of the rivers such as Huntington Creek the ability to use some roads may be limited by the water projects, and other roads may be built to supplement the projects.

Most segments will not be affected by water development projects or other activities and here roads and rights of way management will generally remain the same. Segments would be managed as per Forest Plan standards and existing laws and regulations. Segments without water resource potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, segments located in Wilderness and Research Natural Areas will continue to exclude the possibility of new roads, and limited rights of way.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

The 43 segments (370 miles) that would be found suitable for wild and scenic designation in Alternative 3 would continue to receive interim protection, the effects of which are explained in Alternative 1 analysis including maintenance of the classification, specifically concerning the construction of roads, and could be congressionally designated.

Congressional action would require a comprehensive river management plan be developed within three years of designation. Of the 179 miles of segments classified as Wild, approximately 45 miles are in areas not already designated a Wilderness or Research Natural Area and would also not have future roads; however trails and vehicles could be used or built contingent on congressional intent and river management objectives defined in legislation and through the river planning process. Generally, access routes within the river corridors would continue to be available for public use. However, if that type of use adversely affected the ORVs identified for the river area, the route could be closed or regulated. Acceptability may be determined by historical or valid rights involved, or subject to, specific legislative language, if provided, for motorized use (vehicles or watercraft powered by motors). Motorized use on land or water is best determined by the comprehensive river management planning process and considers factors such as effects (positive or negative) on river values, user demand for such motorized recreation, health and safety to users, and acceptability with desired experiences and other values for which the river was designated. The 192 miles of segments with Scenic and Recreational classifications would be managed to protect their ORVs, possibly which may limit or encourage the development of new roads, if required.

Existing rights of way would remain as before designation. In Alternative 3, six segments have rights of way on them. Specifically in the Wild and Scenic Rivers Act it notes, “Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party. Nothing in this Act shall preclude the improvement of any existing and or right of way within the boundaries of the segment designated” (Sec. 12 [16 usu 1283] (b) Management Policies). In addition, future rights of way are possible in the designated segment. “The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively. Provided that any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act”, (Sec. 13 [16 USC 1284] g). “In the absence of reasonable alternative routes, new public utility rights-of-way on Federal lands affecting a Wild and Scenic River area or study area will be permitted. Where new rights-of-way are unavoidable locations and construction techniques will be selected to minimize adverse effects on scenic, recreational, fish and wildlife and other values of the river area.” Other legislation applicable to the various managing agencies

may also apply to wild and scenic river areas. Where conflict exists between the provisions of the Wild and Scenic Rivers Act and other acts applicable to lands within the system, the more restrictive provisions providing for protection of the river values shall apply." (Wild and Scenic River Guide, Federal Register /Vol 47, No 173/ Tuesday, September 7, 1982).

The segments determined not suitable for wild and scenic designation in Alternative 3 would be released from Wild and Scenic River interim protection and effects on the development of roads or rights of way as discussed in Alternative 2 would apply.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

The 3 segments (45 miles) that would be found suitable for wild and scenic designation would continue to receive interim protection the effects of which are explained in Alternative 1 analysis, and could be congressionally designated. Congressional action would require a comprehensive river management plan be developed within three years of designation. Those segments would be managed to protect their ORVs possibly limiting the creation of new roads or rights of way, if required. Of the 3 segments found suitable in Alternative 4, 2 segments have rights of way on them. There are no miles in this alternative classified as Wild. The 45 miles of segments with Scenic and Recreational classifications would be managed to protect their ORVs, which may limit or encourage the development of new roads, if required.

The 83 segments determined not suitable for wild and scenic designation in Alternative 4 would be released from Wild and Scenic River interim protection and effects on the development of roads or rights of way as discussed in Alternative 2 would apply.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

The 50 segments (530 miles) that would be found suitable for wild and scenic designation in Alternative 5 would continue to receive interim protection the effects of which are explained in Alternative 1 analysis, and could be congressionally designated which would then require a comprehensive river management plan be developed within three years of designation. Those segments would be managed to protect their ORVs possibly limiting the creation of new roads or rights of way, if required. In this alternative, of the 394 river miles that would be managed as Wild, approximately 68 miles are in areas not already designated as Wilderness or a Research Natural Area, where roads are already excluded. Of the 50 segments found suitable in Alternative 5, 6 segments have rights of way on them. The 137 miles of segments with scenic and recreational classifications would be managed to protect their ORVs, possibly which may limit or encourage the development of new roads, if required.

The 36 segments determined not suitable for wild and scenic designation in Alternative 5 would be released from Wild and Scenic River interim protection and effects to roads and rights of way as discussed in Alternative 2 would apply.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

The 40 segments (441 miles) that would be found suitable for wild and scenic designation in Alternative 6 would continue to receive interim protection the effects of which are explained in Alternative 1 analysis, and could be congressionally designated which would then require a comprehensive river management

plan be developed within three years of designation. Those segments would be managed to protect their ORVs possibly limiting the creation of new roads or rights of way, if required. Of the 40 segments found suitable in Alternative 6, 11 segments have Rights of Way on them. In this alternative, of the 216 river miles that would be managed as Wild, approximately 26 miles are in areas not already designated as Wilderness or Research Natural Area. The 225 miles of segments with Scenic and Recreational classifications would be managed to protect their ORVs, possibly which may limit or encourage the development of new roads, if required.

The 46 segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to roads and rights of way as discussed in Alternative 2 would apply.

Alternative 7 – Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

The ten segments (108 miles) that would be found suitable for wild and scenic designation in Alternative 7 would continue to receive interim protection the effects of which are explained in Alternative 1 analysis, and could be congressionally designated which would then require a comprehensive river management plan be developed within three years of designation. Those segments would be managed to protect their ORVs possibly limiting the creation of new roads or rights of way, if required. Of the 10 segments found suitable in Alternative 7, two segments have Rights of Way on them. In this alternative, of the 74 river miles that would be managed as Wild, zero miles are in areas not already designated as Wilderness or Research Natural Area. The 34 miles of segments with Scenic and Recreational classifications would be managed to protect their ORVs, possibly which may limit or encourage the development of new roads, if required.

The 76 segments determined not suitable for wild and scenic designation would be released from Wild and Scenic River interim protection and effects to roads and rights of way as discussed in Alternative 2 would apply.

3.10 Social and Economic Resources

Introduction - Current Social and Economic Trends in Utah

Utah's 2006 population of approximately 2.6 million reflects steady growth of 2 to 3% per year over the past decade, with an overall increase of 14.2% since 2000. Eighty percent of Utah's population lives in the six county area surrounding Salt Lake City (Utah, Salt Lake, Davis, Weber, Box Elder, and Tooele Counties) known as the "Wasatch Front." However, past and projected population growth varies by county (Table 3.10.1)[1].

[1] Variation in population estimates occurs. Data used in preparing this document was drawn from US Census data, the Utah Governor's Office of Planning and Budget, the Economic Development Corporation of Utah (EDCUTAH), and the Utah Department of Workforce Services.

Table 3.10.1. Utah population by county 2000-2020 (projected).

County	2000	2005	% growth (2000-2005)	2010 Forecast	% growth forecast (2005-2010)	2020 Forecast	% growth forecast (2010-2020)
Box Elder	42,860	45,142	5.3%	49,254	9.1%	61,675	25.2%
Cache	91,897	102,477	11.5%	114,304	11.5%	147,776	29.3%
Carbon	20,396	19,205	-5.8%	19,023	-0.9%	20,982	10.3%
Daggett	933	967	3.6%	1,024	5.9%	1,141	11.4%
Duchesne	14,397	15,043	4.5%	15,897	5.7%	19,021	19.7%
Emery	10,782	10,492	-2.7%	10,346	-1.4%	11,359	9.8%
Garfield	4,763	4,645	-2.5%	4,955	6.7%	5,973	20.5%
Grand	8,537	8,691	1.8%	9,039	4.0%	9,751	7.9%
Kane	6,037	6,093	0.9%	6,618	8.6%	8,359	26.3%
Millard	12,461	13,305	6.8%	14,199	6.7%	18,386	29.5%
Piute	1,436	1,356	-5.6%	1,503	10.8%	1,790	19.1%
Salt Lake	902,777	970,748	7.5%	1,053,258	8.5%	1,230,817	16.9%
Sanpete	22,846	25,447	11.4%	27,904	9.7%	32,902	17.9%
San Juan	14,360	14,444	0.6%	14,481	0.3%	15,419	6.5%
Sevier	18,938	19,494	2.9%	21,038	7.9%	24,855	18.1%
Summit	30,048	36,417	21.2%	44,511	22.2%	65,001	46.0%
Uintah	25,297	26,317	4.0%	27,071	2.9%	29,289	8.2%
Utah	371,894	453,977	22.1%	527,502	16.2%	661,319	25.4%
Wasatch	15,433	20,138	30.5%	25,516	26.7%	37,082	45.3%
Washington	91,104	125,010	37.2%	162,544	30.0%	251,896	55.0%
Weber	197,541	212,707	7.7%	230,145	8.2%	271,339	17.9%

Source: Utah Governor's Office of Planning and Budget

Economic growth across Utah was strong in 2006. Growth is projected to continue in 2007, although it is expected to moderate somewhat. Specific industry highlights include: 1) travel and tourism, with all five major industry sectors showing growth in 2006 (including a third consecutive year of record skiing visits); 2) increases in metal, coal, and industrial mineral production and prices led to a record $7.6 billion dollars (estimated) in energy and mineral production across Utah; and 3) changes in the structure of agriculture, with cattle prices declining in 2006 and new demand for grain (corn) as a source of energy. Technology industries continue to grow and provide jobs with higher than average salaries. Growth is also evident in manufacturing and construction sectors.

Data from Utah and across the USA suggest a downward employment trend in traditional rural economics, such as agriculture and mining, in conjunction with increasing service and professional employment (Table 3.10.2).

Table 3.10.2. Utah employment projections by major industry.

Industry	2001	2010	% growth (2001-2010)	2020	% growth (2010-2020)
Natural Resources & Mining	32,282	29,895	-7.4%	28,228	-5.6%
Construction	95,869	114,959	19.9%	141,999	23.5%

Industry	2001	2010	% growth (2001-2010)	2020	% growth (2010-2020)
Manufacturing	127,828	131,677	3.0%	150,920	14.6%
Trade, Transportation, Utilities	259,741	305,185	17.5%	342,687	12.3%
Information	36,535	38,134	4.4%	41,166	8.0%
Financial Activity	130,519	163,555	25.3%	194,359	18.8%
Professional & Business Services	181,034	236,776	30.8%	301,647	27.4%
Education & Health Services	134,218	191,684	42.8%	294,044	53.4%
Leisure & Hospitality	115,490	146,355	26.7%	175,690	20.0%
Other Services	72,467	93,441	28.9%	113,366	21.3%
Government	206,594	246,064	19.1%	299,991	21.9%
Total	1,392,577	1,697,725	21.9%	2,084,097	22.8%

Source: Governor's Office of Planning and Budget, 2005 Baseline Projections.

Affected Environment

County Profiles

The unique cultural and natural heritage of each of Utah's counties results in diverse opportunities for economic development across the state. However, all counties face similar challenges for some broad trends. For example, the availability, current use of, and future plans for water resources is of concern across Utah. Changing demographics and growth patterns further affect county growth, influencing a broad spectrum of industries and related resources. Information provided in this section was drawn from Appendix A – Suitability Evaluation Reports, individual county websites and associated economic development reports, the Utah Department of Workforce Services (DWS), the Utah Governor's Office of Planning and Budget, and the Economic Development Corporation of Utah (EDCUTAH).

Box Elder County

Agriculture and manufacturing are major elements of Box Elder's economy. Agricultural production (crops and livestock) accounts for 43 percent of land use. Manufacturing industries include space technology, motor vehicle parts, iron and steel products, and furniture; these account for 40 percent of total nonagricultural employment. As state growth continues into northern areas, pressure to shift land use from traditional agricultural use to residential and commercial use is expected to rise. In 2006, the population of Box Elder County was 44,832. Brigham City, the county seat, had a 2006 population of 17,585. The economy of the local community of Willard (population ~2000) has centered on agriculture; major area employers are the nearby Hill Air Force Base (AFB), Internal Revenue Service (IRS), Thiokol Corporation, and Morton International.

Cache County

Historically, the processing and distribution of agricultural products has been a mainstay of Cache County. Utah State University (USU) employs approximately 6,000 individuals; USU's research activities and operations have stimulated further job growth. Losses in the manufacturing sector are being replaced by service sector jobs, including a growing tourism sector. An expanding population and high rate of growth is resulting in the conversion of agricultural landscapes to urban, commercial, and industrial development. Growth is expected to continue. Logan City, with a 2006 population of 44,295 is the largest city and the county seat.

Carbon County

Historically, coal has dominated the Carbon County economy. During the 1990s, diversification into transportation, trade, government, and services broadened the economic base; the county's position as a regional hub has helped in local diversification. The College of Eastern Utah also provides employment opportunities. Potential growth is limited by available water; the county is dependent on the Wasatch plateau for agricultural, culinary, and industrial water. In 2006, the population of Carbon County was 18,220, with 7,329 people living in the county seat of Price.

Daggett County

Government services and the operation of Flaming Gorge Dam dominate the economy of Daggett County. Traditional land uses of agriculture, timber harvest, and livestock grazing have been important over time. Tourism and outdoor recreation have grown significantly, and are now a major component of the county's economy; economic development while maintaining the county's rural character, culture, and lifestyle is one goal of the county's Economic Development Action Plan. The 2006 population of Daggett County was estimated at 896; the county seat of Manila has approximately 685 residents.

Duchesne County

While oil and gas are integral to the Duchesne County economy, government services, as well as trade, transportation and utilities are growing economic components. In addition, the growth of Ute Tribal enterprises is an important element of the economy in this area. Agriculture, traditional land uses, and tourism are important across the Uintah Basin, particularly in rural environments. Downstream communities are dependent upon water from the watersheds located on public lands. In 2006, the population of Duchesne County was 14,472; Roosevelt is the largest city (2006 population 4,377), and the county seat of Duchesne had 1,413 residents in 2006.

Emery County

Mining, transportation, communications, utilities, and government are mainstays of the Emery County economy. Electricity generation and auxiliary businesses (i.e., fuel provision for power plants) are an important base for the area's economy. Livestock ranching remains an important agricultural use; agricultural specialty products are also part of the economy. Recreation and tourism are emerging and growing as aspects of the county economy. Water in this area is over-appropriated and in relatively short supply. In 2006, the population of Emery County was 10,115, with 1,539 people living in Castle Dale, the largest city and county seat.

Garfield County

The economy of Garfield County has traditionally been based on natural resources. However, industries such as farming, ranching, and timber are under pressure from rising land values. With over one million acres of federal land including portions of the Grand Staircase-Escalante National Monument (GSENM), Bryce Canyon and Capitol Reef National Parks, and Glen Canyon National Recreation Area, over 90% of the county is federal land; recreation and tourism jobs form a large sector of the Garfield County economy. A recent Utah State Visitor Study of the GSENM reported that approximately 600,000 visitors spent approximately $20.6 million dollars in Garfield and Kane counties. This study reflects the economic contribution of front-country visitors, estimated at $500 per three-member group. However, unemployment rates in Garfield County are high and personal income levels are low relative to the rest of the state. In 2006, the population of Garfield County was 4,082; the 2006 population of the county seat, Panguitch, was 1,414. Population growth is expected to be low.

Kane County

A gateway to several large, heavily visited national parks (Bryce Canyon, Zion, and Grand Canyon), as well as Lake Powell and the Grand Staircase-Escalante National Monument, Kane County has seen strong growth in the recreation, tourism, and service sectors of the economy. Federal land is prominent in Kane County, largely managed by the Bureau of Land Management (BLM). Traditional natural resource-based

activities have historically dominated; recent diversification includes local manufacturing and an animal rescue firm. Second home ownership has increased on private lands. In 2006, the population of Kane County was 5,803; the 2006 population of the county seat, Kanab, was 3,372.

Montrose County, Colorado

Home of Black Canyon of the Gunnison National Park and the Gunnison Gorge National Recreation and Wilderness Areas, Montrose County has 37,500 residents in 2,200 square miles. Public lands (including Forest Service, BLM, and National Park Service lands) make up a large portion of the county; retail trade, manufacturing, and service industries form the county's economic base. In addition, Montrose County is considered the 'agricultural hub' of the western slope area.

Piute County

One of the smallest counties in Utah (763 square miles), Piute County has recently experienced employment growth in the non-agricultural sector (its traditional base.) Tourism and recreation offer some job opportunities; attractions include nearby parks and reservoirs, the Utah Heritage Highway 89 and ATV trail use. Agriculture (including dairy and beef cattle), and trucking are also important to the local economy. In 2006, the county population was 1,288; the largest city in 2006 was Circleville (population 455); Junction is the county seat (2006 population 156).

Salt Lake County

With a 2006 population of 996,374, and approximately 48% of the state's jobs, Salt Lake County is the heart of state government and financial services. The county's economic base is broad, and includes government, professional services, trade/transportation/utilities, leisure/hospitality, education and health services, and manufacturing. Growth is strong and expected to continue, supported by a well-developed infrastructure as well as proximity and access to other regional centers. Some large employers include the State of Utah, the University of Utah, Delta Airlines, and UPS, among others.

San Juan County

Government, trade, and services related to tourism and recreation form the major bases of San Juan County's economy. A significant portion of the county is State, Federal, or Navajo Reservation Land; access to recreational opportunities including several state parks and National Parks and Monuments supports tourism and recreation-related employment. However, unemployment figures are high; overall San Juan County is economically depressed. The Navajo Nation is home to the state's largest tribe, and occupies much of the southern area of the county. In 2006, the population of San Juan County was 13,099; the 2006 population of the county seat, Monticello, was 1,675. Blanding, the largest city, had a 2006 population of 2,847.

Sanpete County

Much of Sanpete County's employment and economic base is based in agriculture; the value of agricultural production in 2006 was $111.5 million dollars. Sanpete County is home to the largest breeding sheep and lamb production in Utah (51,000), as well as substantial turkey production and processing through the Moroni Feed Cooperative with Norbest, Inc. However, the public sector also accounts for a large part of the employment base, including Snow College, the regional prison in Gunnison, and two regional school districts. Trade, transportation, and utilities, as well as manufacturing, education, health and social services, and leisure and hospitality also contribute to the economy. Similar to Carbon County, potential growth is limited by available water; the county is dependent on the Wasatch plateau for agricultural, culinary, and industrial water. In 2006, the county population was 23,049. Although Manti is the county seat, the largest city is Ephraim, with a 2006 population of 4,745.

Sevier County

Sevier County's largest employment sectors are trade, government, and services. Large employers

include the Sevier County school district, Canyon Fuels Company, Barney Trucking, and Wal-Mart, among others. Economic activity has varied in the past few years, including periods of overall job losses. However, the recent growth trend (including approximately 400 net new jobs in 2006, primarily as a result of expansion in wholesale trade, retail trade, and transportation) is expected to continue. Richfield is the largest city and county seat (2006 population 6,353); 2006 county population was 18,589.

Summit County

Summit County, once reliant on natural resource extraction, has transformed into a growing service economy; the development of tourism, skiing, and real estate industries reflect the area's scenic appeal and recreational opportunities. Rural areas support cattle ranching and tourism, while the residential/resort growth of Park City has supported a substantial construction industry, and the 2002 Winter Olympics underlined the role of skiing tourism in the local economy. National Forest System land is quickly becoming a four-season destination. Leisure and hospitality is the largest employment base, with trade, transportation and utilities, and government also providing significant employment opportunities. In 2006, the population of Summit County was 33,874, with 8,147 people living in Park City; the county seat is Coalville (population 1,338 in 2006).

Uinta County, Wyoming

At 2,088 square miles, Uinta County is one of the smallest counties in Wyoming. Government services, education, health care, and service-related businesses play a fundamental role in the local economy, along with mining and agriculture. Natural-resource based activities are a four-season attraction, and provide some job opportunities. Evanston, the county seat, had approximately 12,000 residents in 2005; the county population in 2003 was 20,729.

Uintah County

Oil and gas development, along with industries such as government, trade, recreation services, and Ute Indian Tribal enterprises shape the Uintah County economy. The Uintah and Ouray Indian Reservation is within and adjacent to county boundaries. In 2006, Uintah County's population was 25,960. Vernal (population 7,497 in 2006) is the largest city and the county seat, followed by Maeser (population 2,855 in 2000) and Naples (population 1,300 in 2000). Oil and gas development have led to boom and bust cycles, but the population, economy, and employment are expected to grow. Outdoor recreation/tourist attractions include Dinosaur National Monument, rafting on the Green and Yampa rivers, and winter sports. The Red Cloud Loop Scenic Backway is heavily traveled.

Utah County

Utah County is the second most populated county, with 466,469 residents in 2006. Provo City, the county seat, and the largest city (2006 population: 130,144) is combined with Orem (2006 population: 102,912) to form one of Utah's second largest Metropolitan Statistical Areas (MSA). Brigham Young University (BYU), Utah Valley University (formerly Utah Valley State College), and computer/technology industries are part of a strong economic base. Utah County is an urban county; approximately 25% (343,000 acres) of the county is farmed.

Wasatch County

Close to, yet insulated from the major urban centers of the Wasatch Front, recreation is a major industry for Wasatch County. Mt. Timpanogos and the Wasatch Mountains attract recreation users; the Strawberry and Jordanelle Reservoirs offer fishing opportunities. Sundance ski area and Brigham Young University's Aspen Grove Facility are nearby; both facilities are major attractions that contribute to the economy of the area. Approximately 9% of Wasatch County is farmed. In 2006, Wasatch County's population was 18,384. Heber (population 8,624 in 2006) is the largest city and the county seat, located just 44 miles from Salt Lake City.

Washington County

One of the fastest growing counties in Utah, Washington County has experienced an increase in conflicts over the availability of private land, water, and open space. A booming economy has caused a tight labor market as well as spikes in home prices. Trade, transportation, and utilities form the largest sector of the county's economy; traditional industries, such as farming and ranching have decreased, but are still mainstays of local communities. Overall the economic base is relatively diverse, and job growth is expected to continue. The county's 2006 population was 113,394; the county seat of St. George had a 2006 population of 61,173.

Weber County

The Weber County economy is diverse, with government, trade/transportation/utilities, education, health services, professional and business services, manufacturing, and leisure/hospitality all contributing to steady growth. Proximity to both the urban Wasatch Front and the Wasatch Range ensures access to a variety of employment and recreational opportunities. Snowbasin Ski Resort, in the Ogden Valley, hosted the 2002 Winter Olympics; year-round tourism and recreational opportunities are available. The county's 2006 population was 201,808; the county seat of Ogden had a 2006 population of 76,248.

Environmental Consequences

Measurement Indicators and Outline of the Chapter

Section 3.10 addresses two issues:

Issue 3 – Designation of a Wild and Scenic River could change the economy of a community. Measurement indicators used in this analysis are based on river segments by county and include the current population and expected growth of counties, as well as potential economic and/or social impacts (e.g., as related to water uses and reasonably foreseeable development, employment, visitor/recreation use, and resource uses). This information was drawn from Forest Suitability Evaluation Reports (Appendix A – Suitability Evaluation Reports), Utah Department of Workforce Services (DWS), Utah Governor's Office of Planning and Budget (GOPB), the Economic Development Corporation of Utah (EDCUTAH), US Census resources, individual county websites, and the Utah State University (USU) Draft Final Report: Wild and Scenic River Study (Burr 2007), the USU Final Report: Wild and Scenic River Study (Keith 2007) and the Compendium of Questions and Answers Relating to Wild and Scenic Rivers developed by the Interagency Wild and Scenic Rivers Coordinating Council[2].

Issue 6 – Consistency with state, county, and local government laws and plans. It addresses the measurement indicator: consistency with county plans.

In this section, general economic and social impacts of Alternatives 1 through 7 are discussed. Tables 3.10.3 through 3.10.7 display the counties potentially affected by selected WSR segments for each alternative. Next, applicable alternatives are discussed by county; Tables 3.10.8 through 3.10.43 display the estimated costs and potential impacts of designation for each alternative in each county.

Finally, Table 3.10.44 presents counties' support or opposition to designation in relation to economic and/or social impacts. This information was drawn from applicable suitability factors from the Forest

[2] This document does not provide conclusive effects on local economies (i.e., economic models or statistical analysis). Here, as in each alternative, discussion of potential impacts is based on currently available information, including Forest Suitability Evaluation Reports (Appendix A – SERs), Utah Department of Workforce Services (DWS), Utah Governor's Office of Planning and Budget (GOPB), the Economic Development Corporation of Utah (EDCUTAH), US Census resources, individual county websites, the *Compendium of Questions and Answers Relating to Wild and Scenic Rivers* developed by the Interagency Wild and Scenic Rivers Coordinating Council, the Utah State University (USU) *Draft Final Report: Wild and Scenic River Study,* and the USU *Final Report: Wild and Scenic River Study*[2].

Suitability Evaluation Reports (Appendix A – Suitability Evaluation Reports) and comments received by counties as part of the suitability assessment process, including comments on the DEIS. Many, but not all, counties indicated support of or concern with social and economic aspects of designation.

Potential Economic and Social Impacts of Proposed WSR Designation

National Forests in general make important contributions to local and regional economies, providing water, recreation opportunities that support service enterprises, as well as in the production of forest products. Public concerns about WSR designation include the social and economic aspects of water uses and development, access, employment, visitor/recreation use, and resource uses such as grazing, agriculture, mineral and energy resource extraction, and timber harvest.

Each of the seven alternatives presented in this document may result in a range of social and economic effects on local communities, counties, and the State of Utah. Effects range from no discernible social or economic impact to potentially large effects on individuals and specific industries (most commonly with respect to the development of reasonably foreseeable water projects and associated activities.)

Social and economic conditions such as population growth rates, employment rates by sector, established travel and tourism industries, and diversity of the economic base vary across Utah counties. Thus, counties with segments under consideration are likely to experience unique social and economic impacts as a result of WSR designation. Effects on economies dominated by rural industries may be different than effects on economies with an urban industry base. In some instances, impacts may be highly localized (i.e., experienced primarily by a city or town). For example, water is a scarce resource in Utah; decisions such as WSR designation have the potential to impact some counties/areas more than others.

Economic benefits, costs, and impacts of designation include the *use benefits* of recreation, tourism, and increased property values; the *non-use benefits* of existence values, vicarious use values, option values, and quasi-option (i.e., preservation or bequest) values; *out-of-pocket costs*, such as increased costs to firms or individuals for a variety of goods and services or reduced property values, and *opportunity* costs, including foregone agricultural, timber, mineral, industrial, or residential development (Keith et al. 2007).

While most of the lands adjacent to the segments under consideration are federally owned, in some cases, private lands adjoin proposed segments. In this situation, it has been suggested that lands adjacent to Wild and Scenic Rivers increase in value post-designation. However, land values are also influenced by long-term trends as well as the current and proposed land use. Definitive research on the effects of designation on land values is lacking (Keith et al. 2007).

Recreation-based economic benefits of designation can be substantial. As described in the Utah State University *Final Report: Wild and Scenic River* Study (Keith et al. 2007), while a 'designation effect' has yet to be clearly and scientifically demonstrated, a review of the available literature suggests that designation may be a factor that positively influences recreation demand and associated economic benefits. However, no statistically significant recreational effects of designation currently exist; while some studies indicate the presence of a 'designation effect', others may reflect general long-term trends or the effects of designation in conjunction with other regulations (e.g., the Endangered Species Act, National Environmental Policy Act) and area factors such as access and publicity. Media exposure is expected to increase use, at least in the short term, particularly when promotion and use are already in place (e.g., on a river with commercial rafting use); there is also potential for costs associated with this increased use (e.g., enforcement).

Quantifying the positive and negative impacts to local communities requires consideration of the direct, indirect, and induced (or indirect) effects of potential expenditures in different sections of the economy.

However, measuring the benefits, costs and economic impacts of Wild and Scenic River designation is not straightforward. Keith et al. (2007) concluded that river recreation appears to generate significant economic impact (benefits) in most cases. One study of the economic value of designating 11 Wild and Scenic rivers in Colorado concluded that the economic benefits were greater than the projected costs (including estimated losses to timber production, grazing, mining, and water development). Previous studies have shown positive economic impact (e.g., direct recreation expenditures associated with the designation of the Farmington River were estimated to have an economic impact of $4.2 million (2007 dollars) and 63 jobs (in Keith et al. 2007).

Multiple economic benefits stem from the environmental benefits of protecting Wild and Scenic Rivers. Examples of benefits to natural environments include, but are not limited to: 1) clean water as a result of natural filtration, leading to lower water treatment costs borne by municipalities; and 2) preservation of wildlife habitat and biological diversity, leading to increased recreation opportunities such as hunting and birding. Natural systems may also capture runoff more effectively, holding and releasing water more slowly than more controlled systems. Finally, scenic and amenity values are important in drawing both visitors and new residents to an area.

While recreational impacts (primarily related to both the positive and negative elements of travel and tourism) are commonly considered as a result of wild and scenic river designation, additional impacts may include effects on the development of water projects, withdrawal of public lands from disposition, requirements for agency management, and energy/mineral development restrictions. Impacts on other resource activities such as timber harvesting and grazing will vary, based on the existing direction of land management and the type of classification (Wild, Scenic, or Recreational). Further, it is difficult to measure the intangible benefits of designation such as "existence values" (knowing that a river is protected) and "bequest values" (the value of preservation for future generations). Perspectives on designation may vary within and across groups at local, regional, and national levels.

Alternative 1 - No action, maintain eligibility of all river segments.

General Economic and Social Impacts

Under this alternative, current management practices for all 86 river segments (840 miles) identified for potential inclusion into the National System would continue. No overall changes in social or economic effects from the current management situation are projected. The county economic profiles presented in Section 3.10 would largely be unaffected by any designation effects; other factors unrelated to wild and scenic river designation would continue to direct the economic environments of the affected counties. There may be specific local effects where projects are modified to comply with Chapter 82.5 (Interim Management of Eligible or Suitable Rivers) of the Forest Service Land Management Planning Handbook (FSH 1909.12). For example, activities that would affect the bed/banks of river stretches or development that would change the setting and classification of river segments may be restricted. As no comprehensive river management plans would be produced, no planning costs would be incurred. Further, as segments would continue to be managed as eligible, no annual administration costs would be incurred.

Alternative 2 - No rivers recommended.

General Economic and Social Impacts

Under this alternative, a determination would be made that all 86 river segments (840 miles) are not suitable and released from Wild and Scenic interim protection. Management of forest resources, including these river segments, would continue as directed by Forest Plans and existing laws and

regulations. No overall change in social or economic effects from the current management direction is projected. Local zoning by county government regulates land uses on private lands, and would continue to do so. As no comprehensive river management plans would be produced, no planning costs would be incurred. Further, as no designations would occur, no annual administration costs would be incurred.

Effects for Alternatives 1 and 2 are similar; however, with no WSR protections in place, the river segments in Alternative 2 may be more conducive to economic development pressures. While administrative barriers to proposals may be less apparent, net effects are likely to be minimal, due to current protections in place, including compliance with existing laws and Forest Plan directions.

Alternative 3 - Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

General Economic and Social Impacts

Overall, the economic and social impacts of Alternative 3 are expected to be minimal. None of the segments in Alternative 3 contain reasonably foreseeable water resources or other development projects that are incompatible with maintaining high quality ORVs. Thus, it is unlikely that existing commodity outputs or other developments that contribute to local economies would be hindered. Conversely, a measurable positive economic impact would not necessarily occur. In some areas, river designation has been shown to contribute to increased tourism and higher property values; in other areas this has not been shown to be the case. Current use levels, access, and established activities may influence the effects of designation. For example, publicized designation of an accessible area, close to an urban population, with established access and activities, may result in increased use and associated impacts (both positive and negative). Conversely, more remote areas with minimal current use and difficult access are less likely to experience social or economic impacts. Overall, designation should not change existing social or economic conditions.

Estimated costs[2] for development of Comprehensive River Management Plans (CRMPs) for each of the 43 river segments included in this alternative range from $29,500 to $88,212 per year for the 2- to 3-year process. Developing CRMPs for designated river segments may include, but is not limited to evaluation from specialists in biology, botany, hydrology, watershed, soils, and range. In addition, resource, ownership, water quality, use, and goals and desired conditions should be evaluated as part of a collaborative process.

Annual administration costs range from $29,500 to $88,212. Annual administration costs include ongoing development/management of lands and facilities, use capacity study and monitoring, collection and monitoring of management data, resource protection, enhancement projects, and reporting requirements.

Total estimated costs presented here are based on economies of scale resulting from combined planning and administration processes (i.e., for grouped segments or by forest). Savings of 20 to 40% off the stand-alone costs are projected. Thus, total estimated costs to develop Comprehensive River management Plans for all 43 river segments in this alternative is $1,147,994 to $1,530,659 per year for the 2- to 3-year process; estimated total annual administration cost is $1,147,994 to $1,530,659.

[2] These estimated costs were developed based on the documents “Estimated Costs of Wild and Scenic Rivers Program V.091104” and “Developing Costs for Administration of Forest Service Administered Wild and Scenic Rivers, July 10, 2001,” and on information contained in Appendix A – Suitability Evaluation Reports for each segment. Estimated costs reflect adjustments for inflation (http://www.bls.gov/cpi).

The range of projected costs reflects the variance in complexity of ownership, recreation/visitor use, and resource management issues. Land acquisition is not included in these estimated costs. There are no plans at this time to purchase land in conjunction with the designation process. After designation there may be opportunities to purchase land from willing sellers within designated corridors.

See Tables 3.10.8 through 3.10.43 for a description of impacts by county and river segment.

Alternative 4 - Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

General Economic and Social Impacts

Alternative 4 has some potential for social and economic impacts, primarily due to reasonably foreseeable water development projects associated with the segments under consideration. Counties with limited water resources, and whose planned growth necessitates the development of water projects, would experience the most impact. Effects on agriculture and industrial activities are primarily related to the availability of water. For example, operations at the Huntington Power Plant may be affected by designation.

There is potential for designation to affect mineral and energy resource development in some areas. However, designation does not necessarily preclude development. Some limitations may be imposed where leasable minerals are subject to conditions necessary to protect the values of the river corridor. Local zoning (by county government) regulates private land and would continue to do so regardless of designation. This alternative may have some social impact related to economic expectations for development and desire for growth.

Increases in visitor use and tourism are expected to vary by area, depending on level of publicity, access, and existing uses. Areas with established tourism and attractions may see an initial increase in visitation as a result of designation. Although visitor use may increase on some designated sections, significant and measurable positive economic impact may or may not occur; costs to address increased use (e.g., law enforcement, waste management, etc.) may also occur. In some areas, river designation has been shown to contribute to increased tourism and higher property values; in other areas this has not been shown to be the case. Current use levels, access, and established activities may influence the effects of designation. For example, publicized designation of an accessible area, close to an urban population, with established access and activities, may result in increased use and associated impacts (both positive and negative). Conversely, more remote areas with minimal current use and difficult access are less likely to experience social or economic impacts.

Estimated costs[3] for development of Comprehensive River Management Plans (CRMPs) for each of the three river segments included in this alternative range from $28,000 to $90,000 per year for the 2- to 3-year process.[4] Developing CRMPs for designated river segments may include, but is not limited to evaluation from specialists in biology, botany, hydrology, watershed, soils, and range. In addition, resource, ownership, water quality, use, and goals and desired conditions should be evaluated as part of a collaborative process.

[3] These estimated costs were developed based on the documents "Estimated Costs of Wild and Scenic Rivers Program V.091104" and "Developing Costs for Administration of Forest Service Administered Wild and Scenic Rivers, July 10, 2001," and on information contained in Appendix A - Suitability Evaluation Reports for each segment. Estimated costs reflect adjustments for inflation (http://www.bls.gov/cpi).

Annual administration costs range from $26,900 to $57,500. Annual administration costs include development/management of lands and facilities, use capacity study and monitoring, collection and monitoring of management data, resource protection, enhancement projects, and reporting requirements.

Total estimated costs presented here are based on economies of scale resulting from combined planning and administration processes (i.e., for grouped segments or by forest). Savings of 20 to 40% off the stand-alone costs are projected. Thus, total estimated costs to develop CRMPs for the three rivers in this alternative is $121,800 to $162,400 per year for the 2- to 3-year process; estimated total annual administration cost is $121,800 to $162,400.

The range of projected costs reflects the variance in complexity of ownership, recreation/visitor use, and resource management issues. Land acquisition is not included in these estimated costs. There are no plans at this time to purchase land in conjunction with the designation process. After designation there may be opportunities to purchase land from willing sellers within designated corridors.

See Tables 3.10.8 through 3.10.43 for a description of impacts by county and river segment.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

General Economic and Social Impacts

Overall, the economic and social impacts of Alternative 5 are expected to be negligible. Development of water resources or other projects is unlikely for the segments in this alternative. Thus, it is unlikely that existing commodity outputs or activities that contribute to local economies would be hindered. Conversely, a measurable positive economic impact would not necessarily occur. In some areas, river designation has been shown to contribute to higher property values; in other areas this has not been shown to be the case. Designation should not change existing social or economic conditions.

Increases in visitor use and tourism are expected to vary by area, depending on level of publicity, access, and existing uses. Areas with established tourism and attractions may see an initial increase in visitation as a result of designation. Overall, social and economic benefits related to tourism are expected to be modest. Although visitor use may increase on some designated sections, significant and measurable positive economic impact may or may not occur. In some areas, river designation has been shown to contribute to increased tourism and higher property values; in other areas this has not been shown to be the case.

Estimated costs[5] for development of 47 Comprehensive River Management Plans (CRMPs) for the 50 rivers segments included in this alternative range from $29,500 to $88,212 per year for the 2- to 3-year process (East Fork Whiterocks would be managed with Upper Whiterocks river, Oweep Creek would be managed with Upper Lake Fork and Fall Creek would be managed with upper Rock Creek). Developing CRMPs for designated river segments may include, but is not limited to evaluation from specialists in biology, botany, hydrology, watershed, soils, and range. In addition, resource, ownership, water quality, use, and goals and desired conditions should be evaluated as part of a collaborative process.

Annual administration costs range from $29,500 to $88,212. Annual administration costs include

[5] These estimated costs were developed based on the documents “Estimated Costs of Wild and Scenic Rivers Program V.091104” and “Developing Costs for Administration of Forest Service Administered Wild and Scenic Rivers, July 10, 2001,” and on information contained in Appendix A - Suitability Evaluation Reports for each segment. Estimated costs reflect adjustments for inflation (http://www.bls.gov/cpi).

development/management of lands and facilities, use capacity study and monitoring, collection and monitoring of management data, resource protection, enhancement projects, and reporting requirements.

Total estimated costs presented here are based on economies of scale resulting from combined planning and administration processes (i.e., for grouped segments or by forest). Savings of 20 to 40% off the stand-alone costs are projected. Thus, total estimated costs to develop CRMPs for all 50 rivers in this Alternative is $1,025,347 to $1,367,130 per year for the 2- to 3-year process; estimated total annual administration cost is $1,025,347 to $1,367,130.

The range of projected costs reflects the variance in complexity of ownership, recreation/visitor use, and resource management issues. Land acquisition is not included in these estimated costs. There are no plans at this time to purchase land in conjunction with the designation process. After designation there may be opportunities to purchase land from willing sellers within designated corridors.

See Tables 3.10.8 through 3.10.43 for a description of impacts by county and river segment.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

General Economic and Social Impacts

For some counties, this alternative has potential for impact similar to Alternative 4. Counties with limited water resources, and whose planned growth necessitates the development of water projects, would experience the most impact. Effects on agriculture and industrial activities are primarily related to the availability of water.

However, designation of some segments is not expected to have a measurable impact (i.e., those segments also appearing in Alternatives 3 and 5). In these cases, designation should not change existing social or economic conditions.

Several segments proposed in this alternative include private lands. Local zoning (by county government) regulates private land and would continue to do so regardless of designation.

Increases in visitor use and tourism are expected to vary by area, depending on level of publicity, access, and existing uses. Areas with established tourism and attractions may see an initial increase in visitation as a result of designation. Overall, social and economic benefits related to tourism are expected to be modest. Although visitor use may increase on some designated sections, significant and measurable positive economic impact may or may not occur. In some areas, river designation has been shown to contribute to increased tourism and higher property values; in other areas this has not been shown to be the case.

Estimated costs[6] for development of Comprehensive River Management Plans (CRMPs) for each of the 40 rivers included in this alternative range from $29,500 to $88,212. Developing CRMPs for designated river segments may include, but is not limited to evaluation from specialists in biology, botany, hydrology, watershed, soils, and range. In addition, resource, ownership, water quality, use, and goals and desired conditions should be evaluated as part of a collaborative process.

[6] These estimated costs were developed based on the documents “Estimated Costs of Wild and Scenic Rivers Program V.091104” and “Developing Costs for Administration of Forest Service Administered Wild and Scenic Rivers, July 10, 2001,” and on information contained in Appendix A - Suitability Evaluation Reports for each segment. Estimated costs reflect adjustments for inflation (http://www.bls.gov/cpi).

Annual administration costs range from $29,500 to $88,212. Annual administration costs include development/management of lands and facilities, use capacity study and monitoring, collection and monitoring of management data, resource protection, enhancement projects, and reporting requirements.

Total estimated costs presented here are based on economies of scale resulting from combined planning and administration processes (i.e., for grouped segments or by forest). Savings of 20 to 40% off the stand-alone costs are projected. Thus, total estimated costs to develop CRMPs for all 40 rivers in this Alternative is $1,482,291 to $1,111,718 per year for the 2- to 3-year process; estimated total annual administration cost is $$1,434,652 to $1,075,989.

The range of projected costs reflects the variance in complexity of ownership, recreation/visitor use, and resource management issues. Land acquisition is not included in these estimated costs. There are no plans at this time to purchase land in conjunction with the designation process. After designation there may be opportunities to purchase land from willing sellers within designated corridors.

See Tables 3.10.8 through 3.10.43 for a description of impacts by county and river segment.

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

General Economic and Social Impacts

Overall, the economic and social impacts of Alternative 7 are expected to be minimal. Designation of the river segments would be compatible with, or will enhance other federal agency wild and scenic river recommendations, will complement other national forest management activities and has potential to stimulate tourism and economic growth.

None of the segments in Alternative 7 contain reasonably foreseeable water resource or other development projects that are incompatible with maintaining high quality ORVs. Thus, it is unlikely that existing commodity outputs or other developments that contribute to local economies would be hindered. Conversely, a measurable positive economic impact would not necessarily occur. In some areas, river designation has been shown to contribute to increased tourism and higher property values; in other areas this has not been shown to be the case. Current use levels, access, and established activities may influence the effects of designation. For example, publicized designation of an accessible area, close to an urban population, with established access and activities, may result in increased use and associated impacts (both positive and negative). Conversely, more remote areas with minimal current use and difficult access are less likely to experience social or economic impacts. Overall, designation should not change existing social or economic conditions.

Estimated costs[7] for development of Comprehensive River Management Plans (CRMPs) for each of the 10 river segments included in this alternative range from $29,500 to $88,212 per year for the 2- to 3-year process. Developing CRMPs for designated river segments may include, but is not limited to evaluation from specialists in biology, botany, hydrology, watershed, soils, and range. In addition, resource, ownership, water quality, use, and goals and desired conditions should be evaluated as part of a collaborative process.

[7] These estimated costs were developed based on the documents "Estimated Costs of Wild and Scenic Rivers Program V.091104" and "Developing Costs for Administration of Forest Service Administered Wild and Scenic Rivers, July 10, 2001," and on information contained in Appendix A - Suitability Evaluation Reports for each segment. Estimated costs reflect adjustments for inflation (http://www.bls.gov/cpi).

Annual administration costs range from $29,500 to $88,212. Annual administration costs include ongoing development/management of lands and facilities, use capacity study and monitoring, collection and monitoring of management data, resource protection, enhancement projects, and reporting requirements.

Total estimated costs presented here are based on economies of scale resulting from combined planning and administration processes (i.e., for grouped segments or by forest). Savings of 20 to 40% off the stand-alone costs are projected. Thus, total estimated costs to develop CRMPs for all 10 river segments in this alternative is $282,547 to $376,730 per year for the 2- to 3-year process; estimated total annual administration cost is $282,547 to $376,730.

The range of projected costs reflects the variance in complexity of ownership, recreation/visitor use, and resource management issues. Land acquisition is not included in these estimated costs. There are no plans at this time to purchase land in conjunction with the designation process. After designation there may be opportunities to purchase land from willing sellers within designated corridors.

See Tables 3.10.8 through 3.10.43 for a description of impacts by county and river segment.

Social and Economic Impacts Common to Alternatives 3, 4, 5, 6 and 7 by County

This Section describes the social and economic impacts common to Alternatives 3 through 7. The analysis begins with Tables 3.10.3 through 3.10.6 displaying the counties potentially affected by selected WSR segments in each Alternative. Social and economic impacts are then described by county, alternative, and river segment. Where impacts to alternatives are identical, sections have been combined.

Table 3.10.3. Alternative 3 river segments by county.

County	Alternative 3 River Segments
Box Elder	Willard Creek: Source to Forest Boundary
Cache	Beaver Creek: South Boundary of State Land to Mouth Bunchgrass Creek: Source to Mouth Little Bear Creek: Little Bear Spring to Mouth Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground Logan River: Idaho State line to confluence with Beaver Creek Spawn Creek: Source to Mouth Temple Fork: Source to Mouth White Pine Creek Source to Mouth
Daggett	Green River Lower Main Sheep Creek Middle Main Sheep Creek
Duchesne	Reader Creek Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw
Garfield	Death Hollow Creek Mamie Creek Pine Creek Steep Creek – Only 4 miles is recommended as suitable under this alternative. (This segment is located on the Dixie NF, but is administered by the Fishlake NF.) The Gulch (This segment is located on the Dixie NF, but is administered by the Fishlake NF.)
Kane	North Fork Virgin River
San Juan	Hammond Canyon
San Juan & Montrose, CO	Roc Creek
Sevier & Piute	Fish Creek
Summit	East Fork Smiths Fork: Red Castle Lake to Trailhead

County	Alternative 3 River Segments
	Hayden Fork: Source to Mouth Henry's Fork: Henry's Fork Lake to Trailhead Left, Right, and East Fork Bear River: Alsop Lake and Norice Lake to near Trailhead Little Cottonwood Creek: Source to Murray City Diversion Little East Fork: Source to Mouth Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek Ostler Fork: Source to Mouth Provo River: Trial Lake to U35 Bridge Stillwater Fork: Source to Mouth West Fork Beaver Creek: Source to Forest Boundary West Fork Blacks Fork: Source to Trailhead West Fork Smiths Fork: Source to Forest Boundary
Uintah	Ashley Gorge Creek Black Canyon Lower Dry Fork Creek
Utah	Fifth Water Creek North Fork Provo River
Wasatch	Little Provo Deer Creek
Washington	Moody Wash

Table 3.10.4. Alternative 4 river segments by county.

County	Alternative 4 River Segments
Carbon, Sanpete, & Utah	Fish Creek and Gooseberry Creek
Emery	Huntington Creek Lower Left Fork of Huntington Creek

Table 3.10.5. Alternative 5 river segments by county.

County	Alternative 5 River Segments
Box Elder	Willard Creek: Source to Forest Boundary
Daggett	Carter Creek Cart Creek Proper Green River Lower Main Sheep Creek Middle Main Sheep Creek Pipe Creek
Duchesne	Garfield Creek Reader Creek Shale Creek and Tributaries Upper Whiterocks River (4 miles) and East Fork Whiterocks River (4 miles) Upper Lake Fork River, including Ottoson and East Basin Creeks (35 miles) and Oweep Creek (20 miles) Upper Rock Creek (21 miles) and Fall Creek (6 miles) Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw Upper Yellowstone Creek, including Milk Creek West Fork Rock Creek, including Fish Creek West Fork Whiterocks River
Garfield	Death Hollow Creek East Fork Boulder Creek Mamie Creek Pine Creek Slickrock – (Located on Dixie NF, but administered by Fishlake NF) Steep Creek – (Located on Dixie NF, but administered by Fishlake NF) The Gulch – (Located on Dixie NF, but administered by Fishlake NF)
Kane	North Fork Virgin River

County	Alternative 5 River Segments
Piute	Manning Creek Pine Creek / Bullion Falls
San Juan	Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons Mill Creek Gorge Roc Creek (San Juan & Montrose, CO) Upper Dark Canyon, including Horse Pasture, Peavine and Kigalia Canyons
Sevier	Salina Creek
Sevier & Piute	Fish Creek
Summit	East Fork Blacks Fork: Headwaters to confluence with Little East Fork East Fork Smiths Fork: Red Castle Lake to Trailhead Henry's Fork: Henry's Fork Lake to Trailhead Little East Fork: Source to Mouth Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek Middle Fork Weber River: Source to Forest Boundary Ostler Fork: Source to Mouth Thompson Creek: Source to Hoop Lake Diversion West Fork Beaver Creek: Source to Forest Boundary West Fork Blacks Fork: Source to Trailhead
Uintah	Black Canyon
Utah	South Fork American Fork
Washington	Moody Wash
Weber	Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey

Table 3.10.6. Alternative 6 river segments by county.

County	Alternative 6 River Segments
Cache	Beaver Creek: South Boundary of State Land to Mouth Bunchgrass Creek: Source to Mouth Little Bear Creek: Little Bear Spring to Mouth Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground Logan River: Idaho State Line to Confluence with Beaver Creek Spawn Creek: Source to Mouth Temple Fork: Source to Mouth White Pine Creek: Source to Mouth
Carbon, Sanpete, & Utah	Fish and Gooseberry Creek
Daggett	Green River
Duchesne	Garfield Creek Reader Creek Shale Creek and Tributaries Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw Upper Whiterocks River Upper Yellowstone Creek, including Milk Creek West Fork Whiterocks River
Emery	Lower Left Fork of Huntington Creek Huntington Creek
Garfield	Death Hollow Creek
Kane	North Fork of the Virgin River
Piute	Manning Creek
San Juan	Upper Dark, Horse Pasture, Peavine & Kigalia Canyons in Upper Dark Canyon Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons Hammond Canyon
Summit	Beaver Creek: Source to Forest Boundary Boundary Creek: Source to Confluence with East Fork Bear River Hayden Fork

County	Alternative 6 River Segments
	Henrys Fork: Henry's Fork Lake to Trailhead Left, Right, and Forks of Bear River: Alsop Lake and Norice Lake to near Trailhead Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek Ostler Fork: Source to Mouth Provo River: Trial Lake to UT-35 bridge Stillwater Fork West Fork Beaver Creek: Source to Forest Boundary
Uintah & Duchesne	East Fork Whiterocks River Middle Whiterocks River
Utah	North Fork Provo River
Wasatch	Little Provo Deer Creek
Washington	Moody Wash

Table 3.10.7. Alternative 7 river segments by county.

County	Alternative 7 River Segments
Daggett	Green River
Duchesne	Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw
Garfield	Death Hollow Creek Mamie Creek Pine Creek
Kane	North Fork of the Virgin River
Sevier & Piute	Fish Creek
Summit	Ostler Fork: Source to Mouth Stillwater Fork: Source to mouth
Wasatch	Little Provo Deer Creek – Only 1 mile is recommended as suitable under this alternative

Unless otherwise noted, the sources for Tables 3.10.8 through 3.10.43 are: EDCUTAH; Forest Suitability Evaluation Reports; Utah Department of Workforce Services, Utah Governor's Department of Planning and Budget.

In the following sections, tables of potential impacts are presented for each segment in the affected counties. Classification of potential impacts is based on the following descriptions:

Low = Unlikely to adversely effect social or economic environment because the river segment has few, if any, designation conflicts with water rights, land withdrawals, private land, or land uses that are incompatible with maintaining free flow or preserving ORVs.

Moderate = Some likely potential adverse effects to the social or economic environment because the river segment has a number of potential designation conflicts with water rights, land withdrawals, private land, or land uses that are incompatible with maintaining free flow or preserving ORVs.

High = Highly likely potential adverse effects to the social or economic environment because the river segment has known or a high number of potential designation conflicts with water rights, land withdrawals, private land, or land uses that are incompatible with maintaining free flow or preserving ORVs.

Box Elder County

Alternatives 3 and 5 (*The impacts to Alternatives 3 and 5 are identical).*
Recreation use on the Willard Creek segment is very light; panning for gold and diamond mining has occurred in the past. Some dispersed recreation use occurs. Access to the segment is limited; Forest Road 20084 runs within the corridor in the upper half mile, a rough private road provides access to privately owned land, and there is no access by road or trail within the National Forest.

Lands around this segment of the creek are a mix of Wasatch-Cache National Forest and private land (zoned Multiple Use MU-160). No water development potential, grazing, mining/oil/gas, road/transportation, or vegetation management activities were identified.

Table 3.10.8. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5	Willard Creek: Source to Forest Boundary	Low	Moderate	Low	$29,500	$29,500

Table 3.10.9. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Willard Creek: Source to Forest Boundary	No	Yes -Groundwater Drinking Source Protection Zone -Special Interest Area -Roadless Area (section of segment)	-Private land development	Low	3, 5

Cache County

Alternatives 3 and 6 *(The impacts to Alternatives 3 and 6 are identical).*

A wide variety of visitor use takes place on these segments and in the surrounding areas. This area contains a State Blue Ribbon Fishery including both segments of the Logan River; fishing, hiking, biking, rock climbing, whitewater boating, OHV use, skiing, snowmobiling, skiing and scenic driving on the Logan Canyon National Scenic Byway are popular activities for locals and visitors.

Multiple dams exist below eligible segments. Grazing and livestock use occurs, and would not be affected by designation. Some segments include areas of private and State and Institutional Trust Lands Administration (SITLA) land; recreation residence areas are present.

Designation would complement the State Blue Ribbon Fishery Designation, the National Scenic Byway, and nearby drinking water sources. In addition, designation of Spawn Creek would be helpful to Utah State University's Whirling Disease Study. Local groups have expressed interest in continuing habitat restoration/protection/trash clean-up projects.

Table 3.10.10. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 6	Beaver Creek: South Boundary of State Land to Mouth	Low	Moderate to High	Low to Moderate	$58,800	$58,800
3, 6	Bunchgrass Creek: Source to Mouth	Low	Low	Low to Moderate	$29,500	$29,500
3, 6	Little Bear Creek: Little Bear Spring to Mouth	Low	Low	Low to Moderate	$29,500	$29,500
3, 6	Logan River: Confluence with Beaver Creek to Bridge at Guinavah-	Moderate to High	Moderate	Moderate	$58,800	$58,800

	Malibu Campground					
3, 6	Logan River: Idaho State line to confluence with Beaver Creek	Moderate	Moderate	Low to Moderate	$58,800	$58,800
3, 6	Spawn Creek: Source to Mouth	Moderate	Low	Low to Moderate	$58,800	$58,800
3, 6	Temple Fork: Source to Mouth	Moderate	Low*	Low to Moderate	$58,800	$58,800
3, 6	White Pine Creek: Source to Mouth	Moderate	Low to Moderate	Low to Moderate	$58,800	$58,800

*10 acres of Utah State land within ¼ mile buffer

Table 3.10.11. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Beaver Creek: South Boundary of State Land to Mouth	No	Yes -Category 1 Fish-bearing Stream Riparian Habitat Conservation Area (RHCA) -Transient Drinking Water Source Protection Zone -Portion of segment within Roadless Area	Yes -Potential private (SITLA) land development	Moderate	3, 6
Bunchgrass Creek: Source to Mouth	No	Yes -Category 1 Fish-bearing Stream RHCA -Transient Drinking Water Source Protection Zone -Roadless Area	No	Low	3, 6
Little Bear Creek: Little Bear Spring to Mouth	No	Yes -Category 1 Fish-bearing Stream RHCA -Portion of segment within Roadless Area	No	Low	3, 6
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	No	Yes -Category 1 Fish-bearing Stream RHCA -Transient Drinking Water Source Protection Zone -Portion of segment within Roadless Area -Blue Ribbon Fishery	Yes -Potential private (SITLA) land development	Low to Moderate	3, 6
Logan River: Idaho State line to confluence with Beaver Creek	No	Yes -Category 1 Fish-bearing Stream RHCA -Portion of segment within Roadless Area -Blue Ribbon Fishery	Yes -Potential private and SITLA land development	Low	3, 6
Spawn Creek: Source to Mouth	No	Yes -Category 1 Fish-bearing Stream RHCA -Portion of segment within Roadless Area	No	Low	3, 6
Temple Fork: Source to Mouth	No	Yes -Category 1 Fish-bearing Stream RHCA	Yes -Potential private and SITLA land development	Low	3, 6
White Pine Creek: Source to Mouth	No	Yes -Category 1 Fish-bearing Stream RHCA -Transient Drinking Water Source Protection Zones (2)	Yes -Potential private and SITLA land development	Low	3, 6

Carbon, Sanpete, and Utah Counties (Fish Creek and Gooseberry Creek)

Alternatives 4 and 6 *(The impacts to Alternatives 4 and 6 are identical).*
Visitor use in the area includes the Fish Creek National Recreation trail (10 miles); area attractions include fishing, hiking, hunting, birdwatching, and wildflowers. No formal study on use or capacity has been done.

Development of the Bureau of Reclamation (BOR) Narrows project is seen as reasonably foreseeable and critical to securing adequate water for the counties in this area; this program could potentially be affected by a WSR designation. Opportunities to develop potential coal, oil, and gas would continue; some limitations may be imposed where Semi-Primitive Regulation (SPR) stipulations apply. No impacts on current range allotments or timber management are expected. Recreation would be managed according to the current Forest Plan. Lands are a mix of federal and private along Gooseberry Creek.

Table 3.10.12. Estimated costs*.

Alternative	Segment	Complexity			Estimated cost to develop CRMP	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
4, 6	Fish Creek and Gooseberry Creek	Moderate	High	High	$90,000	$31,079

**Costs provided by the Manti-La Sal NF based on current projects, timelines, and requirements. Forest Suitability Report estimates first-year startup costs at approximately $258,862.*

Table 3.10.13. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Fish Creek and Gooseberry Creek	Water is over-allocated	Yes -Semi-primitive recreation use	Yes -Limited potential for mineral and energy resource activities -Private land development	Low to moderate for mineral and energy resource activities. High for water development (Narrows Project)	4, 6

Daggett County

Alternative 3 *(Segments are also included in other alternatives).*
Recreation use in this area is moderate to heavy; opportunities include camping, hiking, fishing, hunting, and visiting interpretive sites. Some winter recreational use occurs. Area attractions include the Sheep Creek Geologic Area and Spirit Lake. In addition, the Green River (a Blue Ribbon fly fishing river) and Flaming Gorge National Recreation Area are national and international destinations, and play an integral role in the local economy. Approximately 1.7 million dollars per year are brought into the area from customers of Green River outfitting guides. Access to the area includes Sheep Creek/Spirit Lake Scenic Backway Loop (Forest Development Road 218) and Flaming Gorge/Uintas National Scenic Byway (Utah State Highway 44).

No reasonably foreseeable water development projects were identified, no permitted grazing allotments exist on National Forest System land, and no future timber harvest is expected.

Alternative 5 *(Three of these six segments are included in other alternatives).*

Little, if any, other mineral/energy resource development activities are expected. No reasonably foreseeable water development projects were identified, and no future timber harvest is expected, with the possible exception of the Cart Creek Proper and Pipe Creek areas. There are two grazing allotments in the Carter Creek area, as well as in the Pipe Creek area.

Alternatives 6 and 7 *(Segment also occurs in Alternatives 3, and 5).*
No past or present mineral or energy development activity occurs along the Green River; little if any are expected in the future. Bureau of Reclamation (BOR) withdrawals occur along the segment, although future water development is not expected and designation into the WSR system does not affect existing, valid water rights and agreements. Limited grazing may occur.

Table 3.10.14. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5	Middle Main Sheep Creek	Low	Low to Moderate	Low	$29,500	$29,500
3, 5	Lower Main Sheep Creek	Low	Low	Moderate	$29,500	$29,500
3, 5, 6, 7	Green River	Moderate to High	Moderate	Moderate to High	$88,212+	$88,212+
5	Carter Creek	Low to Moderate	Low	Low	$29,500	$29,500
5	Cart Creek Proper	Low to Moderate	Low	Low	$29,500	$29,500
5	Pipe Creek	Low	Low	Low	$29,500	$29,500

Table 3.10.15. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Middle Main Sheep Creek	No	Yes -Sheep Creek National Geologic Area -Dutch John Drinking Water Source Protection Zone	No	Low	3, 5
Lower Main Sheep Creek	No	Yes -Flaming Gorge National Recreation Area -Dutch John Drinking Water Source Protection Zone	-Potential phosphate mining	Low	3, 5
Green River	No	Yes -Flaming Gorge National Recreation Area -Roadless Area (section of segment)	No	Low	3, 5, 6, 7
Carter Creek	No	Yes -Portion of segment within Flaming Gorge National Recreation Area -Dutch John Drinking Water Source Protection Zone -Portions of segment within Roadless Areas	No	Low	5
Cart Creek Proper	No	Yes	No	Low	5

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
		-Portion of segment within Flaming Gorge National Recreation Area -Dutch John Drinking Water Source Protection Zone -Most of segment within Roadless Areas			
Pipe Creek	No	Yes -Portion of segment within Flaming Gorge National Recreation Area -Segment within Roadless Area	No	Low	5

Duchesne County

Alternative 3 *(These segments also appear in Alternatives 5, 6, and 7).*
Visitor use is moderate to heavy in these areas, and includes day use, backpacking, recreation stock use, and hunting. The wilderness portion of the watershed receives concentrated use around the headwater lakes, with moderate to heavy camping and fishing use in season.

Limited, if any mineral or energy extraction activities are expected and no timber harvest would be expected along the river corridor. No permitted livestock use occurs along the Reader Creek segment; there are two grazing allotments associated with the Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw segment. No reasonably foreseeable water developments affecting these segments are known or expected. All known proposed water developments occur downstream and are not expected to alter or be altered by designation.

Alternative 5 *(Two of these segments are included in Alternative 3).*
Limited, if any mineral or energy extraction activities are expected and no timber harvest would be expected along these river corridors. No mineral or energy resource activities would be expected in areas where river segments are in designated wilderness areas. No permitted livestock use occurs along the Reader Creek segment; there are two grazing allotments associated with the Upper Uinta River (including Gilbert Creek, Center Fork, and Painter Draw) segment, two allotments associated with Garfield Creek, two allotments associated with the Upper Lake Fork River (including Ottoson and East Basin Creeks and Oweep Creek), one allotment and Ute Indian Tribe use associated with Upper Rock Creek and Fall Creek, three allotments are associated with Upper Yellowstone Creek, including Milk Creek. High Lakes stabilization is planned. No reasonably foreseeable other water developments affecting these segments are known or expected. All known proposed water developments occur downstream and are not expected to alter or be altered by designation.

Alternative 6 *(All segments appear within Alternative 5).*
In addition to the analysis presented under Alternative 5, numerous trails provide access to the segments under consideration in this area.

Alternative 7 *(Segment is included in Alternatives 3, 5, and 6).)*
In addition to the analysis presented under the Alternatives above, this segment is entirely within a designated Wilderness area.

Table 3.10.16. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5, 6	Reader Creek	Moderate	Low	Moderate	$58,800	$58,800
3, 5, 6, 7	Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw	Moderate	Low	Low	$29,500	$29,500
5, 6	Garfield Creek	Moderate	Low	Low	$29,500	$29,500
5, 6	Shale Creek and Tributaries	Moderate	Low	Low	$29,500	$29,500
5, 6	Upper Whiterocks River and East Fork Whiterocks River	Moderate	Low	Low	$29,500	$29,500
5	Upper Lake Fork River, including Ottoson and East Basin Creeks and Oweep Creek	Low	Low	Low	$29,500	$29,500
5	Upper Rock Creek and Fall Creek	Low	Low	Low	$29,500	$29,500
5, 6	Upper Yellowstone Creek, including Milk Creek	Moderate	Low	Low	$29,500	$29,500
5	West Fork Rock Creek, including Fish Creek	Moderate	Low	Low	$29,500	$29,500
5, 6	West Fork Whiterocks River	Moderate	Low	Low	$29,500	$29,500

Table 3.10.17. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Reader Creek	No	Yes -Tridell/LaPoint Drinking Water Source Protection Zone -Restoration of native Colorado Cutthroat trout habitat -Roadless Area	No	Low	3, 5, 6
Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw	No	Yes -High Uintas Wilderness Area	No	Low	3, 5, 6, 7
Garfield Creek	No	Yes -High Uintas Wilderness Area	High Lakes Stabilization Projects	Low	5, 6
Shale Creek and Tributaries	No	Yes -High Uintas Wilderness Area	No	Low	5, 6
Upper Whiterocks River and East Fork Whiterocks River	No	Yes -Drinking Water Source Protection Zone -Roadless Area	No	Low	5, 6
Upper Lake Fork River, including Ottoson and East Basin Creeks and Oweep Creek	No	Yes -High Uintas Wilderness Area	No	Low	5
Upper Rock Creek	No	Yes	No	Low	5

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
and Fall Creek		-High Uintas Wilderness Area			
Upper Yellowstone Creek, including Milk Creek	No	Yes -High Uintas Wilderness Area	No	Low	5, 6
West Fork Rock Creek, including Fish Creek	No	Yes -High Uintas Wilderness Area	No	Low	5
West Fork Whiterocks River	No	Yes -Tridell/LaPoint Drinking Water Source Protection Zone -Portion of segment in Roadless Area	No	Low	5, 6

Emery County

Alternatives 4 and 6 *(The impacts to Alternatives 4 and 6 are identical).*
Many recreation opportunities are available in this area, including camping, hiking, horseback riding, OHV use, and rock climbing. Fishing is also popular; currently, water flows are regulated to maintain a Blue Ribbon Fishery. The Left Fork of the Huntington Creek National Recreation Trail runs parallel to the Lower Left Fork of the Huntington. State Route 31 is a National Scenic Byway, promoted as part of the "Energy Loop."

Lands in the proposed areas are a mix of Forest Service, private (multiple owners), BLM, and State-owned. In the event of non-designation, state protection of non-federal land is unlikely. Multiple diversions and plans for future impoundments (intended for municipal and agricultural use) would be affected by WSR designation. The development of federally assisted water resource developments (e.g., salinity projects), as well as industrial use (e.g., Huntington Power Plant) may also be affected by designation. There may be potential for the county unemployment rate to increase if water development projects are curtailed.

Table 3.10.18. Estimated costs*.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
4, 6	Huntington Creek*	Moderate to High	High	High	$85,000	$57,500
4, 6	Lower Left Fork of Huntington Creek**	Moderate	Low	Moderate to High	$28,000	$26,900

**Costs provided by the Manti-La Sal NF based on current projects, timelines, and requirements. Forest Suitability Reports estimate first year funding needs for Huntington Creek are projected to be approximately $239,000 (including development of management plan), and first year funding needs for the Lower Left Fork of the Huntington of $65,500.*

Table 3.10.19. Potential Impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Huntington Creek	Water is over-appropriated	Yes -Blue Ribbon Fishery -Drinking Water Source Protection Zone	Yes -Mineral and energy resource activities -Water development	High for mineral and energy resource activities. High for	4, 6

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
			projects	reasonably foreseeable water development projects.	
Lower Left Fork of Huntington Creek	Water is over-appropriated	Yes -Blue Ribbon Fishery -National Recreation Trail	Yes -Water development projects	High	4, 6

Garfield County

Alternative 3

Recreational visitor use of the river segments in this county varies, and includes hiking, backpacking, stock use, and ATV/OHV use. Access to the segments under consideration varies, and includes trails, Forest Service Roads, and motorized trail.

No existing or reasonably foreseeable water developments exist on these segments. No mineral or energy resource development is expected within the Steep Creek, The Gulch, or Death Hollow Creek segments, although development in the greater area is possible. Two oil and gas claims in the Mamie Creek river corridor have been suspended. There is potential for some mining/oil and gas activity in the Pine Creek area.

One grazing allotment is active in The Gulch, with three permittees. In the Death Hollow Creek and Mamie Creek segments, there is no grazing; timber and farming are not reasonably foreseeable in these areas, or in Pine Creek. One active allotment exists in the Pine Creek area, although there is no grazing within the wilderness.

Alternative 5 *(Five of these seven segments appear in Alternative 3; one in Alternatives 6 and 7).*
Access to these areas varies, and includes trails, Forest Service Roads, and motorized trail. Recreational visitor use of the river segments in this county varies, and includes hiking, backpacking, stock use, and ATV/OHV use.

No mineral or energy resource development is expected within the Steep Creek, The Gulch, Death Hollow Creek, or East Fork Boulder Creek segments, although development in the greater area is possible. Two oil and gas claims in the Mamie Creek river corridor have been suspended. There is potential for mineral and energy resource activities in the areas near the Pine Creek and Slickrock segments.

One grazing allotment is active in each of The Gulch and Slickrock segments. There is no grazing in the Death Hollow Creek and Mamie Creek segments; timber and farming are not foreseeable in these areas, or in Pine Creek. One active allotment exists in the Pine Creek area, although there is no grazing within the wilderness.

Alternative 6 *(Segment occurs in Alternatives 3, 5, and 7).*
No existing or proposed water developments occur in Death Hollow Creek. No grazing occurs, and no timber harvest or farming is foreseeable. Limited development of two shut-in oil and gas wells could occur.

Alternative 7 *(Segment occurs in Alternatives 3, 5, and 6).*

In addition to the analyses presented above, the Pine Creek, Mamie Creek, and Death Hollow Creek segments are entirely within the Box-Death Hollow Wilderness.

Table 3.10.20 Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5, 7	Pine Creek	Low	Low	Low to moderate	$29,500	$29,500
3, 5, 7	Mamie Creek	Low	Low	Low to moderate	$29,500	$29,500
3, 5, 6, 7	Death Hollow Creek	Low	Low	Low to moderate	$29,500	$29,500
3, 5	Steep Creek	Low	Moderate	Low	$29,500	$29,500
3, 5	The Gulch	Low	Low	Low	$29,500	$29,500
5	East Fork Boulder Creek	Low to moderate	Low	Moderate to High	$58,800	$58,800
5	Slickrock	Low	Low	Low	$29,500	$29,500

Table 3.10.21. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Pine Creek	No	Yes -Box-Death Hollow Wilderness Area -Roadless Area	-One authorized oil & gas lease in corridor -Shut-in wells with prior existing rights (in wilderness) could be developed	Low	3, 5, 7
Mamie Creek	No	Yes -Box-Death Hollow Wilderness Area -Roadless Area	-Two suspended oil & gas leases	Low	3, 5, 7
Death Hollow Creek	No	Yes -Box-Death Hollow Wilderness Area -Roadless Area	-Two suspended oil & gas leases	Low	3, 5, 6, 7
Steep Creek	No	Yes	No	Moderate	3, 5
The Gulch	No	Yes	No	Low	3, 5
East Fork Boulder Creek	No	Yes -Entire segment in Roadless Area	No	Moderate	5
Slickrock	No	Yes	No	Moderate	5

Kane County

Alternatives 3, 5, 6, and 7 *(Impacts to alternatives 3, 5, 6, and 7 are identical)*

Hiking and sightseeing are popular, leading to heavy use on some trails, particularly those with access to viewpoints (e.g., Cascade Falls National Recreation Trail). Opportunities to study the ecology of Southern Utah are present.

No mineral/energy resource activities are expected; there is one vacant grazing allotment. Some vegetation management may occur.

Table 3.10.22. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5, 6, 7	North Fork of the Virgin River	Moderate	Low	Low to Moderate	$29,500	$29,500

Table 3.10.23. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
North Fork of the Virgin River	No	Yes -National Recreation Trail -Drinking Water Source Protection Zone	No	Low	3, 5, 6, 7

Piute County

Alternatives 5 and 6

Both segments discussed here are in a remote area of the county. Visitor use includes hiking and camping. A non-motorized trail follows Manning Creek; some ATV use has occurred on the upper portion of the trail. Access to this area includes road, ATV, and horse/foot trails. The entire Pine Creek/Bullion Falls segment is in an inventoried roadless area. A foot trail exists along the upper portions of the creek, and there is a semi-developed recreation area near Bullion Falls.

No present or future water developments exist on the Manning Creek segment; an inactive mine is located below the eligible segment. One active cattle grazing allotment is present, although actual use is very low. On the Pine Creek/Bullion Falls segment, historic mining exploration has occurred. While interest in development is periodically expressed, there are currently no known proposals for development.

Table 3.10.24. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
5, 6	Manning Creek	Low	Low	Moderate to High	$58,800	$58,800
5	Pine Creek / Bullion Falls	Low	Low	Moderate to High	$58,800	$58,800

Table 3.10.25. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Manning Creek	No	Yes	No	Low to moderate	5, 6
Pine Creek / Bullion Falls	No	Yes-Roadless Area -Research Natural Area	Potential mineral development	Low to moderate	5

San Juan County (and Montrose County, CO)

Alternative 3 *(Alternative 3 includes Montrose County, Colorado*).

No roads exist within the eligible stream corridor. Trailheads outside the corridor offer excellent

opportunities for hiking, backpacking, and horseback riding. Guided trips are available, and the trails receive a fair amount of use.

No current mining or energy leases occur within the corridor, old mining claims exist, and three oil and gas leases are nearby. The entire corridor is within a cattle allotment and is used for grazing. Tribal lands have been used in the past for agriculture, and may be used again.

Alternative 5 *(Alternative 5 includes Montrose County, Colorado*).
The Roc Creek segment is entirely on National Forest System lands, although the majority of the segment is in Montrose County, Colorado. No water developments exist on this segment; several developments/diversions exist above the segment. In the Upper Dark Canyon and Lower Dark Canyon areas, there are no known water resource projects that could be limited by WSR designation. Diversions/developments exist above and below the Mill Creek segment.

Abandoned mines are present in the Roc Creek and Mill Creek areas; future uranium mining is possible. On the Roc Creek segment, only incidental grazing occurs due to the rugged terrain. Two allotments are used in the Upper Dark Canyon area, one allotment exists in each of the Mill Creek Gorge and Lower Dark Canyon areas.

Visitor use in these areas includes hiking, backpacking, fishing, horseback riding, rock climbing, and some OHV use; access is primarily by trail.

Alternative 6 *(Segments occur in Alternatives 3 and 5).*
In Hammond Canyon, no roads exist within the eligible stream corridor. Trailheads outside the corridor offer excellent opportunities for hiking, backpacking, and horseback riding. Guided trips are available, and the trails receive a fair amount of use. Visitor use in the Lower and Upper Dark canyon areas includes hiking, backpacking, fishing, horseback riding, rock climbing, and some OHV use; access is primarily by trail.

No current mining or energy leases occur within the Hammond Canyon corridor, old mining claims exist, and three oil and gas leases are nearby. The entire corridor is within a cattle allotment and is used for grazing. Tribal lands have been used in the past for agriculture, and may be used again. Two allotments are used in the Upper Dark Canyon area, one allotment exists in the Lower Dark Canyon area. In the Upper Dark Canyon and Lower Dark Canyon areas there are no known water resource projects that could be limited by WSR designation.

Table 3.10.26. Estimated Costs

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 6	Hammond Canyon	Low to Moderate	Moderate	High	$88,212	$88,212
5, 6	Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	Moderate	Low	Low	$29,500	$29,500
5	Mill Creek Gorge	Moderate	Low	Moderate	$58,800	$58,800
3, 5	Roc Creek	Low	Low to Moderate	Moderate to High	$58,800	$58,800
5, 6	Upper Dark Canyon, including Horse Pasture, Peavine & Kigalia Canyons	Moderate	Low	Low	$29,500	$29,500

Table 3.10.27 Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Hammond Canyon	No	Yes -Approximately 70% of segment within Roadless Area	-Mining claims and oil & gas leases possible outside of corridor -Tribal land (Designation in conflict with San Juan County Master Plan)	Low	3, 6
Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	No	Yes -Majority of corridor is in Dark Canyon Wilderness -Roadless Area	No (Designation in conflict with San Juan County Master Plan)	Low	5, 6
Mill Creek Gorge	No	Yes -Research Natural Area	No (Designation in conflict with San Juan County Master Plan)	Low to moderate	5
Roc Creek	No	Yes -Roadless Area	One oil & gas lease within upper portion of segment	Low to moderate	3, 5
Upper Dark Canyon, including Horse Pasture, Peavine & Kigalia Canyons	No	Yes -Majority of corridor is in Dark Canyon Wilderness -Roadless Area	No (Designation in conflict with San Juan County Master Plan)	Low	5, 6

Sevier and Piute Counties

Alternatives 3 and 5 and 7

Access to Fish Creek is limited to several historic mining routes and a hiking trail; approximately 3 miles of Fish Creek is paralleled by an old road and ATV trail that receives moderate use. No existing or reasonably foreseeable water developments have been identified. There are no known plans for future mineral/energy resource development. Two grazing allotments are active.

Salina Creek offers hiking, horseback riding, camping and hunting; access within the segment is by foot/horse trail, with Forest Roads above and below the segment. The segment passes through one active cattle grazing allotment, and no existing or reasonably foreseeable water developments have been identified; however, there are plans for subsurface development of coal deposits in the area.

Table 3.10.28. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5, 7	Fish Creek*	Low	Low to Moderate	Moderate to high	$58,800	$58,800
5	Salina Creek**	Low	Low	Moderate to high	$29,500	$29,500

*Sevier & Piute Counties
**Sevier County only

Table 3.10.29. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Fish Creek*	No	Yes -Headwaters are Research Natural Area	No	Low to moderate	3, 5, 7
Salina Creek**	No	Yes -Entire segment within Roadless Area	No	Low to moderate	5

*Sevier & Piute Counties
**Sevier County only

Summit County (with Uinta County, Wyoming and Salt Lake County)

Alternative 3
Recreation opportunities for these segments are diverse. A variety of Forest Roads and trails offer access to the area. Hiking, horseback, fishing (including a Class II and III fisheries), hunting and other wilderness activities are popular. Heavy use occurs in popular areas. Moderate to heavy use occurs overall, with lower rates of use in the area of West Fork Blacks Fork.

Portions of the segments that lie below the wilderness boundary are within a high oil and gas potential area. Wild and scenic river designation would not affect downstream uses. There are multiple grazing allotments for sheep and cattle; river corridors are used while trailing or herding, and occasionally for recreation stock use.

Alternative 5 *(Seven of these segments occur in Alternative 3)*
Recreation opportunities for these segments are diverse. A variety of Forest Roads and trails offer access to the area. Hiking, horseback, fishing (including a Class II and III fisheries), hunting and other wilderness activities are popular. Heavy use occurs in popular areas. Moderate to heavy use occurs overall, with lower rates of use in the area of West Fork Blacks Fork.

Residents of the Wasatch Front form a significant percentage of users, in addition to national and international visitors. Historical resources, hiking, skiing, biking, horseback use, fishing, hunting, and motorized recreation use occur across the area, and some private recreation dwellings are present. Access is primarily by trail, Forest Road, and State Scenic Byways.

Alternative 6 *(Segments occur in Alternatives 3, and 5).*
Residents of the Wasatch Front form a significant percentage of users, in addition to national and international visitors. Historical resources, hiking, skiing, biking, horseback use, fishing, hunting, and motorized recreation use occur across the area, and some private recreation dwellings are present. Access is primarily by trail, Forest Road, and State Scenic Byways.

A mix of energy/mineral resource use and development (including some areas with high oil and gas potential) and grazing allotments occur on these segments. Some water developments exist on segments. Active vegetation management occurs.

Alternative 7 *(Segments occur in Alternatives 3, 5, and 6).*
In addition to the analyses presented above, Ostler Fork and part of Stillwater Fork (Wild) segments are within the High Uintas Wilderness.

Table 3.10.30. Estimated costs.

Alternative	Segment	Complexity	Estimated	Estimated annual

		Recreation Use	Ownership	Resource Issues*	cost to develop CRMP (per year for 2-3 years)	administration costs
6	Beaver Creek: Source to Forest Boundary	High	Moderate	Moderate	$88,212	$88,212
6	Boundary Creek: Source to Confluence with East Fork Bear River Hayden Fork	Low	Moderate	Moderate to High	$58,800	$58,800
5	East Fork Blacks Fork: Headwaters to confluence with Little East Fork	Low	Low	Low	$29,500	$29,500
3, 5	East Fork Smiths Fork: Red Castle Lake to Trailhead	Moderate	Low	Low to Moderate	$29,500	$29,500
3, 6	Hayden Fork: Source to Mouth	Low to Moderate	Low to Moderate	Low to Moderate	$29,500	$29,500
3, 5, 6	Henry's Fork: Henry's Fork Lake to Trailhead	Moderate	Low	Low to Moderate	$29,500	$29,500
3, 6	Left, Right, and East Fork Bear River: Alsop Lake and Norice Lake to near Trailhead	Low	Low	Low to Moderate	$29,500	$29,500
3	Little Cottonwood Creek: Source to Murray City Diversion	Moderate	Moderate	Moderate	$58,800	58,800
3, 5	Little East Fork: Source to Mouth	Moderate	Low	Low to Moderate	$29,500	$29,500
3, 5, 6	Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	Low to Moderate	Low to Moderate	Low to Moderate	$29,500	$29,500
5	Middle Fork Weber River: Source to Forest Boundary	Low to Moderate	Low	Low to moderate	$29,500	$29,500
3, 5, 6, 7	Ostler Fork: Source to Mouth	Moderate to High	Low	Low to Moderate	$58,800	$58,800
3, 6	Provo River: Trial Lake to U35 Bridge	Moderate	Moderate	Moderate	$58,800	$58,800
3, 6, 7	Stillwater Fork: Source to Mouth	Moderate to High	Low	Low to Moderate	$58,800	$58,800
5	Thompson Creek: Source to Hoop Lake Diversion	Low	Low	Low to Moderate	$29,500	$29,500
3, 5, 6	West Fork Beaver Creek: Source to Forest Boundary	Moderate	Low	Low to Moderate	$29,500	$29,500
3, 5	West Fork Blacks Fork: Source to Trailhead	Low	Low to Moderate**	Low to Moderate	$29,500	$29,500
3	West Fork Smiths Fork:	Low	Moderate to High	Low to Moderate	$58,800	$58,800

	Source to Forest Boundary***					

*Primarily due to grazing in the corridor.
**27 acres of private land within corridor.
***Summit County, UT and Uinta County, WY

Table 3.10.31. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Beaver Creek: Source to Forest Boundary	No	Yes -Category 1 Fish-Bearing Stream RHCA -Drinking Water Source Protection Zone	Yes -Segment within high oil and gas potential area -Potential effects on ability to control beaver; potential effects on irrigators	Low to moderate	6
Boundary Creek: Source to Confluence with East Fork Bear River Hayden Fork	Yes -Portion of segment within high oil and gas potential areas; active lease area in corridor	Yes -Category 1 Fish-Bearing Stream RHCA -Drinking Water Source Protection Zone -Roadless Area	Yes -Potential oil and gas development	Low to moderate	6
East Fork Blacks Fork: Headwaters to confluence with Little East Fork	No	Yes -High Uintas Wilderness -Category 1 Fish-Bearing Stream RHCA -Portion of segment within Roadless	-Small portion of segment below wilderness is within high oil & gas potential area	Low	5
East Fork Smiths Fork: Red Castle Lake to Trailhead	No	Yes -High Uintas Wilderness -Category 1 Fish-Bearing Stream Riparian Habitat Conservation Area (RHCA) -Portion of segment within Roadless	-Small portion of segment below wilderness is within high oil & gas potential area	Low	3, 5
Hayden Fork: Source to Mouth	Yes -Active oil and gas leases within corridor.	Yes -Category 1 Fish-bearing Stream RHCA -Portion of segment is Roadless Area -Drinking Water Source Protection Zone	Yes -Future private land development	Moderate	3, 6
Henry's Fork: Henry's Fork Lake to Trailhead	No	Yes -High Uintas Wilderness	-Small portion of segment below wilderness is within high oil & gas potential area	Low	3, 5, 6
Left, Right, and East Fork Bear River: Alsop Lake and Norice Lake to near Trailhead	Yes -Portion of segment within high oil and gas potential areas; active lease in corridor	Yes -Portion of segment in High Uintas Wilderness Area -Category 1 Fish-bearing Stream RHCA -Portion of segment is Roadless Area	Yes -Potential oil and gas development	Moderate	3, 6
Little Cottonwood Creek: Source to Murray City Diversion	Historically, locatable minerals have been mined. Stream flows altered by off-	Yes -Category 1 Fish-bearing Stream RHCA -Drinking Water Source Protection Zone -Portion of segment	Yes -Future private land development -Potential impact to water development projects	Moderate	3

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
	site operations.	within Lone Peak Wilderness			
Little East Fork: Source to Mouth	No	Yes -Portion of segment within High Uintas Wilderness -Class III fishery -Category 1 Fish-bearing Stream RHCA	Yes -Portion of segment below wilderness boundary within high oil and gas potential area	Low	3, 5
Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	No	Yes -Wasatch-Cache National Forest Wilderness -Category 1 Fish-Bearing Stream Riparian Habitat Conservation Area (RHCA) -Portion of segment within Roadless	-Portion of segment below wilderness is within high oil & gas potential area -Potential private land development	Low	3, 5, 6
Middle Fork Weber River: Source to Forest Boundary	No	Yes -Category 1 Fish-Bearing Stream RHCA -Portion of segment within Roadless	-Segment is within high oil and gas potential area	Low to moderate	5
Ostler Fork: Source to Mouth	No	Yes -All of segment within High Uintas Wilderness -Category 1 Fish-bearing Stream RHCA	No	Low	3, 5, 6, 7
Provo River: Trial Lake to U35 Bridge	No	Yes -Category 1 Fish-bearing Stream RHCA -Portions of segment within Roadless Area	Yes -Future private land development -Area is in high oil and gas potential area (no current leases) -Provo River Project	Moderate	3, 6
Stillwater Fork: Source to Mouth	No	Yes -Portion of segment within High Uintas Wilderness -Category 1 Fish-bearing Stream RHCA -Drinking Water Source Protection Zone	Yes -Area within scenic segment is in high oil and gas potential area	Moderate	3, 6, 7
Thompson Creek: Source to Hoop Lake Diversion	No	Yes -High Uintas Wilderness -Category 1 Fish-Bearing Stream RHCA -Portion of segment within Roadless Area	- Portion of segment below wilderness is within high oil & gas potential area	Low	5, 6
West Fork Beaver Creek: Source to Forest Boundary	No	Yes -High Uintas Wilderness -Category 1 Fish-Bearing Stream Riparian Habitat Conservation Area (RHCA) -Portion of segment within Roadless Area	-Portion of segment below wilderness is within high oil & gas potential area	Low to moderate	3, 5, 6
West Fork Blacks Fork: Source to Trailhead	No	Yes -High Uintas Wilderness -Category 1 Fish-	-Portion of segment below wilderness is within high oil & gas potential area	Low to moderate	3, 5

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
		Bearing Stream Riparian Habitat Conservation Area (RHCA)	-Potential private land development		
West Fork Smiths Fork: Source to Forest Boundary*	Yes -Active lease sharing approximately 1.2 miles of stream corridor	Yes -Portion of segment within High Uintas Wilderness -Category 1 Fish-bearing Stream RHCA -Portion of segment within Roadless area	Yes -Future private land development -Area within Scenic segment is in high oil and gas potential area	Low to moderate	3

Uintah County

Alternatives 3 and 5 *(Impacts to Alternatives 3 and 5 are identical)*

In the proposed Black Canyon River Segment, no water development projects are proposed on this segment. Designation into the National Wild and Scenic Rivers System would not affect downstream projects, nor are existing, valid water rights affected. No large current, nor any future mineral or energy extraction activities are anticipated. One grazing allotment primarily uses the upper two miles of the segment; any future timber harvesting would also occur in the upper watershed. This segment receives light recreation use, including hiking, horseback riding, fishing, and hunting.

Table 3.10.32. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5	Black Canyon	Low	Low	Low to Moderate	$29,500	$29,500
3	Ashley Gorge Creek	Low to Moderate	Moderate	Low	$29,500	$29,500
3	Lower Dry Fork Creek	Moderate	Moderate	Low to moderate	$58,800	$58,800

Table 3.10.33. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Black Canyon	No	Yes -Ashley Spring (Vernal City) Drinking Water Source Protection Zone --Portion of segment within Roadless Area	No	Low	3, 5
Ashley Gorge Creek	No	Yes -Research Natural Area -Drinking Water Source Protection Zone	Yes -BOR CUP	Low	3
Lower Dry Fork Creek	Yes -Several existing mining claims (unlikely future development)	Yes -Drinking Water Source Protection Zone -Surface Water Protection Zone for Ashley Spring (Vernal	Yes -Potential private land development -Potential reservoir development (2 scoping comments)	Low to moderate	3

		municipal watershed)			

Uintah and Duchesne Counties

Alternative 6

Recreation/visitor use is light to moderate. Access is primarily by trail, but varies by area. Activities include hunting and fishing.

No past or present mineral or energy resource activity exists. No grazing occurs on either segment. Timber harvest has occurred in some areas; no harvest along the river corridors is expected in the future.

Table 3.10.34 Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
6	East Fork Whiterocks River	Low	Low	Low	$29,500	$29,500
6	Middle Whiterocks River	Low	Low	Low	$29,500	$29,500

Table 3.10.35. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
East Fork Whiterocks River	Dam/outlet structure at upper end of segment	Yes -Roadless Area -Drinking Water Source Protection Zone	No	Low	6
Middle Whiterocks River	No	Yes -Roadless Area -Drinking Water Source Protection Zone -Efforts to restore native Colorado Cutthroat trout	No	Low	6

Utah County

Alternative 3

The hot springs area within this segment is a major recreation attraction, with an estimated 15,000 to 20,000 visitors annually. One developed trail (#015) is available; other activities include dispersed camping, hiking, biking, fishing, hunting, and motorcycle riding. Area access includes paved roads, hiking, biking, ATV, and motorcycle trails. Several guides and outfitters hold permits overlapping the corridor.

The Department of Interior (DOI), Central Utah Project (CUP) has withdrawn or proposed to withdraw lands surrounding Fifth Water Creek. The area is considered high potential for oil and gas, with no salable or locatable developments in the vicinity. One grazing allotment exists.

Alternative 5

Visitor use in the corridor is estimated at 9,000 per year, primarily as access to the Mt. Timpanogos Wilderness. The Timpooneke National Scenic Trail is partly within the corridor; most recreation use is focused on hiking and horseback riding, with some dispersed camping. In addition, two developed

campgrounds with facilities adjoin and/or lie within the corridor.

No grazing, timber harvest, or farming occurs within the corridor; water rights maintained by the USFS are for recreation, wildlife, and stock do not substantially affect streamflows within the segment. No existing or reasonably foreseeable water developments have been identified.

Alternative 6

Substantial visitor use occurs in the North Fork Provo River area, including approximately 13,000 visitors annually that access Mt. Timpanogos through the river corridor. Wilderness-based activities, such as scenic hiking experiences, are the primary draw, although Sundance Ski Area and BYU's Aspen Grove facility also attract users (approximately 30% of the use in this area is linked to these to sources). In addition, the Alpine Loop Scenic Backway (SR 92) is heavily used.

No mineral/energy resource or grazing activities would be affected by designation. Although 1997 comments from the State of Utah Division of Water Resources expressed no concerns with designation, the North Fork Special Service District, who use water diverted from the corridor, are concerned that designation would result in changes in use. BYU plans exist for building improvements to their Aspen Grove Facility; designation as proposed may result in impacts to their planned activities.

Table 3.10.36. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3	Fifth Water Creek	Moderate to High	Low	Moderate to High	$58,800	$58,800
3, 6	North Fork Provo River	Moderate to High	Low	Low	$58,800	$58,800
5	South Fork American Fork	Moderate	Low	Low to Moderate	$29,500	$29,500

Table 3.10.37. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Fifth Water Creek	No	Yes -Mostly Roadless Area	-Withdrawal of surrounding lands by DOI for CUP -Surrounding area under oil & gas lease; considered high potential for oil & gas resources -Fuel management planned within corridor	Low	3
North Fork Provo River	No	Yes, recognizing that wild designation may conflict with future modification/maintenance of current water uses -Portion of segment within Mt. Timpanogos Wilderness, also designation as wildlife viewing area	-Water developments in corridor	Low to moderate	3, 6
South Fork American Fork	No	Yes -Wild segment within Mt. Timpanogos Wilderness -Corridor within Critical Environmental Zone Planning Area of Utah County General Plan	No	Low	5

Wasatch County

Alternatives 3, 6, and 7 *(The impact to Alternatives 3, 6, and 7 are identical).*
The Little Provo Deer Creek area hosts a variety of dispersed recreation activities, including hunting and camping, with some fishing opportunities. Heavy use of trails occurs in all seasons, for ATV, motorcycle, and snowmobile use. The Cascade Springs Scenic Drive is also heavily used. Sections of three roads, as well as the South Cascade Dispersed Camping site and the Cascade Springs Recreation Site are located within the corridor.

Mineral and energy resource activity potential is low. One vacant grazing allotment exists; no farming or timber use is expected.

Table 3.10.38. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 6, 7*	Little Provo Deer Creek	Moderate to High	Low**	Moderate	$58,800	$58,800

* Only 1 mile is recommended as suitable under Alternative 7.
**Corridor truncated at private property boundary.

Table 3.10.39. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Little Provo Deer Creek	No	Yes -Cascade Springs is a designated wildlife viewing areas and interpretive site	No	Low	3, 6, 7

Washington County

Alternatives 3, 5 and 6 *(The impact to Alternatives 3, 5 and 6 are identical).*
Access to the area includes Forest Service Roads and a non-system, non-motorized trail. Recreation use is low, and includes some ATV/OHV use.

There are no existing or planned water development projects. Overall, mineral and energy resource activity development is low. Two grazing allotments exist. Other uses, such as farming and timber harvest, are unlikely due to limited access, vegetation, and topography.

Table 3.10.40. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
3, 5, 6	Moody Wash	Low	Moderate	Low to moderate	$29,500	$29,500

Table 3.10.41. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Moody Wash	No	Yes -Roadless Area -FS participation in Conservation Agreement for Virgin River Spindace	-Potential private land development	Low	3, 5, 6

Weber County

Alternative 5

Limited access to the segment under consideration keeps recreation use very low. The area is only accessible by boat; no public trails access this property, although private roads and trails exist. Use includes fishing, some hunting and horseback riding.

No grazing or commercial recreation exists; nor are mineral/energy resource activities expected. The Causey Dam, part of the Weber Basin Project, is present below the stream segment. A large parcel of land adjacent to the watershed is privately owned and managed as a ranch, including grazing and guided big game hunting.

Table 3.10.42. Estimated costs.

Alternative	Segment	Complexity			Estimated cost to develop CRMP (per year for 2-3 years)	Estimated annual administration costs
		Recreation Use	Ownership	Resource Issues		
5	Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	Low	Moderate	Low	$29,500	$29,500

Table 3.10.43. Potential impacts.

Segment	Competing Uses	Compatibility with current uses	Foreseeable alternative uses	Overall Projected Impact	Alternative
Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	No	Yes -Category 1 Fish-Bearing Stream RHCA -Roadless Area -Surface Water Drinking Water Source Protection Zone	-Potential private land development	Low	5

Table 3.10.44 presents counties' support for or opposition to designation in relation to economic and/or social impacts. This information was drawn from applicable suitability factors from the Forest Suitability Evaluation Reports (Appendix A – Suitability Evaluation Reports) and comments received by counties as part of the suitability assessment process. Many, but not all, counties indicated support of or concern with social and economic aspects of designation.

Level of county support or opposition is identified as follows:

Support = County supports designation; designation is consistent with county plans.

Neutral = County neither supports nor opposes designation, or no inconsistencies with county plans have been identified at this time. Designation may be consistent with some aspects of county plans but inconsistent with others (e.g., consistent with protection of land/open space and wildlife habitat but inconsistent with stated purpose of agriculture and mining).

Oppose = County does not support designation; county has expressed concern with economic and/or social impacts as inconsistent with aspects of county plans (e.g., for future water development, zoning for area development, agricultural use, mining, oil & gas, forestry, or other uses), or county plans explicitly do not support special designations such as WSR.

Table 3.10.44. County support for WSR designation.

County	River	Consistency or inconsistency with social/economic aspects of county plans and/or goals
Box Elder	Willard Creek: Source to Forest Boundary	-Neutral -No inconsistencies with county plans identified at this time
Cache	Beaver Creek: South Boundary of State Land to Mouth	-Oppose -Designation may conflict with density of subdivision development on SITLA and private land
	Bunchgrass Creek: Source to Mouth	-Oppose -No inconsistencies with county plans identified at this time; county opposes designation
	Little Bear Creek: Little Bear Spring to Mouth	-See above
	Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	-Oppose -Designation may conflict with density of subdivision development on SITLA and private land -County comment letter (6/29/2007) expresses concern about effects on future water development or storage projects
	Logan River: Idaho State line to confluence with Beaver Creek	-Oppose -Designation may conflict with density of subdivision development on SITLA and private land
	Spawn Creek: Source to Mouth	-Oppose -No inconsistencies with county plans identified at this time; county opposes designation
	Temple Fork: Source to Mouth	-Oppose -Designation may conflict with density of subdivision development on SITLA and private land
	White Pine Creek Source to Mouth	-See above
Carbon, Sanpete, & Utah	Fish Creek and Gooseberry Creek	-Oppose (Carbon County); comment letter (4/8/2007) expresses concern about county stability and growth in relation to water management in the Fish Creek watershed -Oppose (Sanpete County*;* comment letters (5/10/2007; 6/29/2007) express concern about development of Narrows Water Project -Designation inconsistent with Carbon and Sanpete County Plans -No inconsistencies with Utah County plans identified at this time; Utah County does not support WSR designation
Daggett	Carter Creek	-Oppose -Concerns regarding potential effects to water rights, future development, water management; but county plan does not specifically address WSR designation -Daggett County requested analysis and disclosure of economic impacts (6/29/2007)
	Cart Creek Proper	-See above
	Middle Main Sheep Creek	-See above
	Lower Main Sheep Creek	-See above
	Green River	-Oppose -Daggett County requested analysis and disclosure of economic impacts (6/29/2007)
	Pipe Creek	-Oppose -Concerns regarding potential effects to water rights, future development, water management; but county plan does not specifically address WSR designation -Daggett County requested analysis and disclosure of economic impacts

County	River	Consistency or inconsistency with social/economic aspects of county plans and/or goals
		(6/29/2007)
Duchesne	Garfield Creek	-Oppose all segments especially those outside wilderness areas to maintain flexibility for future water development (this segment is entirely within wilderness area) -County plan policy requires evaluation of effects on local and state economies and related issues; plan generally opposes special designations such as WSR -Oppose for potential downstream effects to water rights and future developments, etc -County comments that support will be withheld until evaluation of social and economic effects (6/27/2007)
	Reader Creek	-Oppose all segments especially those outside wilderness areas to maintain flexibility for future water development -County plan policy requires evaluation of effects on local and state economies and related issues; plan generally opposes special designations such as WSR
	Shale Creek and Tributaries	-Oppose all segments especially those outside wilderness areas to maintain flexibility for future water development (this segment is entirely within wilderness area) -County plan policy requires evaluation of effects on local and state economies and related issues; plan generally opposes special designations such as WSR -Oppose for potential downstream effects to water rights and future developments
	Upper Lake Fork River, including Ottoson and East Basin Creeks (35 miles) and Oweep Creek (20 miles)	-See above
	Upper Rock Creek (21 miles) and Fall Creek (6 miles)	-See above
	Upper Uinta River, including Gilbert Creek, Center Fork, and Painter Draw	-See above
	Upper Yellowstone Creek, including Milk Creek	-See above
	West Fork Rock Creek, including Fish Creek	-See above
Emery	Huntington Creek	-Oppose -Conflict with Emery County's General County Plan (based on water development and associated economic issues)
	Lower Left Fork of Huntington Creek	-See above
Garfield	Death Hollow Creek	- County opposes designation as inconsistent with Garfield County General Management Plan*
	East Fork Boulder Creek	-See above
	Mamie Creek	-See above
	Slickrock – (Located on Dixie NF, but administered by Fishlake NF)	-See above
	Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	-See above
	The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	-See above
	Pine Creek	-County opposes designation
*Specifically, the county comment stated that WSR designation "...is detrimental to the custom, culture, socioeconomic base, health, and wealth of the County."		
Kane	North Fork Virgin River	-Oppose -County plan is not specifically referenced, local social and economic impacts are of concern to the county; comment letter (6/29/2007) expresses concern about local property impacts and water development impacts
Piute	Manning Creek	-Neutral -Piute County plan is silent on WSR and Manning Creek -No inconsistencies with county plan identified at this time

County	River	Consistency or inconsistency with social/economic aspects of county plans and/or goals
	Pine Creek / Bullion Falls	-See above -Sevier County commission has expressed opposition to designation.
Salt Lake County	Little Cottonwood Creek: Source to Murray City Diversion	-Neutral
San Juan	Hammond Canyon	-Oppose -Designation would conflict with San Juan County Master Plan
	Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	-See above
	Mill Creek Gorge	-See above
	Upper Dark Canyon, including Horse Pasture, Peavine & Kigalia Canyons	-Designation inconsistent with San Juan County Master Plan
San Juan & Montrose, CO	Roc Creek	-Neutral -No inconsistencies with Montrose county plan identified at this time
Sevier	Salina Creek	-Oppose -County plan is silent on Wild and Scenic Rivers in general and Salina Creek in particular -Sevier County comment letter (6/26/2007) opposed designation for economic concerns including minerals, oil and gas, agriculture, private lands, etc.
Sevier & Piute	Fish Creek	-Oppose -Both county plans are silent on Wild and Scenic Rivers in general and Fish Creek in particular -Sevier County comment letter (6/26/2007) opposed designation for economic concerns including minerals, oil and gas, agriculture, private lands, etc.
Summit	Beaver Creek: Source to Forest Boundary	-Support -Summit County comment letter 5/30/2007 supports inclusion of all listed segments in the Wild and Scenic Rivers Act designation
	Boundary Creek: Source to Confluence with East Fork Bear River	-Support (see above)
	East Fork Blacks Fork: Headwaters to Confluence with Little East Fork	-Support (see above)
	East Fork Smiths Fork: Red Castle Lake to Trailhead	-Support (see above)
	Hayden Fork: Source to Mouth	-Support (see above)
	Henry's Fork: Henry's Fork Lake to Trailhead	-Support (see above)
	Left, Right, and East Fork Bear River: Alsop Lake and Norice Lake to near Trailhead	-Support (see above)
	Little East Fork: Source to Mouth	-Support (see above)
	Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	-Support (see above)
	Middle Fork Weber River: Source to Forest Boundary	-Support (see above)
	Ostler Fork: Source to Mouth	-Support (see above)
	Provo River: Trial Lake to U35 Bridge	-Support (see above)
	Stillwater Fork: Source to Mouth	-Support (see above)
	Thompson Creek: Source to Hoop Lake Diversion	-Support (see above)
	West Fork Beaver Creek: Source to Forest Boundary	-Support (see above)
	West Fork Blacks Fork: Source to Trailhead	-Support (see above)
Summit County and Uinta County, WY	West Fork Smiths Fork: Source to Forest Boundary	-Support (Summit County) -Oppose (Uinta County, WY); general and land use plans do not support actions, such as WSR designations, which would impede, limit or restrict the

County	River	Consistency or inconsistency with social/economic aspects of county plans and/or goals
		lawful development and utilization of water rights. See e.g., UC Comprehensive Plan, p. 17 (2003); comment letter refers to potential negative social–economic impacts.
Uintah	Ashley Gorge Creek	-Oppose -County General Plan Draft (2005) for water quality maintenance would be in accordance with WSR; County Public Lands Policy reluctant to accept special designations as potentially detrimental to area economy -Comment letter (7/2/2007) requests analysis and disclosure of potential economic impact resulting from designation
	Black Canyon	-See above
	Lower Dry Fork Creek	-See above
	Middle Whiterocks River	-See above
Uintah & Duchesne	Upper Whiterocks River (4 miles) and East Fork Whiterocks River (4 miles)	-Oppose (Uintah and Duchesne Counties) -Duchesne opposes all segments outside wilderness areas -Duchesne County Plan Policy requires evaluation of effects on local and state economies and related issues -Oppose for potential downstream effects to water rights and future developments, etc
	West Fork Whiterocks River	-Oppose (Uintah and Duchesne Counties) -Concern for limitations on development
Utah	Fifth Water Creek	-Designation appears to be consistent with the zoning allocation of the 1997 Utah County Plan -County comment letter 6/29/2007 opposes designation of all 3, but not for socio-economic reasons
	North Fork Provo River	-See above
	South Fork American Fork	-See above
Wasatch	Little Provo Deer Creek	-Acknowledge and will not contest 1 mile segment -Wasatch County Public Lands Ordinance of the General Plan concern that special designations can be detrimental to the County's economy, life style, culture, and heritage - Designation inconsistent with Wasatch County General Plan
Washington	Moody Wash	-No specific reference to county plan -Comment letters 6/29/2007, 9/24/2007 oppose designation but not for socio-economic reasons
Weber	Left Fork South Fork Ogden River: Frost Canyon/Bear Canyon Confluence to Causey	-Neutral -No inconsistencies with county plans identified at this time

3.11 Timber Harvest

Introduction

During the eligibility determination, the National Forests in Utah used Classification Criteria to determine classification as Wild, Scenic, or Recreational rivers. One attribute, among many, was to look at shoreline development and past or ongoing timber harvest. In general, for a Wild classification there was little or no evidence of past timber harvest and no ongoing timber harvest. For a Scenic classification, evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank. For a Recreational classification, the river corridor may show evidence of past and ongoing timber harvest. (FSH 1909.12, Sec. 82.3 – Exhibit 01). There are 45 Wild, 30 Scenic, and 22 Recreational total classifications for the 86 river segments totaling 840 miles.

Detailed information for Section 3.11 came from Appendix A – Suitability Evaluation Reports, "Other Resource Activities."

Affected Environment

Twenty-eight segments (281 miles) of the 86 eligible river segments have past, present, and/or reasonably foreseeable timber harvest. All segments were reviewed; however, Table 3.11.1 only shows segments with past, present, or reasonably foreseeable timber harvest. The information was obtained from and is described in more detail in Appendix A – Suitability Evaluation Reports.

Table 3.11.1. River segments with past, present, and reasonably foreseeable timber harvest.

River Segment	Miles	Classification	Past, Present, and/or Reasonably Foreseeable Timber Harvest Activities	Segment Suitable in Alternatives
Ashley NF				
Black Canyon	10	Wild	Past timber harvest in the upper headwaters. Possible future harvest in the upper watershed, with no direct harvest expected along the river corridor.	3, 5
Cart Creek Proper	10	Scenic	No timber harvest has occurred along the river corridor, but past harvest has occurred in the upper watershed and could potentially occur in the future. Recent salvage logging activities are evident on the lower slopes of the surrounding mountains.	5
Carter Creek	16	Scenic	Past timber harvest has occurred in the upper portions of this watershed. There is a potential for future timber harvest, but it would not be expected along the river corridor.	5
Lower Dry Fork	7	Recreational	Past harvest. Future harvest possible, not expected in river corridor.	3
Middle Whiterocks River	9	Wild	Timber harvest has only occurred in the upstream headwaters of this watershed. The rugged nature and limited access of the river corridor has precluded any harvest, and no harvest activities are expected in the future.	6
Pipe Creek	6	Scenic	Past harvest. Future harvest possible, not expected in river corridor.	5
Reader Creek	6	Scenic	Past harvest. Future harvest possible, not expected in river corridor.	3, 5, 6
South Fork Ashley Creek	15	Scenic	Past and recent harvest. Future harvest possible, not expected in river corridor.	*
Upper and East Fork Whiterocks	8	Scenic	Past harvest. Future harvest possible, not expected in river corridor.	5, 6
West Fork Whiterocks	11	Scenic	Past harvest. Future harvest possible, not expected in river corridor.	5, 6
Dixie NF				
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	Possible future aspen regeneration work in the upper one mile of the corridor.	*
North Fork Virgin River	1	Scenic	No past harvest. Below the Virgin River Rim, there is a notable die off of Douglas-fir trees. Timber projects may be pursued In the future (e.g., helicopter logging).	3, 5, 6, 7
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	Possible future aspen regeneration work in the upper one half mile of the Steep Creek corridor.	3, 5
Fishlake NF				
N/A.				
Manti-La Sal NF				
Chippean and Allen Canyons	21	Scenic (2.6 mi.); Recreational (19 mi.)	Future harvest possible at upper end of Chippean Canyon.	*
Huntington Creek	19	Recreational	Spruce throughout the corridor are dead or dying and create a potential hazard for campers and those traveling the Scenic Byway. These trees will eventually be removed.	4, 6
Lower Left Fork Huntington Creek	5	Scenic	Past timber harvest.	4, 6
Roc Creek	9	Wild	Some timber harvesting has occurred on the adjacent mesa tops some of it within a ¼ mile of the eligible	3, 5

River Segment	Miles	Classification	Past, Present, and/or Reasonably Foreseeable Timber Harvest Activities	Segment Suitable in Alternatives
			segment. This use could potentially occur again in the area.	
Upper Dark Canyon Including Horse Pasture Canyon, Peavine & Kigalia Canyon	26	Recreational	Timber harvest potential exists in the heads of the canyons outside the Wilderness and Roadless Areas.	5, 6
Uinta NF				
Fifth Water Creek	8	Scenic	Fuels management activities are planned within the corridor above Sheep Creek-Rays Valley Road.	3
Wasatch-Cache NF				
Beaver Creek: Source to Forest Boundary	6	Recreational	Two current timber projects: the Ponderosa Pine Restoration project is within the upper portion of this stream corridor and the Roadside Salvage project is within the stream corridor.	6
Boundary Creek: Source to Confluence with East Fork Bear River	4	Wild	East Fork Salvage Sale near future.	6
Left, Right, and East Forks Bear River: Alsop Lake and Norice Lake to near Trailhead	13	Wild	Past (approx. 100 years) evidence of tie-hacking.	3, 6
Little Bear Creek	1	Scenic	Historical timber harvests visible from stream segment. No current or planned projects within this stream corridor.	3, 6
Main Fork Weber	6	Scenic	Past fuels treatment work conducted along the Forest boundary with the private land to provide defensible space to the Alpine Acres subdivision. No other current or planned projects within stream corridor.	*
Middle Fork Beaver Creek	11	Wild (6.9 mi.); Scenic (4.2 mi.)	Past evidence of harvest. No future harvest.	3, 5, 6
Middle Fork Weber	6	Wild	Past fuels treatment work conducted along the Forest boundary with the private land to provide defensible space to the Alpine Acres subdivision. No other current or planned projects within stream corridor.	5
Provo River	20	Recreational	The area around the Upper Setting Road on the north side of the segment has had many past timber harvests. There are three vegetation/fuels treatments planned for this area: the Ponderosa Restoration Prescribed Burn, Roadside Salvage, and the Murdock Basin Fuels Treatment.	3, 6
West Fork Smiths Fork	14	Wild (4 mi.); Scenic (10 mi.)	Portions of this reach have been logged in the past. There are active timber harvest activities on the private lands within this stream segment.	3
28 river segments	**281 Total Miles**			

* Segment(s) only occur in Alternatives 1 and 2

Table 3.11.2. Miles of segments found suitable with past present, and reasonably foreseeable timber harvest or fuels activities, by classification and alternative.

Segments with Timber Harvest / Fuels Activities		Alternatives						
		1	2	3	4	5	6	7
Total # of Segments	28	0	0	12	2	14	14	1
Total Miles	281	0	0	107	24	127	131	1
Recreational Miles	97	0	0	27	19	26	71	0
Scenic Miles	110	0	0	30	5	62	36	1
Wild Miles	75	0	0	50	0	39	24	0

The Timber Harvest section will describe the effects of WSR designation on harvesting practices on

Federal lands located within wild and scenic river corridors, harvesting practices outside the wild and scenic river corridors, and private timber harvesting if future projects were proposed.

Currently, most river corridors (riparian zones) are already protected by other laws and regulations and Forest Plans, and best management practices. If timber harvesting activities are proposed on or adjacent to the eligible river segment, it would be analyzed in a separate NEPA document, outside of this process.

Environmental Consequences

See Table 3.1.1 for restriction to activities within stream corridors based on classification. Refer to Table 3.1.2 for a list of basic assumptions.

Section 3.11 addresses one issue:

> Issue 2 – Uses and activities may be precluded, limited or enhanced if the river segment and its corridor were included in the National System. The measurement indicator for is miles of river affected by timber harvesting.

This resource will be analyzed by alternative, and the effects will be generally displayed. Currently, most river corridors (riparian areas) are already protected by other laws and regulations and Forest Plans, and best management practices. If timber harvesting activities are proposed on or adjacent to the eligible river segment, it would be analyzed in a separate NEPA document, outside of this process.

General Environmental Impacts

Harvesting on Federal Lands located within Wild and Scenic River Corridors
Harvesting practices on federal lands located within WSR corridors must be designed to help achieve land-management objectives consistent with the protection and enhancement of the values which caused the river to be added to the National System. WSR designation is not likely to significantly affect timber harvesting or logging practices beyond existing limitations to protect riparian zones and wetlands which are guided by other legal mandates and planning direction. (Marsh 2006).

Once designated as Wild, Scenic, or Recreational, the river must be managed to maintain that classification within the established corridor. Wild river segments have no roads or railroads along them or ongoing timber harvest. The degree of protection and enhancement is a management prerogative based on an appropriate level of analysis typically done through the river planning process. For example, if scenery is identified as an ORV, then visual resources must be protected by developing appropriate objectives to guide management activities both within and outside the river corridor. (Marsh 2006).

Federal and state regulations which protect wildlife, visual values, water quality, etc., may prohibit timber harvesting from streamside areas regardless of whether or not a river is designated (Marsh 2006).

Timber Harvest Practices Outside the Wild and Scenic River Corridor
Timber harvesting would be further analyzed under a site-specific NEPA process outside of the current process. Federal timber management activities outside the WSR corridor will be designed to not adversely affect the values which caused the river to be designated. Values such as water quality, scenery, and riparian-dependent resources would be considered. These types of resources are addressed in the river planning process to guide action both inside and outside the designated river corridor. (Marsh 2006)

Private Timber Management Practices
Private timber management practices are guided by state and local authorities, along with management agencies who may provide technical assistance to mitigate incompatible or inappropriate activities. Under

the Act, the only way the federal government can restrict private timber harvesting is through purchase of timber rights (in easement or fee title) or under cooperative agreement. (Marsh 2006)

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification, and ORVs.

If timber harvesting activities are proposed on Federal land adjacent to the eligible river segment or on any of the 19 segments with reasonably foreseeable timber harvesting (see Table 3.11.1), it would be analyzed in a separate NEPA document, outside of this process. Harvesting practices on federal lands located within WSR corridors would be designed to help achieve land-management objectives consistent with the protection and enhancement of the values which caused the river to be added to the National System. River corridors would be protected by existing laws, regulations, and standards within Forest Plans, and best management practices.

Alternative 2 – No rivers recommended.

Under Alternative 2, a determination would be made that all 86 river segments (840 miles) are not suitable and released from Wild and Scenic River interim protection. There would be no impact to reasonably foreseeable timber harvesting activities on 19 river segments (see Table 3.11.1). If timber harvesting activities are proposed on federal lands adjacent to the eligible river segment or on any of the 19 segments, it would be analyzed in a separate NEPA document, outside of this process. River corridors would continue to be protected by other laws and regulations and standards within Forest Plans, and best management practices.

Impacts Common to Alternatives 3, 4, 5, 6, or 7

There are twelve river segments (107 miles) with past, present, or reasonably foreseeable timber harvesting activities under Alternative 3; two segments (24 miles) under Alternative 4; fourteen segments (127 miles) under Alternative 5; fourteen segments (131 miles) under Alternative 6; and one river segment (1 mile) under Alternative 7 (see Table 3.11.2). Following selection of any of the action alternatives, and designation of a river segment, timber management practices would be evaluated during comprehensive river management plan by the river administering agency. Harvesting practices on federal lands located within WSR corridors must be designed to help achieve land-management objectives consistent with the protection and enhancement of the values which caused the river to be added to the National System. Federal timber management activities outside the WSR corridor will be designed to not adversely affect the values which caused the river to be designated. Values such as water quality, scenery, and riparian-dependent resources would be considered. WSR designation is not likely to significantly affect timber harvesting or logging practices beyond existing limitations to protect riparian zones and wetlands which are guided by other legal mandates and planning direction.

3.12 Water Resources and Water Developments

Introduction

This section will first define and describe the water resources and the water resources developments related to the study segments. Then this section will discuss which streams in this study may be recommended for suitability in each alternative and then relate the affects of those recommendations to

these stream related water resources and water developments.

The water resources of a stream segment will be described in terms of the type of flow, the water quality and beneficial uses of the water, if the stream is identified as a Drinking Water Source Protection Zone (DWSPZ). The water resources developments related to stream segments will be described in terms of existing and reasonably foreseeable projects. Stream segments with existing and reasonably foreseeable water developments are considered to be free-flowing; however the free-flowing condition of stream segments with reasonably foreseeable water developments located upstream, immediately downstream of, or on the segment could be impacted if the potential projects were constructed.

Detailed information for the water resource portion of Section 3.12 was compiled from the 2006 303d lists of impaired waters for Utah, Wyoming, and Colorado, the 2006 305b lists of waters requiring a Total Maximum Daily Load (TMDL) studies for Utah, Wyoming, and Colorado from each State's Division of Water Quality and Drinking Water Source Protection data and the Utah Division of Drinking Water. The data regarding the existing and potential water developments were compiled from Appendix A – Suitability Evaluation Reports, State and Basin Water Plans, scoping and DEIS comments, the Bureau of Reclamation and the Central Utah Water Conservancy District.

Affected Environment

Water Resources

The 86 stream segments being studied are located on five National Forests in Utah. These river segments contain 840 miles of free-flowing rivers and streams. Variations in stream type and flow depend on the location of the stream within the State and associated climate, the size and position of the watersheds that these streams flow through, and the locations of the stream segments within their related drainage basin.

The characteristics of these streams vary widely, with 76 segments (715 miles of stream) with perennial flow, 3 segments (46 miles of stream) have perennial flow in the mainstem of the river with intermittent or ephemeral conditions in the headwater reaches, 5 segments (75 miles of stream) with intermittent flow, 1 segment (2 miles) has a combination of intermittent and ephemeral conditions, and 1 segment (2 miles) has ephemeral flow (see Table 3.12.1).

All of the streams on the Ashley and Uinta-Wasatch-Cache National Forests have perennial flow. The streams with intermittent flow are located the Dixie and the Manti-La Sal National Forests and the majority of the segments with combinations of flow regimes including perennial, intermittent, and ephemeral flow are located on the Dixie, and the Manti-La Sal National Forests. This pattern represents the climatic, geologic, and physiographic differences between the National Forests in Utah. Rivers with intermittent or non-perennial flows exist within the National System and may be representative of rivers within particular physiographic regions. For the purposes of this suitability study, the volume of flow is sufficient if it can sustain or complement the ORVs identified within the segment.

Table 3.12.1. Flow regimes of Wild and Scenic River segments (perennial, intermittent, or ephemeral). This information is from Appendix A – Suitability Evaluation Reports.

Eligible River Segment	Miles	Classification	Type of Stream Flow	Segment Found Suitable in Alternative
Ashley National Forest				
Ashley Gorge Creek	10	Wild	Intermittent	3
Black Canyon	10	Wild	Intermittent	3, 5
Cart Creek Proper	10	Scenic	Perennial	5

Eligible River Segment	Miles	Classification	Type of Stream Flow	Segment Found Suitable in Alternative
Carter Creek	16	Scenic	Perennial	5
East Fork Whiterocks River	4	Scenic	Perennial	5, 6
Fall Creek	6	Wild	Perennial	5
Garfield Creek	17	Wild	Perennial	5, 6
Green River	13	Scenic	Perennial	3, 5, 6, 7
Lower Dry Fork Creek	7	Recreational	Intermittent	3
Lower Main Sheep Creek	4	Recreational	Perennial	3, 5
Middle Main Sheep Creek	5	Recreational	Perennial	3, 5
Middle Whiterocks River	9	Wild	Perennial	6
Oweep Creek	20	Wild	Perennial	5
Pipe Creek	6	Scenic	Perennial	5
Reader Creek	6	Scenic	Perennial	3, 6
Shale Creek and Tributaries	10	Wild	Perennial	5, 6
South Fork Ashley Creek	15	Scenic	Perennial	*
Upper Lake Fork River, including Ottoson and East Basin Creeks	35	Wild	Perennial	5
Upper Rock Creek	21	Wild	Perennial	5
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	Wild	Perennial	3, 5, 6, 7
Upper Whiterocks River	4	Scenic	Perennial	5, 6
Upper Yellowstone Creek, including Milk Creek	33	Wild	Perennial	5, 6
West Fork Rock Creek, including Fish Creek	13	Wild	Perennial	5
West Fork Whiterocks River	11	Scenic	Perennial	5, 6
Dixie National Forest				
Death Hollow Creek	10	Wild	Perennial in mainstem, ephemeral at headwaters	3, 5, 6, 7
East Fork Boulder Creek	3	Wild	Perennial	5
Mamie Creek	2	Wild	Ephemeral	3, 5, 7
Moody Wash	5	Wild	Intermittent	3, 5, 6
North Fork Virgin River	1	Scenic	Perennial	3, 5, 6, 7
Pine Creek	8	Wild	Perennial	3, 5, 7
Cottonwood Canyon – (Located on Dixie NF, but administered by Fishlake NF)	6	Wild	Intermittent	*
Slickrock Canyon – (Located on Dixie NF, but administered by Fishlake NF)	2	Wild	Intermittent/ ephemeral	5
Steep Creek – (Located on Dixie NF, but administered by Fishlake NF)	7	Wild	Perennial	3
The Gulch – (Located on Dixie NF, but administered by Fishlake NF)	2	Recreational	Perennial	3
Fishlake National Forest				
Corn Creek	2	Scenic	Perennial	*
Fish Creek	15	Wild/Rec.	Perennial	3, 5, 7
Manning Creek	4	Wild	Perennial	5, 6

Eligible River Segment	Miles	Classification	Type of Stream Flow	Segment Found Suitable in Alternative
Pine Creek / Bullion Falls	4	Wild	Perennial	5
Salina Creek	7	Wild	Perennial	5
Manti-La Sal National Forest				
Chippean and Allen Canyons	21	Scenic/ Rec.	Intermittent	*
Fish Creek and Gooseberry Creek	21	Scenic/ Rec.	Perennial	4, 6
Hammond Canyon	10	Scenic	Perennial in mainstem, intermittent at headwaters	3, 6
Huntington Creek	19	Recreational	Perennial	4, 6
Lower Dark Canyon, including Poison Canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons	41	Wild	Intermittent	5, 6
Lower Left Fork of Huntington Creek	5	Scenic	Perennial	4, 6
Mill Creek Gorge	3	Wild	Perennial	5
Miners Basin (Placer Creek)	2	Recreational	Intermittent	*
Roc Creek	9	Wild	Perennial	3, 5
Upper Dark, Horse Pasture, Peavine & Kigalia Canyons in Upper Dark Canyon	26	Recreational	Perennial in mainstem, intermittent in headwaters	5, 6
Uinta National Forest				
Fifth Water Creek	8	Scenic	Perennial	3
Little Provo Deer Creek	3	Recreational	Perennial	3, 6, 7
North Fork, Provo River	1	Wild/ Rec.	Perennial	3
South Fork, American Fork River	1	Wild/ Rec.	Perennial	5
Wasatch-Cache National Forest				
Beaver Creek	6	Recreational	Perennial	6
Beaver Creek (Logan)	3	Recreational	Perennial	3, 6
Blacks Fork	3	Recreational	Perennial	*
Boundary Creek	4	Wild	Perennial	6
Bunchgrass Creek	5	Scenic	Perennial	3, 6
East Fork Blacks Fork	10	Wild	Perennial	5
East Fork Smiths Fork	12	Wild	Perennial	3, 5
Hayden Fork	12	Recreational	Perennial	3, 6
Henry's Fork	8	Wild	Perennial	3, 5, 6
High Creek	7	Wild/ Rec.	Perennial	*
Left Fork South Fork Ogden River	5	Wild	Perennial	5
Left Hand Fork Blacksmiths Fork	15	Recreational	Perennial	*
Left, Right, and East Forks Bear River	13	Wild	Perennial	3, 6
Little Bear Creek	1	Scenic	Perennial	3, 6
Little Cottonwood Creek	8	Recreational	Perennial	3
Little East Fork	9	Wild	Perennial	3, 5
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	Recreational	Perennial	3, 6

Eligible River Segment	Miles	Classification	Type of Stream Flow	Segment Found Suitable in Alternative
Logan River: Idaho State line to confluence with Beaver Creek	7	Scenic	Perennial	3, 6
Main Fork Weber River	6	Scenic	Perennial	*
Middle Fork Beaver Creek	11	Wild/ Scenic	Perennial	3, 5, 6
Middle Fork Weber River	6	Wild	Perennial	5
Ostler Fork	4	Wild	Perennial	3, 5, 6, 7
Provo River	20	Recreational	Perennial	3, 6
Red Butte Creek	3	Scenic	Perennial	3
Spawn Creek	4	Scenic	Perennial	6
Stillwater Fork	14	Wild/ Scenic	Perennial	3, 6, 7
Temple Fork	6	Scenic	Perennial	3, 6
Thompson Creek	5	Wild	Perennial	5
West Fork Beaver Creek	10	Wild/ Scenic	Perennial	3, 5, 6
West Fork Blacks Fork	12	Wild/ Scenic	Perennial	3, 5
West Fork Smiths Fork	14	Wild/ Scenic	Perennial	3
White Pine Creek	1	Scenic	Perennial	3, 6
Willard Creek	4	Scenic	Perennial	3, 5

*Only found in Alternatives 1 and 2.

Due to the variations in water resource characteristics across the five National Forests in Utah, the existing condition of water resources will be discussed in terms of water uses, water quality, and the concurrence of Drinking Water Source Protection Zones (DWSPZ) in the stream segment corridors. Analyzing these water resource factors will help describe the quality and importance of the available water resource value related to the 86 river segments. The protection of water quality and stream areas within a State designated DWSPZ would continue to be managed by the Forest Service to State and Federal standards through adherence to standard water quality monitoring directed by the Clean Water Act, the Environmental Protection Agency (EPA), and state laws including: Utah Code R309-605-7/8, Utah Code 19-4-101, the Utah Division of Water Quality, the Utah Safe Drinking Water Act (SDWA); Colorado law, Title 25-8, The Colorado Water Quality Act administered by the Water Quality Control Commission; and Wyoming law, Title 35-11, The Wyoming Environmental Quality Act and the Wyoming Water Quality Rules and Regulations.

Water Uses and Water Quality

The status of water quality for the river segments will be discussed generally in terms of the States of Utah, Wyoming, and Colorado's designated beneficial uses and whether the water quality of the stream is supporting these uses. The concurrence of State of Utah DWSPZ and river segment corridors were identified using GIS to describe areas that have high quality waters that are protected for drinking water supplies in municipalities and seasonal recreation sites.

Of the 86 stream segments, 84 of the stream segments considered in this analysis are located in one or more of Utah's ten Watershed Management Units that are administered by the Utah Water Quality Board, and include the Great Salt Lake Desert, Bear River, Weber River, Jordan River and Utah Lake, San Juan, Provo, Spanish Fork, Uinta Basin, Sevier River, Cedar/Beaver, Lower Colorado, Colorado River West, and Colorado River Southeast basins. A small portion of Roc Creek (Manti-La Sal NF) is located in Utah and Colorado and flows within the Colorado River Southeast Management Unit of Utah, with the majority of the segment within the Delores River Basin of Colorado. A portion of the West Fork Smiths Fork (Wasatch-Cache Portion of the Uinta-Wasatch-Cache National Forest) is located in Utah and

Wyoming, and flows into Wyoming within the Green River Basin.

Water Quality of Stream Segments in Utah

Water quality protection in Utah has been delegated by the Federal Environmental Protection Agency (EPA) to the State. The State enforces tenets of the Clean Water Act under Utah law, Title 19-5, Water Quality Act. This act defines water quality objectives as "to prevent, abate, and control the pollution of the waters of the state". The Water Quality Board categorizes waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each class as set forth. Water quality standards are distributed pursuant to Utah State Code, Sections 19-5-104 and 19-5-110 with Rule R317-2 that outlines the Standards of Quality for Waters of the State. This information was located at State of Utah Division of Administrative Rules, Standards for Quality of Waters for the State of Utah at http://www.rules.utah.gov/publicat/code/r317/r317-002.htm#T4.

All of the portions of the 86 stream segments that are located in Utah are classified as High Quality waters under Classes 1 and/or 2, Class 3 streams are protected for use by aquatic wildlife, and Class 4 streams are protected for agricultural uses. The designated beneficial uses identified for the 86 stream segments are: Class 1 (protected for use as a raw water source for domestic water systems); Class 1C (protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water); Class 2 (protected for recreational use and aesthetics); Class 2B (protected for secondary contact recreation such as boating, wading, or similar uses); Class 3A (protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain); Class 3C (protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain); Class 3D (protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, 3C, including the necessary aquatic organisms in their food chain); and Class 4(protected for agricultural uses including irrigation of crops and stock watering).

Water Quality of Stream Segments in Colorado

Water quality protection in Colorado has been delegated by the Federal Environmental Protection Agency (EPA) to the State. The State enforces tenets of the Clean Water Act under Colorado law, Title 25-8, The Colorado Water Quality Act administered by the Water Quality Control Commission. The designated Water Quality classifications for Roc Creek, the single segment in Colorado, are for Aquatic Life Cold Water 1, Recreation E, Water Supply, and Agriculture. This information was found at the Colorado Department of Health and Environment, Water Quality Control Commission Regulations (http://www.cdphe.state.co.us/regulations/wqccregs/index.html). Water uses in this stream fully support the water quality standards.

Water Quality of Stream Segments in Wyoming

Water quality protection in Wyoming has been delegated by the Federal Environmental Protection Agency (EPA) to the State. The State enforces tenets of the Clean Water Act under Wyoming law, Title 35-11, The Wyoming Environmental Quality Act and the Wyoming Water Quality Rules and Regulations. The advisory board sets the Wyoming Surface Water Quality Standards. The designated water use classifications for the portion of the West Fork Smiths Fork that is in Wyoming are Class 2AB and water quality standards are set to support Drinking Water, Other Aquatic Life, Game Fish, Recreation, Wildlife, Agriculture, Industry, and Scenic Value uses. Water quality for these water uses in this stream fully support the water quality standards (http://deq.state.wy.us/wqd/watershed/surfacestandards/Downloads/Standards/2-3648-doc.pdf).

Stream Segments with Impaired Water Quality

Pursuant to Section 303(d) of the Clean Water Act as amended, each state is required to identify those assessment units for which existing pollution controls are not stringent enough to implement state water quality standards. Thus, those waters or assessment units (i.e., lakes, reservoirs, rivers, and streams) that

are not currently achieving or are not expected to achieve those standards are identified as water quality limited. An assessment unit is considered water quality limited when it is known that its water quality does not meet applicable water quality standards or is not expected to meet applicable water quality standards. Assessment units can be water quality limited due to point sources of pollutants, non point sources of pollutants or both. Examples of pollutants that can cause beneficial use impairment include chemicals for which there are numeric standards (e.g., ammonia, chlorine, organic compounds and trace elements), and pathogens (Utah Department of Environmental Quality, Department of Water Quality, 2006).

Each State prepares a 303(d) list, and is required to prioritize its assessment units for Total Maximum Daily Load (TMDL) development and to identify those assessment units that will be targeted for TMDL development within the next two years. None of the Wild and Scenic study streams were listed on the 2006 lists for Utah, Colorado or Wyoming. Streams that were impaired in the past and have had TMDL studies approved in the past include: Cottonwood Wash, which includes Hammond Canyon, Chippean and Allen Canyons, the Virgin River, which includes the North Fork Virgin River segment, the Upper Uinta River, which includes the Upper Uinta and Whiterocks River segments, and Little Cottonwood Canyon (http://www.waterquality.utah.gov/TMDL/index.htm#addinfo).

Each of these TMDLS has been approved and implementation strategies have been adopted for improving the impaired parameters within these drainages. The water quality issues for Little Cottonwood Canyon have been addressed through the Abandoned Mine Lands Initiative. In 1996, Salt Lake County began construction on a pilot project to build a constructed wetland for pollutant removal in Alta, Utah. This project utilized a fen for adsorption and bioaccumulation of metals, thereby reducing the metals load in Little Cottonwood Creek. In addition, the fen has been used to neutralize pH levels in the Creek. The fen has been in operation for the last nine years with repeated monitoring. Recently, the United States Geological Survey (USGS) has been contracted to create an OTEQ model to determine if the Fen has the capacity to treat the entire Columbus-Rexall Mine Drainage. In order to treat the entire discharge, the fen would be deepened to accommodate increased removal capacity. There is concern that designation would interfere with this project and impede the necessary increase in the capacity of the Fen Pilot Project (http://www.waterresources.slco.org/html/TMDLstudies/wqAltaFen.html).

Drinking Water Source Protection Zones

Some of the stream segments and stream corridors are within and recognized by the State of Utah as a DWSPZ. A DWSPZ is an area that is defined as the area where contaminants are limited from the surface and subsurface areas surrounding a surface source of drinking water supplying a public water system (PWS), over which or through which contaminants are reasonably likely to move toward and reach the source. Surface water means all water which is open to the atmosphere and subject to surface runoff, and subsurface water relates to any well, spring, tunnel, adit, or other underground opening from or through which ground-water flows or is pumped from subsurface water-bearing formations.

Table 3.12.2 lists the stream segments by Forest, where approximately 43 segments with 368 miles of the eligible 86 segments and 840 miles are within DWSPZs. The Ashley National Forest has 28 segments and 272 miles, the Fishlake National Forest has 1 segment and 1 mile, the Dixie National Forest has 1 segment and 1 mile, the Manti-La Sal National Forest has 3 segments and 39 miles, the Uinta National Forest has 3 segments and 5 miles, and the Wasatch-Cache National Forest has 7 segments and 49 miles. This data was provided from the Utah Department of Environmental Quality, Division of Drinking Water.

Protection for Water Quality and DWSPZs

The protection of water quality and stream areas within a State designated DWSPZ would continue to be managed by the Forest Service to State and Federal standards through adherence to standard water quality monitoring directed by the Clean Water Act, EPA, Utah Code R309-605-7/8, and the Utah Division of

Water Quality, the Safe Drinking Water Act (SDWA), Utah Code 19-4-101, and the Utah Safe Drinking Water Act. The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells (US EPA, Safe Drinking Water Act and Utah Safe Drinking Water Act).

Recommendation of stream segments would promote no change to the monitoring and management currently in place for water quality or DWSPZ across the alternatives presented in this section. This analysis serves only to identify the stream areas that have identified water quality impairments and are Drinking Water Source Protection Zones to show areas if recommended would need to be addressed in the long-term comprehensive river management plan for the segment.

Water Developments

Water is a limited and therefore very valuable resource in Utah. Utah is the second-driest state in the nation where there is only 13 inches average of precipitation annually. The precipitation varies from 5 inches in the arid desert areas to 60 inches in some of the high mountain regions. The mountain watershed regions, located largely within National Forest System lands collect large amounts of precipitation in the form of snow, which in turn supply the state's natural and manmade water storage systems. The flows from these upper watershed areas are the major source of water used for irrigation, municipal and industrial supplies, power production, recreational activities, fish and wildlife habitat, and other uses. The construction of dams, reservoirs, and water systems has been essential for capturing and delivering the state's water. Agricultural, municipal, and industrial water uses rely heavily on spring runoff from mountain snowpacks stored in reservoirs to meet summer water needs. The majority of the existing and potential water development projects identified in this study that deliver surface water for municipal and agricultural uses are located on the Ashley, Manti-La Sal and Uinta-Wasatch-Cache National Forests.

Table 3.12.2. Segments that have drinking water source protection zones (DWSPZ) by alternative. This information is from the Utah Division of Drinking Water.

Eligible River Segment	DWSPZ Miles	Classification	Segment Found Suitable in Alternatives
Ashley National Forest			
Ashley Gorge Creek	10	Wild	3
Black Canyon	10	Wild	3, 5
Cart Creek Proper	10	Scenic	5
Carter Creek	16	Scenic	5
East Fork Whiterocks River	4	Scenic	5, 6
Garfield Creek	13	Wild	5, 6
Lower Dry Fork Creek	7	Recreational	3
Lower Main Sheep Creek	4	Recreational	3, 5
Middle Main Sheep Creek	5	Recreational	3, 5
Middle Whiterocks River	9	Wild	6
Reader Creek	6	Scenic	3, 5, 6
South Fork Ashley Creek	15	Scenic	*
Upper Lake Fork River including Ottoson and East Basin Creeks	34	Wild	5
Upper Rock Creek	9	Wild	5
Fall Creek	6	Wild	5
Upper Uinta River including Gilbert Creek, Painter Draw, and Center Fork	40	Wild	3, 5, 6, 7

Eligible River Segment	DWSPZ Miles	Classification	Segment Found Suitable in Alternatives
Upper Whiterocks	4	Scenic	5, 6
Upper Yellowstone Creek	33	Wild	5, 6
West Fork Rock Creek including Fish Creek	25	Wild	5
West Fork Whiterocks River	11	Scenic	5, 6
Dixie National Forest			
North Fork Virgin River	1	Scenic	3, 5, 6, 7
Fishlake National Forest			
Corn Creek	1	Scenic	*
Manti-La Sal National Forest			
Huntington Creek	19	Recreational	4, 6
Fish Creek and Gooseberry Creek	20	Scenic	4, 6
Left Fork of Huntington Creek	4	Scenic	4, 6
Uinta National Forest			
Little Provo Deer Creek	3	Recreational	3, 6, 7
South Fork American Fork	1	Wild	5
North Fork Provo River	1	Wild	3, 6
Wasatch-Cache National Forest			
Beaver Creek (Weber)	6	Recreational	6
Provo River	20	Recreational	3, 6
Little Cottonwood Creek	8	Recreational	3
Weber River	6	Scenic	*
Boundary Creek	2	Wild	6
Thompson Creek	2	Wild	*
Middle Fork Weber River	6	Wild	*

* Segment(s) only occur in Alternatives 1 and 2

Approximately 80% of the state's water is used for irrigation. As the state's population increases, however, municipal and industrial water use will increase and irrigation needs will decrease slightly. More than one-third of Utah's total public water is supplied from this snowmelt surface water. Over time, this percentage will probably increase as more water is diverted from surface courses and treated for municipal uses as communities continue to grow. Currently, groundwater supplies about one-tenth of the total used statewide for irrigation (Utah State Water Plan, Division of Water Resources).

This section will describe the existing and reasonably foreseeable water resource development projects located on stream segments being studied. A water development by definition includes: dams, diversions, and other modifications of the waterway (WSR Act 16b). The DEIS stated that the lists of existing and reasonably foreseeable water resources development used in this analysis is based on the best available information from the Division of Water Resources, State Water Plans, personal communication, scoping comment letters, and is subject to change during this process. Comments on the DEIS provided more detailed information regarding the locations of projects, withdrawn lands, and the development of feasibility studies. These changes resulted in additions to or omissions of water development projects that are currently being analyzed. Following receipt of new information from the DEIS comments, the Forest Service determined that many of the water development projects were not reasonably foreseeable.

Existing Water Developments

There are 50 stream segments that have existing water developments downstream, upstream, or on the

segment. There are 540 miles of river with existing water resource developments of the 840 miles being studied. These segments were determined to be free-flowing and have at least one ORV with the current operation and management of these water resource projects. These existing water development projects are located on all of the five National Forests in Utah. Table 3.12.3 lists the segments with existing water developments by Forest and the location of those developments on the segments. The water developments are described as on the segment (S), upstream of the segment (U), downstream (D), or a combination of where there are multiple projects in the drainage basin.

The developments on the segment and upstream are water developments that may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Some of the river segments studied and found suitable have existing water development projects that exist above or below the segment. The segments that have maintenance access will continue to have that access and any new access will need to be requested, and guided and addressed in the Comprehensive River Management Plan. Emergency projects will need to be addressed on a case-by-case basis with the administering forest. A finding of suitability on a segment is based on existing conditions and will not remove exiting authorized operation and maintenance access to water developments.

The river management plans developed after designation will recognize the current uses and authorizations while protecting the Outstanding Remarkable Values and free flow of the river.

Table 3.12.3 Existing Water Developments on or near wild and scenic river segments (the locations of the water developments are indicated by a D, S, or U, signifying that the development is either downstream (D) of the segment, on (S) the segment, or upstream (U) of the segment).

Eligible Segment	Miles	Existing Water Developments	Location of Water Dev.	Suitable in Alt.	Miles by Alt. 3	Miles by Alt. 4	Miles by Alt. 5	Miles by Alt. 6	Miles by Alt. 7
Ashley National Forest									
Ashley Gorge Creek	10	Reservoirs on Ashley and Goose Lakes are in the upper watershed upstream of the segment, a cross-drainage diversion from Oaks Park Reservoir flows into the eligible segment, BOR, CUP-Vernal and Jensen Units are downstream of segment.	U, D	3	10	0	0	0	0
Black Canyon	10	BOR, CUP - Vernal and Jensen Units are downstream of segment.	D	3	10	0	10	0	0
Carter Creek	16	Water developments upstream affect flows, BOR withdrawals for Flaming Gorge at end of segment.	U, D	5	0	0	16	0	0
East Fork Whiterocks River	4	Dams on headwaters lakes that store irrigation water (UWCD).	U	5, 6	0	0	4	4	0
Fall Creek	6	BOR withdrawal below segment for Upper Stillwater Reservoir.	D	5	0	0	6	0	0
Garfield Creek	17	BOR, CUP- Bonneville Unit, High Lake Stabilization.	U	5, 6	0	0	17	17	0
Green River	13	Colorado River Storage Project - Flaming Gorge, BOR withdrawals along segment.	U	3, 5, 6, 7	13	0	13	13	13
Lower Dry Fork Creek	7	BOR, CUP - Vernal and Jensen Units.	D	3	7	0	0	0	0
Lower Main Sheep Creek	4	Two small diversions upstream of segment. Main Fork Sheep Creek is completely diverted into Long Park Reservoir via Sheep Creek Canal.	U	3, 5	4	0	4	0	0
Middle Main Sheep Creek	5	Existing diversions in the upstream watershed (out of the eligible segment) include the Lodgepole canal, which diverts water from the North and Middle Forks of Sheep Creek into Lodgepole canyon. This diversion is not always used or active (ANF). The Main Fork of Sheep Creek is completely diverted into Long Park Reservoir via the Sheep Creek canal (Sheep Creek Irrigation Co.).	U	3, 5	5	0	5	0	0
Middle Whiterocks River	9	Chepeta and Whiterocks Dams upstream of segment (UWCD).	U	6	0	0	0	9	0
Oweep Creek	20	BOR, Moon Lake Project.	D	5	0	0	20	0	0
Shale Creek and Tributaries	10	Fox and Crescent Lakes provide water	U	5, 6	0	0	10	10	0

Eligible Segment	Miles	Existing Water Developments	Location of Water Dev.	Suitable in Alt.	Miles by Alt. 3	Miles by Alt. 4	Miles by Alt. 5	Miles by Alt. 6	Miles by Alt. 7
		storage and controlled releases (Dry Gulch Irrig. Co.).							
South Fork Ashley Creek	15	BOR, CUP - Vernal and Jensen Units.	D	None	0	0	0	0	0
Upper Lake Fork River, including Ottoson and East Basin Creeks	35	BOR, Moon Lake Project.	U, D	5	0	0	35	0	0
Upper Rock Creek	21	BOR withdrawal below segment for Upper Stillwater Reservoir.	D	5	0	0	21	0	0
Upper Uinta River, including Gilbert Creek, Center Fork and Painter Draw	40	CUWCD projects on upstream tributaries.	U	3, 5, 6, 7	40	0	40	40	40
Upper Whiterocks River	4	Whiterocks Dam upstream of segment (UWCD).	U	5, 6	0	0	4	4	0
Upper Yellowstone Creek, including Milk Creek	33	BOR, CUP- Bonneville Unit.	D	5, 6	0	0	33	33	0
West Fork Whiterocks River	11	Diversion for irrigation (UWCD).	U, S	5, 6	0	0	11	11	0
Total Miles	**290**			**Total Miles**	**89**	**0**	**249**	**141**	**53**
Dixie National Forest									
East Fork Boulder Creek	3	Hydroelectric Project downstream of segment, pending new FERC license No.2219, Scoping comments from Garkane Energy Cooperative.	D	5	0	0	3	0	0
Total Miles	3			**Total Miles**	**0**	**0**	**3**	**0**	**0**
Fishlake National Forest									
Manning Creek	7	Manning Meadow Reservoir upstream of segment, operated by Division of Wildlife Resources for fish.	U	5, 6	0	0	7	7	0
Total Miles	7			**Total Miles**	**0**	**0**	**7**	**7**	**0**
Manti-La Sal National Forest									
Chippean and Allen Canyons	21	Two diversions, located approximately four miles from the headwaters of Allen Creek deliver water to inholdings and have capacity to dewater stream.	S	None	0	0	0	0	0
Fish Creek and Gooseberry Creek	21	BOR, Sanpete Project.	U	4, 6	0	21	0	21	0
Hammond Canyon	10	The White Mesa Ute Tribe diverts water for agricultural and culinary purposes from the stream on Tribal Land.	S	3, 6	10	0	0	10	0
Huntington Creek	19	BOR, Emery Project, Electric Lake (U),	D, U	4, 6	0	19	0	19	0

Eligible Segment	Miles	Existing Water Developments	Location of Water Dev.	Suitable in Alt.	Miles by Alt. 3	Miles by Alt. 4	Miles by Alt. 5	Miles by Alt. 6	Miles by Alt. 7
		Huntington Power Plant (D), five private reservoirs impound water at the head of this drainage. Through a series of canals and diversions, water from the top of this drainage can be diverted to Carbon, Emery, or Sanpete Counties. Huntington Cleveland Irrigation Company has multiple diversions.							
Lower Left Fork of Huntington Creek	5	Emery Project.	D	4, 6	0	5	0	5	0
Mill Creek Gorge	3	Diversions upstream of segment.	U	5	0	0	3	0	0
Miners Basin (Placer Creek)	2	Earthen impoundment on segment.	S	None	0	0	0	0	0
Roc Creek	9	Diversions upstream of segment.	U	3, 5	9	0	9	0	0
Total Miles	**90**			**Total Miles**	**19**	**45**	**12**	**55**	**0**
Uinta Portion of the Uinta-Wasatch-Cache National Forest									
Fifth Water Creek	8	CUWCD, CUP Syar Tunnel maintenance, DOI Withdrawal.	ADJ	3	8	0	0	0	0
Little Provo Deer Creek	3	BOR, Provo River CUP- Bonneville Unit.	D	3, 7	3	0	0	3	1
North Fork, Provo River	1	BOR, Provo River CUP- Bonneville Unit, Spring Development (North Fork Special Service District).	U, D	3, 6	1	0	0	1	0
Total Miles	**12**			**Total Miles**	**12**	**0**	**0**	**4**	**1**
Wasatch-Cache Portion of the Uinta-Wasatch-Cache National Forest									
Beaver Creek: Source to Forest Boundary	6	BOR, Provo River and Weber River Projects, water is diverted from the Provo Basin into Beaver Creek for storage in Echo Reservoir (Weber Basin).	S	6	0	0	0	6	0
Blacks Fork: Confluence of West Fork and East Fork to Meeks Cabin Reservoir	3	BOR, Lyman Project.	D	None	0	0	0	0	0
East Fork Blacks Fork: Headwaters to confluence with Little East Fork	10	BOR, Lyman Project.	D	5	0	0	10	0	0
East Fork Smiths Fork: Red Castle Lake to Trailhead	12	BOR, Lyman Project downstream.	D	3, 5	12	0	12	0	0
Left Fork South Fork Ogden River: Frost Canyon/Bear	5	BOR, Weber Basin Project Causey Reservoir below segment.	D	5	0	0	5	0	0

Eligible Segment	Miles	Existing Water Developments	Location of Water Dev.	Suitable in Alt.	Miles by Alt. 3	Miles by Alt. 4	Miles by Alt. 5	Miles by Alt. 6	Miles by Alt. 7
Canyon Confluence to Causey									
Little Bear Creek: Little Bear Spring to Mouth	1	One small diversion for USU Forestry camp.	S	3, 6	1	0	0	1	0
Little Cottonwood Creek: Source to Murray City Diversion	8	Salt Lake City, Department of Public Utilities, Metropolitan Water District, and Sandy City operate upstream storage reservoirs include Cecret, White Pine, and Red Pine Lake, diversions on segment for ski resorts, Murray Diversion downstream of segment.	U, S, D	3	8	0	0	0	0
Little East Fork: Source to Mouth	9	BOR, Lyman Project.	D	3, 5	9	0	9	0	0
Logan River: Confluence with Beaver Creek to Bridge at Guinavah-Malibu Campground	19	Small diversions on segment, Dam 1, 2, 3 downstream.	D	3, 6	19	0	0	19	0
Main Fork Weber River: Source to Forest Boundary	6	BOR, Provo River, Weber basin, Weber River Projects 4 small reservoirs with dams. Insignificant effect on stream flows.	D S	None	0	0	0	0	0
Middle Fork Beaver Creek: Beaver Lake to Confluence with East Fork Beaver Creek	11	One small diversion downstream of segment.	D	3, 5, 6	11	0	11	11	0
Middle Fork Weber River: Source to Forest Boundary	6	BOR, Provo River, Weber basin, Weber River Projects.	D	5	0	0	6	0	0
Provo River: Trial Lake to U35 Bridge	20	Provo River CUP- Bonneville Unit -Dams above segment.	U, S	3, 6	20	0	0	20	0
Red Butte Creek: Source to Red Butte Reservoir	3	CUWCD, Red Butte Reservoir downstream of segment.	D	None	0	0	0	0	0
Thompson Creek: Source to Hoop Lake Diversion	5	Hoop Lake Reservoir, Diversion below segment.	D	5	0	0	5	0	0
West Fork Beaver Creek: Source to Forest Boundary	10	Irrigation diversions below Forest boundary.	D	3, 5, 6	10	0	10	10	0
Willard Creek: Source to Forest Boundary	4	Diversions downstream of segment.	D	3, 5	4	0	4	0	0
Total Miles	**138**			**Total Miles**	**94**	**0**	**72**	**67**	**0**
Forests Total Miles	**540**			**Forests Total Miles**	**214**	**45**	**345**	**276**	**54**

Table 3.12.3 shows that the Ashley National Forest has 20 segments with approximately 290 miles of stream that are related to existing water developments. There are approximately 147 miles of stream that have water developments downstream of the segment. There are approximately 42 miles of stream that have existing water developments on the segment. There are approximately 85 miles of stream that only have existing water developments upstream of the segment. There are approximately 26 miles of stream that has existing water developments upstream and downstream of the segment.

Table 3.12.3 shows that the Dixie National Forest has one segment with approximately 3 miles of stream have existing water developments downstream from the segment. This project is a hydroelectric project and is not on the segment, but has a new application in to FERC for license renewal.

Table 3.12.3 shows that the Fishlake National Forest has one segment with approximately 7 miles of stream have existing water developments upstream of the segment. There is a dam and reservoir upstream that is administered by the Division of Wildlife for fisheries.

Table 3.12.3 shows that the Manti-La Sal National Forest has eight segments with approximately 90 miles of stream that are related to existing water developments. There are approximately 26 miles of stream that only have existing water developments downstream of the segment. There are approximately 19 miles of stream with existing water developments downstream and upstream of the segment. There are approximately 33 miles of stream with existing water developments on the segment. There are approximately 12 miles of stream with existing water developments upstream of the segment.

Table 3.12.3 shows that the Uinta National Forest has 3 segments with approximately 12 miles of stream that are related to existing water developments. There are 8 miles of stream that has an existing water development adjacent to segment (When Syar Tunnel is maintained water is diverted into Fifth Water for short periods of time). There are 4 miles of stream with an existing water development downstream of the segment.

Table 3.12.3 shows that the Wasatch-Cache National Forest has 17 segments with approximately 138 miles of stream that are related to existing water developments. There are approximately 97 miles of stream that have existing water developments downstream of the segment. There are 6 miles of stream that have existing water developments on the segment (low dams at headwaters lakes) and downstream of segment. There are approximately 6 miles of stream that have existing water developments on the segment (one diversion, one import). There are approximately 20 miles of stream that has an existing water developments on the segment (water is exported from the Duchesne River and imported into the Provo River), and (CUP dams and reservoirs) upstream of the segment. There are approximately 8 miles of stream that have existing water developments on the segment (water is added to flow from Wasatch Drain Tunnel and diverted for use at ski areas), and (dams reservoirs) upstream of the segment.

Reasonably Foreseeable Future Water Developments

This discussion of potential water developments is related to those reasonably foreseeable future projects which are those Federal or Non-Federal projects not yet undertaken that are based on information presented to the Wild and Scenic Rivers Interdisciplinary Team which includes: completed and approved plans, project documents that are in the final stages of the NEPA process (e.g., final or draft environmental impact statement or an environmental assessment), or projects that are documented as ready to implement. Where no scoping or DEIS comments were received during the comment periods by the Wild and Scenic Rivers Interdisciplinary Team related to specific water development projects the decision makers concluded that projects were not reasonably foreseeable. Table 3.12.4 provides information considered and rationale for determining if potential water developments discussed in scoping and DEIS comments are reasonably foreseeable future water developments. Table 3.12.5 provides a list of reasonably foreseeable water development projects that are analyzed in the FEIS.

The location of water projects were located from references in the individual stream segment's Appendix A – Suitability Evaluation Reports, scoping letters, topographic maps, limited withdrawal data from the Bureau of Reclamation, the Narrows Project EIS, withdrawal reports from the Central Utah Water Conservancy District, the Wyoming State Water Plan, the Colorado State Water Plan, the Utah State Water Plans for each basin, and personal communication with water user groups. See Table 3.12.3 in the Existing Water Developments section for existing water developments and Table 3.12.4 in the Potential Water Developments section which lists the potential water developments and locations upstream, downstream, or within the segment.

Water development projects by definition include: dams, diversions, and other modifications of the waterway (WSR Act 16b). These potential water development projects are located on the Ashley, Manti-La Sal, and Wasatch-Cache National Forests. The Dixie, Fishlake, and Uinta National Forests do not have any potential water developments planned on Wild and Scenic River segments. Of the 86 segments, three have some type of reasonably foreseeable water developments downstream, upstream, or on the segment. There are approximately 45 miles of river affected by reasonably foreseeable water resource developments of the 840 miles being studied.

Table 3.12.4 lists the segments with existing and potential water developments by Forest and the location of those developments on the segments. It also includes a description of whether the water development is reasonably foreseeable. The water developments are described as on the segment (S), upstream of the segment (U), downstream (D), or a combination of where there are multiple projects in the drainage basin. The developments are water developments that may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage. To summarize the existing and potential water developments related to Wild and Scenic stream segments on the five National Forests in Utah: the Ashley National Forest has the most existing and potential water development sites of all of the Forests, the Wasatch-Cache is second, followed by the Manti-La Sal National Forest. However, the Manti-La Sal has the most reasonably foreseeable water developments. The Dixie, Fishlake and Uinta National Forests do not have any potential water developments only existing ones.

Withdrawn Lands and Potential Water Developments

The term "withdrawal" means withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than "property" governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472) from one department, bureau or agency to another department, bureau or agency (http://www.blm.gov/flpma/FLPMA.pdf).

The Bureau of Reclamation's general authority to withdraw lands comes from Section 3 of the Reclamation Act of 1902:

> *The Secretary of the Interior shall, before giving the public notice provided for in Section 4 of this act, withdraw from public entry the lands required for any irrigation works contemplated under the provisions of this act…*

Over the years, this authority has been clarified a number of times as noted in the Bureau of

Reclamation's Blue Books which contain and explain all of the laws pertaining to Reclamation activities and related administrative decisions, court decisions, and the like. A 1909 decision states:

> *The discretion of the Secretary of the Interior in making first-form withdrawals of lands cannot be questioned, and no application to enter can be allowed on the ground that the land is not needed (Ernest Woodcock, 38 L.D. 349,; see BOR Blue Book, Vol. 1, p. 38 Note 2.)*

Particular guidance regarding National Forests is as follows:

> *Reclamation withdrawals within the national forests are dominant, but until needed by the Reclamation Service, the lands will remain for administrative and protection purposes under control and direction of the Forest Service (Departmental Decision, February 27, 1909; see BOR Blue Book Vol. 1, p. 46, Note 33).*

There are 23 segments that have been identified to have existing Bureau of Reclamation projects which are mostly upstream or downstream of the segments, however there are some in the Provo River drainage that are on the segment. There is one project with a Department of Interior withdrawal for a Central Utah Project, there are existing withdrawals for all of these existing water projects, however the extent and intent of these withdrawn project areas is not known. There is one instance of withdrawn lands associated with the proposed Narrows Project on the Manti-La Sal National Forest. These withdrawals are cited in Table 3.12.3 for the existing project withdrawals and Table 3.12.4 for the potential projects with withdrawn lands.

Table 3.12.4. Description of segments with existing and potential water developments (the locations of the water developments are indicated by a D, S, or U, signifying that the development is either downstream (D) of the segment, on (S) the segment, or upstream (U) of the segment).

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
Ashley National Forest										
Ashley Gorge Creek	10	3	No	Existing	Reservoirs on Ashley and Goose Lakes are in the upper watershed upstream of the segment, a cross-drainage diversion from Oaks Park Reservoir flows into the eligible segment, BOR, CUP-Vernal and Jensen Units are downstream of segment.	U, D	Bureau of Reclamation, UWCD	Scoping: BOR Letter #224, Table 1., Uintah Water Conservancy District #71 DEIS: UWCD UTD 120	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #71 describes the water used by segments in Uintah County and all the reasons they think that these WSR segments are not suitable, no site specific information regarding operation of locations. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Existing development. There are no proposed projects related to this segment.
Black Canyon	10	3, 5	No	Existing	Central Utah Project - Vernal and Jensen Units	D	Bureau of Reclamation, UWCD	Scoping: BOR Letter #224, Table 1., Uintah Water Conservancy District #71 DEIS: UWCD UTD120	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #71 describes the water used by segments in Uintah County and all the reasons they think that these WSR segments are not suitable, no site specific information regarding operation of locations. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Existing development. There are no proposed projects related to this segment.
Cart Creek	10	5	Yes, at inflow to Flaming Gorge Reservoir	Existing	Colorado River Compact-BOR withdrawals for Flaming Gorge at end of segment	D	Sweetwater County Conservation District	Scoping: SCCD 165 DEIS: SCCD UTD342, Wyoming Collective Governments (Sweetwater, Lincoln, and Uinta Counties, and the Sweetwater County, Lincoln County, and Uinta County Conservation Districts) UTD232	Scoping: SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study may directly affect the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights may directly affect flows of water in Utah on the Green River. DEIS: SCCD UTD 342, SCCD is appealing the WSR Teams rejection of MOU for cooperating status based on their water management issues of a trans-State water compact qualify SCCD and Wyoming as cooperators, and also because the WSRA protection may affect future Wyoming water projects. Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	Existing development. There are no proposed projects related to this segment.
Carter Creek	16	5	Yes, at inflow to Flaming Gorge Reservoir	Existing	Colorado River Compact-water developments upstream affect flows, BOR withdrawals for Flaming Gorge at end of segment	U, D	Sweetwater County Conservation District	Scoping: SCCD 165 DEIS: SCCD UTD342, Wyoming Collective Governments (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation Districts) UTD232	Scoping: SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study may directly affect the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights may directly affect flows of water in Utah on the Green River. DEIS: SCCD UTD 342, SCCD is appealing the WSR Teams rejection of MOU for cooperating status based on their water management issues of a trans-State water compact qualify SCCD and Wyoming as cooperators, and also because the WSRA protection may affect future Wyoming water projects. Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	Existing development. There are no proposed projects related to this segment.
East Fork Whiterocks	4	5, 6	No	Existing	Uintah Water Conservancy District, Ouray Park	U	Uintah Water Conservancy	Scoping: UWCD 71, OPIC 157, Duchesne	Scoping: UWCD states that the Ouray Park Irrigation Co. releases water from the lake for downstream irrigation needs. The water from these two lakes is released	Existing development. There are no specific plans or proposals

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
					Irrigation Co.-Dams on headwaters lakes that store irrigation water		District	County #19,#124 DEIS: UWCD UTD 120	during the irrigation season and delivered to either Pelican Lake via Cottonwood Reservoir or to Brough Reservoir via the Whiterocks-Ouray Valley Canal. OPIC 157 states that they release water for irrigation downstream and are concerned that designation will impact their water rights since they regulate flows (dry during parts of the year). SERS states that entire Whiterocks system is proposed to be developed downstream in the UBRP. DC 319, #124, opposes designations outside Wilderness areas due to impact on long-term water development. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge	developed for the Whiterocks drainage, there has been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however a BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Green River	13	3, 5, 6, 7	Yes, entire length	Existing	Colorado River Storage - Flaming Gorge Dam and Reservoir upstream of segment, BOR withdrawals along entire segment	U	BOR, Sweetwater County Conservation District	Scoping: BOR Letter #224, Table 1., SCCD 165 DEIS: Sweetwater County Conservation District UTD342, DOI UTD96, Wyoming Local Governments UTD 232	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study directly affects the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights may directly affect flows of water in Utah on the Green River. DEIS: SWCCD Letter UTD342 is concerned about the segments related to Green River and Bear River and possible impacts that it will have on downstream users. Wyoming does not use all of its water allocated in the compact to develop water rights using storage and diversion facilities. There are proposals to sell the Wyoming water in the Green River Basin, which would also include construction of storage and diversion facilities (no specific info regarding proposals or locations of these projects). Projects identified in the Bear River and Green River Water Plans are identified in DEIS Table 3.12.4. Letter did not state which projects they were concerned about. DOI UTD96, discusses how the Flaming Gorge Dam is operated. Wyoming Collective Governments UTD232, state that the Forest Service's administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans.	Existing development. SCCD states that there are proposals to sell the Wyoming water in the Green River Basin, which would also involve construction of storage and diversion facilities. There was no evidence provided to support the construction and storage diversion facilities as a reasonably foreseeable water development.
Lower Dry Fork	7	3	No	Potential	East Cottonwood-this reservoir would be located on Dry Fork Creek at the south end of Brownie Canyon, Blanchett Park-this reservoir site is located 5 miles upstream of the segment, topography limits development of this site	U	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200	Scoping: Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	There was no evidence provided to support any proposed project as reasonably foreseeable.
Lower Dry Fork	7	3	No	Existing	Central Utah Project - Vernal and Jensen Units, projects are downstream of segment	D	Bureau of Reclamation, UWCD	Scoping: BOR Letter #224, Table 1. DEIS: UWCD UTD 120	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge, UWCD states that the FS found this segment eligible while the BLM did not find the stream on its land eligible.	Existing development.
Lower Main Sheep Creek	4	3, 5	Yes, at inflow to Flaming Gorge Reservoir	Existing	Colorado River Compact-two small diversions upstream of segment, Main Fork Sheep creek is diverted into Long Park reservoir via Sheep Creek Canal	U	Sweetwater County Conservation District	Scoping: SCCD 165 DEIS: SCCD UTD342, Wyoming Collective Governments (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation	Scoping: SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study directly affect the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights may directly affect flows of water in Utah on the Green River. DEIS: SWCCD Letter UTD342 is concerned about the segments related to Green	There was no evidence provided to support any proposed project as reasonably foreseeable.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
								Districts) UTD232	River and Bear River and possible impacts that it will have on downstream users. Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	
Middle Main Sheep Creek	5	3, 5	Yes, at inflow to Flaming Gorge Reservoir	Potential	Hickerson Park, T02N R18E Section 19, Heights of 60 ft and 96 ft, with capacities of 4,000 ac-ft and 8,997 ac-ft respectively. Dam would be on Sheep Creek 6 miles above proposed W&S section. This proposed reservoir is located west of existing Long Park Reservoir and was investigated at the same time. The Long Park site was chosen over this site due to its larger capacity of 14,300 ac-ft. This reservoir could be useful if leaks reappear in Long Park Reservoir.	U	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: Wyoming Local Governments UTD 232 (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation Districts), State of Utah, UTD200	Scoping: Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, provided the same information as scoping.	There was no evidence provided to support any proposed project as reasonably foreseeable.
Middle Main Sheep Creek	5	3, 5	Yes, at inflow to Flaming Gorge Reservoir	Existing	Colorado River Compact-segment flows into Flaming Gorge Reservoir. Existing diversions in the upstream watershed (upstream of the segment) include the Lodgepole Canal, which diverts water from the North and Middle Forks Sheep Creek into Lodgepole Canyon. This diversion is not always active (ANF). The Main Fork of Sheep Creek is completely diverted into Long Park Reservoir via Sheep Creek Canal (Sheep Creek Irrigation Co.).	U	Sweetwater County Conservation District	Scoping: SCCD 165 DEIS: SCCD UTD342	Scoping: SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study directly affect the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights directly affect flows of water in Utah on the Green River. DEIS: SCCD UTD 342, SCCD is appealing the WSR Teams rejection of MOU for cooperating status. This letter outlines their argument for wanting the MOU based on their water management issues of a trans-State water compact qualify SCCD and Wyoming as cooperators, and also because the WSRA protection may affect future Wyoming water projects.	Existing development. There are no proposed projects related to this segment.
Middle Whiterocks	9	6	No	Existing	Chepeta and Whiterocks Dams upstream of segment (UWCD)	U	Uintah Water Conservancy District	Scoping: UWCD 71, OPIC 157 DEIS: UWCD UTD 120	Scoping: UWCD manages flow from Chepeta Reservoir through segment for downstream users. OPIC 157, OPIC delivers water from two reservoirs through this segment for OPIC and from Chepeta Lake for White Rocks Irrigation Co., flows in these segments are regulated. The water from these two lakes is released during the irrigation season and delivered to either Pelican Lake via Cottonwood Reservoir or to Brough Reservoir via the Whiterocks-Ouray Valley Canal. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge	Existing Development. There are no specific plans or proposals developed for the Whiterocks drainage, there has been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Middle Whiterocks	9	6	No	Potential	UBRP-Chepeta Reservoir and Cliff Lake Reservoir, proposed Whiterocks	D	Uintah Water Conservancy District, Utah	Scoping: Duchesne County #19, #124, State of Utah, 74 and	Scoping: DC #19, #124, opposes designations outside Wilderness areas due to impact on long-term water development. SERS states that entire Whiterocks system is proposed to be developed downstream in the UBRP. Utah's proposed	There are no specific plans or proposals developed for the Whiterocks drainage, there has

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
					Reservoir (swiger alignment-Utah), proposed Whiterocks Reservoir (Utah). A recommended reservoir is mentioned in the Utah State water Plan for the Uintah Basin (1999), but is near the town of Whiterocks, several miles downstream of the eligible segment		Division of Water Resources	158 DEIS: UWCD UTD 120, Utah UTD 200	reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however a BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Pipe Creek	6	5	Yes, at inflow to Flaming Gorge Reservoir	Existing	Colorado River Compact-segment flows into Flaming Gorge Reservoir.	D	Sweetwater County Conservation District	Scoping: SCCD 165 DEIS: SCCD UTD342, Wyoming Collective Governments (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation Districts) UTD232	Scoping: SCCD 165, this segment is in or flows into Sweetwater County Wyoming and decisions made in this study directly affect the SCCD's management of the stream. SCCD wants to be a cooperating agency in this study. The Colorado River System, including the Green River and tributaries; waters are fully committed to downstream users. The State of Colorado and conservancy districts are developing storage on the Yampa and the Green rivers to meet Colorado's water needs and ensure Colorado River Compact water rights. These planned projects and existing water rights may directly affect flows of water in Utah on the Green River. DEIS: SCCD UTD 342, SCCD is appealing the WSR Teams rejection of MOU for cooperating status based on their water management issues of a trans-State water compact qualify SCCD and Wyoming as cooperators, and also because the WSRA protection may affect future Wyoming water projects. Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	Existing Development. There was no evidence provided to support any proposed project as reasonably foreseeable.
Reader Creek	6	3, 5, 6	No	Existing	UBRP (Whiterocks system)-Reader Lake reservoir	U	Uintah Water Conservancy District	Scoping: UWCD 71, DCWCD 55 DEIS: UWCD UTD 120	Scoping: UWCD 71, manages flow from Reader Lakes down through segment for downstream users, SERS stated that the entire Whiterocks drainage was identified in the UBRP (Whiterocks system). DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Existing development. There are no proposed projects related to this segment.
Shale Creek and Tributaries	10	5, 6	No	Existing	Fox and Crescent Lakes provide water storage and controlled releases (Dry Gulch Irrig. Co.)	U	Dry Gulch Irrigation Co.,	Scoping: DGIC #123, Duchesne County #124, DCWCD 55 DEIS: Duchesne County Commission UTD94, DGIC UTD199	Scoping: DCWCD #124, DGIC #123 owns filings on Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Fox and Crescent Lake have a Colorado Ditch Bill easement. DC #124, opposes designations outside Wilderness areas due to impact on long-term water development. DCWCD 55, 2006 Colorado Ditch Bill easements for Fox and Crescent Lakes, reservoirs at headwaters. Flows below these reservoirs are regulated. MLWU 164, MLWU operates and maintains many storage facilities on this segment. These reservoirs dry dam October through June in order to store water for owners. These reservoirs are in the High Lake Stabilization project of the UBRP. DEIS: DGIC UTD 199, page 3-163, Table 3.12.3, Existing Water Developments, Crescent and Fox Lake Dams/Res, could be affected by both the Upper Uinta and the Shale Creek segments. We are concerned about maintaining our right to access the dams for operation and maintenance, including the embankments, outlet works, spillways, toe drains, etc and the right to store and release water for irrigation purposes may be affected by designation into the WSR system.	Existing development. There are no proposed projects related to this segment.
South Fork Ashley Creek	15	None	No	Potential	Dry Fork Twins, Harmston Park, Reynolds Lake Reservoir, Trout Creek Reservoir	U	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200, UWCD UTD 120	Scoping: Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: State of Utah, UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable. UWCD UTD 120, qualitative description of segments from local knowledge.	There was no evidence provided to support any proposed project as reasonably foreseeable.
South Fork Ashley Creek	15	None	No	Existing	Central Utah Project - Vernal and Jensen Units	D	Bureau of Reclamation, UWCD	Scoping: BOR Letter #224, Table 1., Uintah Water	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #71 describes the water used by segments in Uintah County and all the reasons they think that these WSR segments are not	Existing development. There are no proposed projects related to this segment.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
								Conservancy District #71 DEIS: None	suitable, no site specific information regarding operation of locations	
Upper Whiterocks	4	5, 6	No	Existing	Uintah Water Conservancy District, Ouray Park Irrigation Co.-Whiterocks Lake	U	Uintah Water Conservancy District	Scoping: UWCD 71, OPIC 157, Duchesne County #19,#124 DEIS: UWCD UTD 120	Scoping: UWCD states that the Ouray Park Irrigation Co. releases water from the lake for downstream irrigation needs. The water from these two lakes is released during the irrigation season and delivered to either Pelican Lake via Cottonwood Reservoir or to Brough Reservoir via the Whiterocks-Ouray Valley Canal. OPIC 157 states that they release water for irrigation downstream and are concerned that designation will impact their water rights since they regulate flows (dry during parts of the year). SERS states that entire Whiterocks system is proposed to be developed downstream in the UBRP. DC 319, #124, opposes designations outside Wilderness areas due to impact on long-term water development. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Existing development. There are no specific plans or proposals developed for the Whiterocks drainage, there has been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Upper Lake Fork River, including East Basin Creek, Ottoson Creek	35	5	No	Existing	Uinta Basin Replacement Project-High Lake Stabilization, Moon Lake Project, Moon Lake Reservoir High lakes stabilization upstream of mainstem Lake Fork only includes Clements Reservoir.	U, D	High Lake Stabilization (UBRP) Central Utah Water Conservancy District, Duchesne County Water Conservancy District, Uintah Water Conservancy District, Dry Gulch Irrigation Co.	Scoping: BOR Letter #224, Table 1., CUWCD Letter #142, BOR Letter #208, DCWCD #55, Moon Lake Water Users #164, DGIC#123 DEIS: DCWCD UTD121, MLWU UTD251, UTD199 Dry Gulch Irrigation Co.,	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 and #208 states that the High Lake Stabilization project occurs on the Lake Fork system and the Yellowstone River, Letter #55 describes that there are existing reservoirs on Garfield Creek operated by Moon Lake Water Users, Letter #164 MLWUs operate reservoirs on Upper Lake Fork, Yellowstone, Garfield Creek and Uinta River, no detailed information was provided by any of these agencies. DGIC#123, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. These reservoirs dry dam October through June in order to store water for owners. Fox and Crescent Lake have a Colorado Ditch Bill easement. DEIS: DCWCD UTD121, listed existing projects that are in DEIS Table 3.12.3 and 4, did add information regarding the Uinta River UBRP details that were new since DEIS, this project is in Table 3.12.4 but more details can be added. MLWU UTD 251 states that WSR designation will hamper enlargement of Moon Lake Dam, and adversely affect operation of Fox and Crescent Lakes (private reservoirs), but did not say how. UTD199 DGIC uses water from this segment, MLWU manage upstream reservoirs that are a part of the UBRP lake stabilization project in progress, and DGIC is interested in the development of the Upper Uinta Reservoir as part of the UBRP (Farson and CH2MHill study). DGIC is concerned with access and maintenance of existing developments.	Existing development. Work on selected High Lake Stabilization is in progress and should be completed in 4-5 years. This will help to restore natural flows in outlet streams below these lakes. See DOI letter of 2/8/08.
Upper Lake Fork, Oweep Creek	20	5	No	Existing	Uinta Basin Replacement Project-High Lake Stabilization, Moon Lake Project, Moon Lake Reservoir. High lakes stabilization upstream of mainstem Lake Fork only includes Clements Reservoir.	U, D	High Lake Stabilization (UBRP) Central Utah Water Conservancy District, Duchesne County Water Conservancy District, Uintah Water Conservancy District, Dry Gulch Irrigation Co.	Scoping: BOR Letter #224, Table 1., CUWCD Letter #142, BOR Letter #208, DCWCD #55, Moon Lake Water Users #164, DGIC#123 DEIS: DCWCD UTD121, MLWU UTD251, UTD199 Dry Gulch Irrigation Co.,	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 and #208 states that the High Lake Stabilization project occurs on the Lake Fork system and the Yellowstone River, Letter #55 describes that there are existing reservoirs on Garfield Creek operated by Moon Lake Water Users, Letter #164 MLWUs operate reservoirs on Upper Lake Fork, Yellowstone, Garfield Creek and Uinta River, no detailed information was provided by any of these agencies. MLWU 164, MLWU operates and maintains many storage facilities on this segment. These reservoirs are in the High Lake Stabilization project of the UBRP. These reservoirs dry dam October through June in order to store water for owners. This segment is one of the main water sources for storage facilities, regulate flow in this segment for downstream users. DGIC#123, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. These reservoirs dry dam October through June in order to store water for owners. Fox and Crescent Lake have a Colorado Ditch Bill easement.	Existing development. Work on selected High Lake Stabilization is in progress and should be completed in 4-5 years. This will help to restore natural flows in outlet streams below these lakes. See DOI letter of 2/8/08.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
									DEIS: DCWCD UTD121, listed existing projects that are in DEIS Table 3.12.3 and 4, did add information regarding the Uinta River UBRP details that were new since DEIS, this project is in Table 3.12.4 but more details can be added. MLWU UTD 251 states that WSR designation will hamper enlargement of Moon Lake Dam, and adversely affect operation of Fox and Crescent Lakes (private reservoirs), but did not say how. UTD199 DGIC uses water from this segment, MLWU manage upstream reservoirs that are a part of the UBRP lake stabilization project in progress, DGIC is interested in the development of the Upper Uinta Reservoir as part of the UBRP (Farson and CH2MHill study). DGIC is concerned with access and maintenance of existing developments.	
Upper Uinta	40	3, 5, 6, 7	Yes (BOR) 4.5 miles upstream from wilderness boundary? Withdrawal downstream	Existing	CUWCD projects on upstream tributaries, Lake Atwood Reservoir is not on segment, but Atwood Creek drains into the Upper Uinta River about 3 miles upstream from the wilderness boundary. Upper and Lower Chain Lake Reservoirs drain down Krebs Creek to the mainstem Uinta River, but the confluence is at the lower boundary of the eligible segment. Fox and Crescent Reservoirs are in the upstream headwaters of the Uinta River.	U	CUWCD and DWCD, Uintah Water Conservancy District, Dry Gulch Irrigation Co. , Moon Lake Water Users	Scoping: CUWCD 142, DGIC #123, Duchesne County #124, DCWCD 55, MLWU 164 DEIS: Duchesne County Commission UTD94, DOI UTD95, DOI UTD 96, DGIC UTD199, MLWU UTD 251	Scoping: DGIC#123, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. Fox and Crescent Lake have a Colorado Ditch Bill easement. DC #124, opposes designations outside Wilderness areas due to impact on long-term water development. DCWCD 55, 2006 Colorado Ditch Bill easements for Fox and Crescent Lakes, reservoirs at headwaters. Flows below these reservoirs are regulated. MLWU 164, MLWU operates and maintains many storage facilities on this segment. These reservoirs dry dam October through June in order to store water for owners. These reservoirs are in the High Lake Stabilization project of the UBRP. DEIS: DGIC UTD 199, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. Fox and Crescent Lake have a Colorado Ditch Bill easement. DC UTD 94, opposes designations outside Wilderness areas due to impact on long-term water development. There are 2006 Colorado Ditch Bill easements for Fox and Crescent Lakes, reservoirs at headwaters. Flows below these reservoirs are regulated. MLWU UTD 251, MLWU operates and maintains many storage facilities on this segment. These reservoirs dry dam October through June in order to store water for owners. These reservoirs are in the High Lake Stabilization project of the UBRP.	There are no specific plans or proposals developed for the existing Upper Uinta water developments.
Upper Uinta	40	3, 5, 6, 7	Yes (BOR) 4.5 miles upstream from wilderness boundary? Withdrawal downstream	Potential	UBRP-Upper Uinta Reservoir from Franson and CH2MHill for the CUWCD and DWCD. The CUWCD is also studying potential reservoirs within the Uinta River Basin as part of the Uinta River Basin/Green River Water Development Project in the Atwood Basin, Upper and Lower Chain Lakes, and Krebs Creek, and on the Uinta River near the Wilderness Boundary.	D	CUWCD and DWCD, Uintah Water Conservancy District, Dry Gulch Irrigation Co. , Moon Lake Water Users	Scoping: CUWCD 142, DGIC #123, Duchesne County #124, DCWCD 55, MLWU 164 DEIS: Duchesne County Commission UTD94, DOI UTD95, DOI UTD 96, DGIC UTD199, MLWU UTD 251, CUWCD UTD 332	Scoping: CUWCD 142, CUWCD, DCWCD and UWCD have signed an MOU to prepare study "Water Development Prospectus: Developing Water from both the Uinta and the Green Rivers within the Uinta Basin." DEIS: DOI UTD95, 96, DOI withdrawals are documented correctly in the DEIS, however withdrawals downstream are actively being studied for possible development of an irrigation reservoir by the CUWCD and DWCD. While the Upper Uinta River segment does not include this southern withdrawal area, it is close enough to warrant a more thorough discussion of potential conflicts in the FEIS. All of the agencies submitted the study titled, Conceptual Analysis of Uinta and Green River Water Development Projects, prepared by Franson and CH2MHill Study discusses the availability of water for development.	There are no specific plans or proposals developed for the Upper Uinta Reservoir, which is located downstream from the WSR segment. There are has been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however a BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Upper Yellowstone and Garfield Creek	33	5, 6	No	Existing	UBRP-Fivepoint, Superior, Drift, Bluebell reservoirs	U	Moon Lake Water Users	Scoping: MLWU 164, DCWCD 55, Duchesne County #19, #124	Scoping: MLWU 164, MLWU operates and maintains many storage facilities on this segment. These reservoirs are in the High Lake Stabilization project of the UBRP. This segment is one of the main water sources for storage facilities, regulate flow in this segment for downstream users. DCWCD 55, these reservoirs dry dam October through June in order to store water for owners and is part of the UBRP High Lake Stabilization project. DC #19, #124, opposes designations outside Wilderness areas due to impact on long-term water development. DEIS: UBRP plans to relocate irrigation storage from certain lakes on the Upper Yellowstone and Garfield Creek drainages and stabilize lakes at low hazard level.	Existing development. Work on selected High Lake Stabilization is in progress and should be completed in 4-5 years. This will help to restore natural flows in outlet streams below these lakes. See DOI letter of 2/8/08.

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									This would return natural flows below the lakes and improve natural flows in Upper Yellowstone/Garfield.	
Upper Yellowstone and Garfield Creek	33	5, 6	No	Potential	Upper Yellowstone B, T02N R04W Section 10, 134 ft height, 6,440 ac-ft capacity. This on-stream dam site is located 1.5 miles north of the Yellowstone Ranch. The dam was proposed to be constructed of roller compacted concrete or earthfill. Nine canals would furnish irrigation water for 13,100 acres of Indian land and 30,400 of non-Indian land. The reservoir would be located on Forest Service land and would inundate the Riverview Campground.	D	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200	Scoping: Scoping Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks. DEIS: DEIS Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks.	There are no proposed projects related to this segment. There was no evidence provided to support any proposed project as reasonably foreseeable.
Upper Yellowstone and Garfield Creek	33	5, 6	No	Potential	Upper Yellowstone C, T02N R04W Section 15, 275 ft height, 61,350 ac-ft capacity. This on-stream dam site is located 0.75 miles north of the Yellowstone Ranch. The dam was proposed to be constructed of roller compacted concrete or earthfill. Nine canals would furnish irrigation water for 13,100 acres of Indian land and 30,400 of non-Indian land. The reservoir would be located on Forest Service land and inundate both the Swift Creek and Riverview Campgrounds. This reservoir would be located entirely on federal land, backing water up into the proposed Wild and Scenic River section.	D	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200	Scoping: Scoping Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks. DEIS: DEIS Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks.	There are no proposed projects related to this segment. There was no evidence provided to support any proposed project as reasonably foreseeable.
Upper Yellowstone and Garfield Creek	33	5, 6	No	Potential	Upper Yellowstone E, T02N R04W Section 15, 330 ft height, 101,040 ac-ft capacity. This on-stream dam site is located 0.25 miles north of the Yellowstone Ranch. The dam was proposed to be constructed of roller compacted concrete or earthfill. Nine canals would furnish irrigation water for 13,700 acres of Indian land and 30,400 of non-Indian land. The reservoir would be located on Forest Service land and inundate Swift Creek, Riverview and Reservoir Campgrounds. This proposed reservoir	D	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200	Scoping: Scoping Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks. DEIS: DEIS Comments from the Utah Div. of Water Resources, Preliminary site geology was examined in the summer of 1993 by CH2M Hill/Horrocks.	There are no proposed projects related to this segment. There was no evidence provided to support any proposed project as reasonably foreseeable.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
					would be located entirely on federal land, backing water up into the proposed Wild and Scenic River section.					
Garfield Creek	17	5, 6	No	Existing	BOR, CUP- Bonneville Unit, High Lake Stabilization, Uinta Basin Replacement Project- Moon lake is in the Lake Fork drainage, not applicable to Yellowstone and Garfield segments	U	High Lake Stabilization (UBRP) Central Utah Water Conservancy District, Duchesne County Water Conservancy District, Uintah Water Conservancy District, Dry Gulch Irrigation Co.	Scoping: BOR Letter #224, Table 1., CUWCD Letter #142, BOR Letter #208, DCWCD #55, Moon Lake Water Users #164, DGIC#123 DEIS: None	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 and #208 states that the High Lake Stabilization project occurs on the Lake Fork system and the Yellowstone River, Letter #55 describes that there are existing reservoirs on Garfield Creek operated by Moon Lake Water Users, Letter #164 MLWUs operate reservoirs on Upper Lake Fork, Yellowstone, Garfield Creek and Uinta River, no detailed information was provided by any of these agencies. DGIC#123, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. These reservoirs dry dam October through June in order to store water for owners. Fox and Crescent Lake have a Colorado Ditch Bill easement.	Existing development. There are no proposed projects related to this segment.
Upper Yellowstone including Milk Creek	33	5, 6	No	Existing	Central Utah Project - Bonneville Unit, State of Utah proposed reservoirs- Uinta Basin Replacement Project-High Lake Stabilization, Upper Yellowstone B,C,E High Lakes Stabilization work is upstream of segment.	D, U	High Lake Stabilization (UBRP) Central Utah Water Conservancy District, Duchesne County Water Conservancy District, Uintah Water Conservancy District, Moon Lake Water Users, Dry Gulch Irrigation Co., State of Utah	Scoping: BOR Letter #224, Table 1., CUWCD Letter #142, BOR Letter #208, DCWCD #55, Moon Lake Water Users #164, DGIC#123, Duchesne County #124, State of Utah 74, 158 DEIS: UTD199 Dry Gulch Irrigation Co.,	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 and #208 states that the High Lake Stabilization project occurs on the Lake Fork system and the Yellowstone River, Letter #55 describes that there are existing reservoirs on Garfield Creek operated by Moon Lake Water Users, Letter #164 MLWUs operate reservoirs on Upper Lake Fork, Yellowstone, Garfield Creek and Uinta River, no detailed information was provided by any of these agencies. DGIC#123, DGIC is a member of the MLWU and own storage facilities on Upper Lake Fork River, Upper Yellowstone Creek and Garfield Creek. These reservoirs are in the process of being stabilized under the direction of the CUWCD. DGIC owns filings on the Uinta River and Shale Creek and its tributaries and have the following reservoirs on those river systems: Fox Lake, Crescent Lake, Three Chain Lakes and Atwood Lake. Fox and Crescent Lake have a Colorado Ditch Bill easement. DC #124, opposes designations outside Wilderness areas due suspected impact on long-term water development. MLWU 164, MLWU operates and maintains many storage facilities on this segment. These reservoirs are in the High Lake Stabilization project of the UBRP. This segment is one of the main water sources for storage facilities, regulate flow in this segment for downstream users. Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: UTD199 DGIC uses water from this segment, MLWU manage upstream reservoirs that are a part of the UBRP lake stabilization project in progress, DGIC is interested in the development of the Upper Uinta Reservoir as part of the UBRP (Farson and CH2MHill study). DGIC is concerned with access and maintenance of existing developments.	Existing development. Work on selected High Lake Stabilization is in progress and should be completed in 4-5 years. This will help to restore natural flows in outlet streams below these lakes. See DOI letter of 2/8/08.
West Fork Whiterocks	11	5, 6	No	Existing	Headwater reservoirs hold irrigation water	U	Uintah Water Conservancy District	Scoping: UWCD 71, Duchesne County#19, #124 DEIS: UWCD UTD 120	Scoping: DC #19, #124, opposes designations outside Wilderness areas due to impact on long-term water development. DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Existing development. There are no specific plans or proposals developed for the Whiterocks drainage, there has been a study completed, Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however a BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
West Fork Whiterocks	11	5, 6	No	Potential	Proposed reservoirs downstream	D	Uintah Water Conservancy District	Scoping: UWCD 71, Duchesne County#19, #124	Scoping: SERS states that entire Whiterocks system is proposed to be developed downstream in the UBRP. DC #19, #124, opposes designations outside Wilderness areas due to impact on long-term water development.	There are no specific plans or proposals developed for the Whiterocks drainage, there has been a study completed,

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								DEIS: UWCD UTD 120	DEIS: UWCD UTD 120, qualitative description of segments from local knowledge.	Conceptual Analysis of Uinta and Green River Water Development Projects Technical Memorandum 1-5, prepared by Franson and CH2MHill Study, (however a BOR and DOI withdrawals occur on the segment, and the reservoirs upstream at the headwaters of the segment are also part of the Uinta Basin Replacement project with the High Lake Stabilization project (in progress).
Dixie National Forest										
East Fork Boulder Creek	3	None	No	Existing	Hydroelectric power production downstream of segments managed by Garkane Energy	D	Garkane Energy	Scoping: Garkane Energy, 270 DEIS: Wade UTD27, Garfield County UTD333	Scoping: This development is listed in the Existing Water Dev. Table 3.12.3, Garkane Energy is concerned that WSR study will conflict with its current FERC relicensing and operation and maintenance of plant. DEIS: Related to SERS Factor 6 being incorrect--There is no evidence that Garkane Energy and the Boulder Creek Alliance are interested in supporting Wild and Scenic designation of East Fork Boulder Creek with volunteer commitments or funding. In fact, the purposes of the WSR Act are contrary to Garkane Energy efforts to develop hydropower.	Existing development. Garkane Energy is relicensing currently with FERC for powerplant downstream of WSR segment, there is no conflict between WSR and completion of this project.
Manti-La Sal National Forest										
Hammond Canyon	10	3,6	No	Potential	The White Mesa Ute Tribe diverts water for agricultural and culinary purposes and may wish to expand those diversions.	S	Ute Tribe	Scoping: Manti-La Sal National Forest DEIS: None	Scoping: DEIS, Water Dev. Section p. 3-31, Table 3.12.4.	There are no proposed projects related to this segment. There was no evidence provided to support any proposed project as reasonably foreseeable.
Fish Creek and Gooseberry Creek	21	4	No, water dev. is upstream of Gooseberry and Fish Creek segment	Potential	Proposed Narrows Dam and Reservoir project (BOR), Mammoth Dam (State of Utah, UDWR)	U	Sanpete Water Conservancy District, Utah Division of Water Resources	Scoping: BOR Letter #224, Table 1., Sanpete Water Conservancy District Letter #125, State of Utah Letter #158, Carbon County #10, Utah Farm Bureau #219, Sanpete County #222, State of Utah 74 and 158 DEIS: Sanpete County UTD206, SWCD UTD30, DOI UTD 96, Utah Farm Bureau UTD 124, State of Utah UTD 200	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #125, Letter #158 Div. of Water Resources has identified a potential dam site on Gooseberry Creek upstream of segment and one on Fish Creek above segments (this information is in Table 3.12.4 of DEIS), Carbon Co. #10, CC depends on Upper Fish Creek for almost all of the culinary and irrigation water in their county. The county's growth is dependant on their ability to manage and have some authority on the Fish Creek watershed. UFB#219 water development at the Narrows project on Fish/Gooseberry Creek is essential to sustain growth in northern Sanpete County by impounding water that is now flowing into Carbon County. SC #222, primary focus of SWCD has been to develop the Narrows Project to provide Sanpete County with an annual supply of 5,400 acre-ft of water to help alleviate the drastic shortfalls in water for their rapidly growing population and agricultural needs. Cited 1941 BOR withdrawal for Narrows Project. State of Utah's (74 and 158) proposed reservoirs in conflict with WSR designation of NFS lands. DEIS: UTD206 discusses history of water rights and transfer from FS to Sanpete Water Conservancy District and there is a BOR withdrawal (no location), SWCD UTD30, describes history of development with dates of withdrawn land and water rights transfer. DOI UTD 96, Designation of Fish and Gooseberry Creek could be of concern with respect to operation of the Scofield project and the proposed Narrows project. Utah Farm Bureau UTD 124, does not support suitability for these streams because designation would preclude the Gooseberry Narrows project which is Sanpete County has a land use plan that supports the Narrows Project. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	**This project is considered to be reasonably foreseeable.** The BOR is completing an EIS for the Narrows Project. Proposed project includes dam and recreation areas upstream from stream segment that may reduce flows through the segment. UDWR provided the same information as scoping, no evidence that the Mammoth project is reasonably foreseeable.
Huntington Creek	19	4	No	Potential	Russell Site, T14S R06E Section 24, 121 ft high, 3,325 ac-ft capacity. This site is located downstream of Electric Lake on the proposed Huntington Creek Wild and Scenic River segment. Electric Lake has been leaking into	S, U	CVSSD, H-CIC, PCE, Utah Division of Water Resources	Scoping: BOR Letter #224, Table 1., Castle Valley Special service District #18, Emery County #153, Pacific Corp Energy #163, State of Utah, 74 and 158	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, CVSSD #18, CVSSD opposed designation of this segment because CVSSD provides municipal drinking water for the communities of Huntington, Cleveland, and Elmo. CVSSD currently have developed springs and water transmission lines in Huntington Canyon that supply the water for these communities. CVSSD diverts water directly out of Huntington Creek into a water treatment plant at the mouth of Huntington Canyon and is dependent upon the upstream watershed and reservoir storage for its water supply. CVSSD also supplies irrigation water to these communities through shares in the Huntington-	**This project is considered to be reasonably foreseeable.** Emery County UTD 188, Engineering studies have been completed on one reservoir site and others are currently being considered. UDWR provided the same information as scoping, no evidence that the Russel and

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
					the nearby coal mines and may have to be replaced or supplemented in the future if leaks cannot be plugged. Millset Creek-Millset Creek, T13S R06E Section 27, 69 ft high, 1,060 ac-ft capacity. USBR site just upstream of Electric Lake and the Huntington Creek Wild and Scenic River segment. The State Engineer performed preliminary design and cost estimates. (State of Utah, UDWR)			DEIS: Emery County UTD 188, State of Utah, UTD200	Cleveland Irrigation Company. EC#153, H-CIC operates 6 storage reservoirs in this drainage and flow is regulated. Huntington and Left Fork Huntington Creek are part of a water delivery system supplying agricultural, industrial and municipal water needs for communities in Emery Co. PCE #163, PCE operates water storage facility at Electric Lake upstream of the segment, owns 1/3 the shares in H-CIC, owns and operates the Huntington Power Plant, which receives its entire water supply from Huntington Creek and Left Fork Huntington Creek. State of Utah's (74 and 158) proposed reservoirs in conflict with WSR designation of NFS lands, it is unclear if their proposed site is the same as the others since. DEIS: EC UTD 188, a future impoundment along Huntington Creek is actively being sought by the H-CIC in order to better control, distribute, and preserve water for its owners. Engineering studies have been completed on one reservoir site and others are currently being considered. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	Millset projects are reasonably foreseeable.
Left Fork of Huntington Creek	5	4	No	Potential	An impoundment along Lower left Fork of Huntington Creek is actively being sought by Huntington Cleveland irrigation Company in order to control, distribute, preserve, and regulate water for its owners. Engineering studies have been completed on one reservoir site (Johnny Jensen Hollow Reservoir) and others are currently being looked at. Potential impoundment would likely be upstream or downstream of the segment.	U, D	CVSSD, H-CIC, PCE	Scoping: BOR Letter #224, Table 1., Castle Valley Special service District #18, Huntington-Cleveland Irrigation Co. #78, Emery County #153, Pacific Corp Energy #163 DEIS: Emery County UTD 188	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, CVSSD #18, CVSSD opposed designation of this segment because CVSSD provides municipal drinking water for the communities of Huntington, Cleveland, and Elmo. CVSSD currently have developed springs and water transmission lines in Huntington Canyon that supply the water for these communities. CVSSD diverts water directly out of Huntington Creek into a water treatment plant at the mouth of Huntington Canyon and is dependent upon the upstream watershed and reservoir storage for its water supply. CVSSD also supplies irrigation water to these communities through shares in the Huntington-Cleveland Irrigation Company. H-CIC#78, H-CIC does not think the ORV is nationally significant. EC#153, H-CIC operates 6 storage reservoirs in this drainage and flow is regulated. Huntington and Left Fork Huntington Creek are part of a water delivery system supplying agricultural, industrial and municipal water needs for communities in Emery Co. PCE #163, PCE operates water storage facility at Electric Lake upstream of the segment, owns 1/3 the shares in H-CIC, owns and operates the Huntington Power Plant, which receives its entire water supply from Huntington Creek and Left Fork Huntington Creek. DEIS: EC UTD 188, a future impoundment along Huntington Creek is actively being sought by the H-CIC in order to better control, distribute, and preserve water for its owners. Engineering studies have been completed on one reservoir site and others are currently being considered. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	**This project is considered to be reasonably foreseeable.** Emery County indicated that engineering studies have been completed on one reservoir site and others are currently being considered (Emery County UTD 188).
Uinta Portion of the Uinta-Wasatch-Cache National Forest										
Little Provo Deer Creek	3	3	No	Existing	The Provo River Project includes the Deer Creek Dam and Reservoir, the enlarged Provo Reservoir Canal and Murdock Diversion Dam, the enlarged Weber-Provo Diversion Canal, the Duchesne Tunnel and Diversion Dam, and the Provo River Channel Revision--water from Little Provo Deer Creek flows into the Deer Creek Reservoir below the segment and FS boundary. CUWCD operates Jordanelle Reservoir and Deer Creek Reservoir is operated by PRWUA.	D	Provo River Water Users Association (PRWUA) is the local sponsor of the Deer Creek Division of the Provo River Project, constructed by the BOR in phases since the 1930's. Under the Deer Creek Reservoir/Jordanelle Reservoir Operating Agreement (1994), the Central Utah Water Conservancy District (CUWCD) and PRWUA operate certain	Scoping: BOR Letter #224, Table 1., Central Utah Water Conservancy District Letter #142 DEIS: NFSSD UTD32, operates spring water source for Sundance Ski area and residential area, concerned about WSR designation and maintenance of spring source	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 describes that there is a gauging station on LPDC that is used to regulate the instream flow below the Deer Creek dam for the Provo River. There is also a wetland protection station located on LPDC. In addition, there is a water treatment diversion and other irrigation diversions. DEIS: Existing stream gauging station used to determine instream flows below the Deer Creek Dam. There are no proposed projects for this segment, however there are water right deliveries and obligations that need to be maintained. Changes to current practices would be unacceptable. Operation and maintenance activities that could occur on the listed facilities range from minor maintenance to work in the river with large equipment. Existing facilities may need to be upgraded at some point in time.	Existing development. There are no proposed projects related to this segment.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
							PRP facilities to store water to benefit the Bonneville Unit of the Central Utah Project (CUP).			
North Fork Provo River	1	3	No	Existing	Provo River Project - Central Utah Project - Bonneville Unit, Spring Development	U	North Fork Special Service District	Scoping: BOR Letter #224, Table 1. DEIS: North Fork Special Service District UTD32	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment. DEIS: Concerned with maintaining their ability to access and maintain their spring development if found suitable.	Existing development. There are no proposed projects related to this segment.
Fifth Water	8	3	Yes, land was withdrawn in 2006 for the transmission line.	Existing	Utah Lake System, Bonneville Unit, CUP completion, installation of Diamond Fork hydropower transmission lines across segment	S	Bureau of Reclamation, Central Utah Project, Central Utah Water Conservancy District	Scoping: BOR-CUP #208, CUWCD 142 DEIS: CUWCD UTD 332, DOI UTD96	Scoping: BOR-CUP 208, CUWCD 142, Water will be delivered from Strawberry Reservoir through the Diamond Fork System, hydropower is planned to be developed as a part of this larger project, and a transmission line will be built. Also CUWCD 142, CUWCD manages the Syar tunnel that runs adjacent to Fifth Water and regulates flow within the stream during maintenance. DEIS: CUWCD UTD 332, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable DOI UTD 96, An existing powerline crossing Fifth Water Creek will be upgraded in the future by the CUWCD, designation of this segment could jeopardize or seriously impair this work.	Existing water development. There are no proposed water development projects related to this segment. There will be a power transmission line crossing the segment in Section 20, T8S, R6E (approx.) part of definite plan for CUP Bonneville Unit completion plan.
Wasatch-Cache Portion of the Uinta-Wasatch-Cache National Forest										
Beaver Creek	3	3, 6	No	Potential	Beaver Narrows, Beaver Narrows (lower)	S	State of Utah, Division of Water Resources	Scoping: State of Utah 74 and 158, DEIS: State of Utah UTD 200	Scoping: State of Utah compiled a list of segments that were related to potential reservoirs that have been studied by the Division of Water Resources. DEIS: State of Utah UTD200, after reassessment, the State has removed this stream segment from its potential water development list.	There are no proposed projects related to this segment.
Beaver Creek	6	6	No	Existing	Provo River Project - Weber Basin Projects-The Provo River Project includes the Deer Creek Dam and Reservoir, the enlarged Provo Reservoir Canal and Murdock Diversion Dam, the enlarged Weber-Provo Diversion Canal, the Duchesne Tunnel and Diversion Dam, and the Provo River Channel Revision, Beaver Creek-Shingle Creek Diversion (on Shingle Creek) sends water from Weber basin into Provo basin via Beaver Creek to Provo River (June -October).	S	Weber River Water Users, Weber Basin Water Conservancy District (?), Beaver and Shingle Creek Irrigation Co.	Scoping: BOR Letter #224, Table 1., Central Utah Water Conservancy District Letter #142 DEIS: Beaver and Shingle Creek Irrigation Co. Letter UTD338, Hansen, Allen and Luce UTD125	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #142 describes Beaver-Shingle Creek Diversion, which is located at the head of Beaver Creek - approximately N40 36 35.1 W111 07 14.0. DEIS: UTD338, said that WSR designation would adversely impact B&SCIC and its shareholders by restricting access to the stream, impact grazing and stockwater use, and the ability to manage, operate, and maintain diversions along Beaver Creek. HAL UTD125 same letter as UTD338	No evidence provided to support the proposed project is reasonably foreseeable. CUWCD is concerned that if Beaver Creek were designated as Wild and Scenic, there would be a desire from the Forest Service to alter the way that the Beaver-Shingle Creek diversion is operated. The Beaver-Shingle Creek diversion is used to deliver CUP and other water rights from Shingle Creek. CUWCD is also concerned with Beaver Creek being considered for "Wild" designation since it is fed by a diversion in the summer and otherwise would be dry on low water years.
Blacks Fork	3	None	No	Existing, potential expansion	Meeks Cabin Reservoir (Wyoming), State of Utah proposed developments Old Headquarters, Big Bend, Blacks Fork Upper	D	Bridger Valley Water Conservancy District provide project operation (1964, 1976)	Scoping: BOR Letter #224, Table 1., State of Utah, 74 and 158 DEIS: BVWCD UTD182, Larson Livestock UTD183, Wyoming Water Dev. Comm. UTD66, Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, State of Utah 74 and 158, Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: BVWCD UTD182 describes early warning site for Meeks Cabin dam on Blacks Fork, UTD 183, concerned with Blacks Fork WSR designation, would impact grazing and timber (no specifics of how). WWDC UTD66, Meeks Cabin Reservoir has been identified as a possible future enlargement project, this project would benefit agriculture and possibly future municipal water supplies in the Bridger Valley. Expansion of reservoir would back up onto WSR segment Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential	WWDC UTD66, Meeks Cabin Reservoir has been identified as a possible future enlargement project to benefit agriculture and possibly future municipal water supplies in the Bridger Valley. There is no evidence provided to support that the State of Utah's proposed project is reasonably foreseeable.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
									water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	
Boundary Creek	4	6	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No scoping comments DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	There are no proposed projects related to this segment.
East Fork Blacks Fork	10	5	No	Existing	Colorado River Storage - Lyman Project, Meeks Cabin Reservoir (Wyoming)	D	Bridger Valley Water Conservancy District provide project operation (1964, 1976)	Scoping: BOR Letter #224, Table 1. DEIS: Wyoming Local Governments UTD 232 (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation Districts), State of Utah, UTD200	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	Existing development. No evidence provided to support that the State of Utah's proposed project is reasonably foreseeable
East Fork Smiths Fork	12	None	No	Existing	Colorado River Storage - Lyman Project, Stateline Reservoir (Wyoming)	D	Bridger Valley Water Conservancy District provide project operation (1964, 1976)	Scoping: BOR Letter #224, Table 1. DEIS: Uinta County Citizens Coalition for Sound Resource Use UTD341, Wyoming Local Governments (Sweetwater, Lincoln, and Uinta Counties, and Sweetwater, Lincoln, and Uinta County Conservation Districts) UTD 232, State of Utah, UTD200	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	Existing development. There are no proposed projects related to this segment.
Hayden Fork	12	3, 5, 6	No	Potential	Gold Hill, T01N R09E Section 14 or 23 (?), upstream of segment on a tributary stream	U	State of Utah, Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: State of Utah compiled a list of segments that were related to potential reservoirs that have been studied by the Division of Water Resources. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	No evidence provided to support that the State of Utah's proposed project is reasonably foreseeable. There are no proposed projects related to this segment.
Henrys Fork	8	3, 5, 6	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No scoping comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	There are no proposed projects related to this segment.
Left Hand Fork Blacksmiths Fork	15	None	No	Potential	Forks, T10N R02E Section 03, 230 ft height and capacity of 47,000 ac-ft. Just downstream of W&S section, would back water up into the proposed river	D	Utah Division of Water Resources	Scoping: State of Utah, 74 and 158 DEIS: State of Utah, UTD200	Scoping: Utah's proposed reservoirs in conflict with WSR designation of NFS lands, no documentation was provided supporting any of these projects (only references to Div. Water Resources files). DEIS: Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	There is no evidence to support that the State of Utah's proposed projects are reasonably foreseeable

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
					section. Forks, T10N R02E Section 03, 255 ft height and capacity of 35,000 ac-ft. Reference 2. Just downstream of W&S section, would back water up into the proposed river section.					
Left, Right and East Fork Bear River	13	3, 6	No	Potential	East Fork Reservoir, sites 1, 2, 3, below segment, T01N R10E Section 26 or 27(?)	D	State of Utah, Division of Water Resources	Scoping: State of Utah 74 and 158, Wyoming Water Plan DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: State of Utah compiled a list of segments that were related to potential reservoirs that have been studied by the Division of Water Resources. DEIS: State of Utah UTD200, after reassessment, the State has removed this stream segment from its potential water development list. Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	There are no proposed projects related to this segment that were supported from the DEIS or scoping comments, the potential reservoir site was identified in Wyoming and Utah's Bear River Water Plan. No evidence provided to support that the State of Utah's proposed project is reasonably foreseeable.
Little Cottonwood Canyon	8	3	No	Existing	Alta Fen Pilot Project	U	Town of Alta, Salt Lake County, Alta Ski Lifts, Salt Lake County Service District #3	Scoping: Scoping comments from Town of Alta, pers. comm. SL Co. SA#3 DEIS: None	Scoping: Designation may limit Alta Fen Project (Water Quality Improvement Project within stream corridor to treat water from the Columbus-Rexall Mine) and impact operations of Salt Lake County Service Area #3 (these projects do not affect the free-flowing condition of the stream).	There are no proposed projects related to this segment that would affect the WSR segment. However, there are concerns that designation may complicate the expansion of the Alta Fen Project because it is within the 1/4 mile corridor.
Little East Fork	9	3, 5	No	Existing	Colorado River Storage - Lyman Project, Meeks Cabin Reservoir (Wyoming)	U	Bridger Valley Water Conservancy District provide project operation (1964, 1976)	Scoping: BOR Letter #224, Table 1. DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable	This segment is upstream from the existing Meeks Cabin Reservoir, there are no proposed projects for this segment. There is no evidence to support that the State of Utah's proposed project is reasonably foreseeable.
Logan River (lower)	19	3, 6	No	Potential	Card Canyon, DeWitt, Logan River (Twin Bridge), Logan River No. 2A, No. 3A, No. 4, No. 5, Twin Creek.	D	State of Utah, Division of Water Resources	Scoping: State of Utah 74 and 158, DEIS: State of Utah UTD 200	Scoping: State of Utah compiled a list of segments that were related to potential reservoirs that have been studied by the Division of Water Resources. DEIS: State of Utah UTD200, after reassessment, the State has removed this stream segment from its potential water development list.	There are no proposed projects related to this segment.
Main Fork Weber River	6	None	No, PRP facilities are off Forest and downstream of segment	Existing	Provo River Project, Weber River and Weber Basin Projects-The Provo River Project includes the Deer Creek Dam and Reservoir, the enlarged Provo Reservoir Canal and Murdock Diversion Dam, the enlarged Weber-Provo Diversion Canal, the Duchesne Tunnel and Diversion Dam, and the Provo River Channel Revision, Echo Dam and Reservoir, Smith-Morehouse and Rockport Reservoirs (downstream)	D	Weber River Water Users, Weber Basin Water Conservancy District	Scoping: BOR Letter #224, Table 1. DEIS: None	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment.	Existing development. There are no proposed projects related to this segment.
Middle Fork Beaver Creek	11	5, 6	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the	There are no proposed projects related to this segment.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
									Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	
Ostler Fork	4	3, 7	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	There are no proposed projects related to this segment.
Provo River	20	Yes, Duchesne Tunnel and road access, and Provo River Channel Revision, areas around Washington, Trial, and Lost Lakes	No	Existing	The Provo River Project includes the Deer Creek Dam and Reservoir, the enlarged Provo Reservoir Canal and Murdock Diversion Dam, the enlarged Weber-Provo Diversion Canal, the Duchesne Tunnel and Diversion Dam (on segment), and the Provo River Channel Revision (on segment), CUWCD operates Jordanelle Reservoir and Deer Creek Reservoir is operated by PRWUA.	U, S, D	Provo River Water Users Association (PRWUA) is the local sponsor of the Deer Creek Division of the Provo River Project, constructed by the BOR in phases since the 1930's. Under the Deer Creek Reservoir/Jordanelle Reservoir Operating Agreement (1994), the Central Utah Water Conservancy District (CUWCD) and PRWUA operate certain PRP facilities to store water to benefit the Bonneville Unit of the Central Utah Project (CUP). Metropolitan Water District Salt Lake City (PRP-Deer Creek Reservoir)	Scoping: BOR Letter #224, Table 1, PRWUA Letter #218, CUWCD Letter #142, DEIS: PRWUA #UTD364	Scoping: Letter #224 listed segment, but did not provide any detailed information about the WSR segment, Letter #218 provided background information and history of PRP, operation of PRP, PRP water rights, Letter #142 described the operation of Trial, Washington, and Lost Lake Reservoirs and Duchesne Tunnel operation, water from the Duchesne Tunnel feeds into the Provo River Approximately 10 miles below the upper lakes. DEIS: UTD364, Exhibits A-F describe concerns in detail and provide legal descriptions for the withdrawn lands for Duchesne Tunnel and Diversion and the Provo Channel Revision and the Acts that withdraw the land for the projects.	There are no proposed projects for this segment, however water deliveries and flows are based on established water rights that dictate flow levels. Routine operations can dry up or induce inordinately high flows in streams below these water features and may be incompatible with WSR designations. If WSR designations could lead to efforts to alter timing and amounts of flow, then we would oppose such designation. Extraordinary or emergency operations could involve heavy equipment in the streams without warning or time for pre-approvals. Repair of damaged or faulty equipment may involve shut off of flows and construction in bed and on banks of streams. Replacement of facilities would normally allow for prior consultations but would also likely involve disruption of flows and impacts to bed and banks of streams.
Red Butte	3	No	No	Existing	Red Butte Reservoir and Dam	U	CUWCD	Scoping: CUWCD 142 DEIS: CUWCD UTD 332	Scoping: CUWCD 142, CUWCD is concerned that this segment of Red Butte Creek could be impacted by futures actions by the District associated with operation and maintenance of the dam and reservoir. DEIS: Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	No evidence provided to support the proposed project is reasonably foreseeable
Stillwater Fork	14	3, 6, 7	No	Potential	Wyuta, T01N R10E Section 09, Two heights proposed; 130 ft and 170 ft, with capacities of 6,325 ac-ft and 146,000 ac. ft. respectively. These projects would be located on-stream in the middle of this proposed Wild and Scenic segment (UT); Stillwater Reservoir site (WY)	S	State of Utah, Division of Water Resources, State of Wyoming, Water Development Commission	Scoping: Scoping Comments Utah Div. of Water Resources; Wyoming State Water Plan, Bear River Basin Plan, Chapter 6, Figure 6-35, Banner and Associates 1958. DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	State of Utah compiled a list of segments that were related to potential reservoirs that have been studied by the Division of Water Resources. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	There are no proposed projects related to this segment that were supported from the DEIS or scoping comments, the potential reservoir site was identified in Wyoming and Utah's Bear River Water Plan, but is not reasonably foreseeable.
Thompson Creek	5	5	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None	Scoping: No comments	There are no proposed projects related to this segment.

WSR Stream Segments	Miles	Suitable in Alt.	Withdrawn Lands on segment	Existing or Potential Water Dev.	Water Development Name	Location of Water Dev.	Administering Agency and Water Users	Scoping Comment Letter # / DEIS Comment Letter #	Information from Scoping / DEIS Comments	Reasonably Foreseeable Water Development
								DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	
West Fork Beaver Creek	10	3, 5, 6	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable.	There are no proposed projects related to this segment.
West Fork Blacks Fork	12	3, 5	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008.	There are no proposed projects related to this segment.
West Fork Smiths Fork	14	3	No	Potential	Wyoming potential water development	?	Wyoming Local Governments	Scoping: None DEIS: Wyoming Local Governments UTD 232, State of Utah, UTD200	Scoping: No comments. DEIS: Wyoming Collective Governments UTD232, state that the Forest Services administrative recommendations for WSRA designation will directly affect the interests of the Wyoming Local Governments including adversely affecting existing and potential water developments and water rights, and is in conflict with the Counties' land use plans. The WSR Team has signed MOUs with these individual agencies as of July 2008. State of Utah UTD 200, Provided the same information as scoping, no evidence that any of these projects are reasonably foreseeable	There are no proposed projects related to this segment.

Table 3.12.5. Segments with Reasonably Foreseeable Future Water Developments (the locations of the water developments are indicated by a D, S, or U, signifying that the development is either downstream (D) of the segment, on (S) the segment, or upstream (U) of the segment). For more details, see Table 3.12.4.

WSR Stream Segments	Miles	Suitable in Alternative	Water Development Name	Location of Water Dev.
Fish Creek and Gooseberry Creek	21	4	Proposed Narrows Dam and Reservoir project (BOR), Mammoth Dam (State of Utah, UDWR)	U
Huntington Creek	19	4	Russell Site, T14S R06E Section 24, 121 ft high, 3,325 ac-ft capacity. This site is located downstream of Electric Lake on the proposed Huntington Creek Wild and Scenic River segment. Electric Lake has been leaking into the nearby coal mines and may have to be replaced or supplemented in the future if leaks cannot be plugged. Millset Creek-Millset Creek, T13S R06E Section 27, 69 ft high, 1,060 ac-ft capacity. USBR site just upstream of Electric Lake and the Huntington Creek Wild and Scenic River segment. The State Engineer performed preliminary design and cost estimates. (State of Utah, UDWR)	S, U
Left Fork of Huntington Creek	5	4	An impoundment along Lower left Fork of Huntington Creek is actively being sought by Huntington Cleveland irrigation Company in order to control, distribute, preserve, and regulate water for its owners. Engineering studies have been completed on one reservoir site (Johnny Jensen Hollow Reservoir) and others are currently being looked at. Potential impoundment would likely be upstream or downstream of the segment.	U, D

Environmental Consequences

Impacts to the 86 Wild and Scenic study segments will be discussed in terms of which stream segments will be recommended as suitable and not suitable by alternative, the implications of managing those stream segments free-flowing and ORVs, and the expected impacts to those segments not found suitable by Alternative.

Classification of the stream segments describes the existing level of development within the stream corridor and also relates to how National Forest System lands within suitable stream corridors will be managed in the future. See Table 3.1.1 for restrictions to activities within stream corridors based on classification of suitable stream segments.

For Alternatives 1 through 7, each alternative selects a different set of stream segments and has different implications for the future management of activities within the 86 Wild and Scenic study segment corridors. Refer to Table 3.1.2 for a list of basic assumptions about how each Alternative may influence Forest management and activities allowed within these stream corridors.

The effects analysis in Section 3.12 will address Issues 1, 4, and 6:

Issue 1—Designation of river segments in a National Wild and Scenic River System may affect reasonably foreseeable future water resources development projects. The measurement indicators for estimating these impacts are miles of river affecting existing and reasonably foreseeable water resources projects, and social/economic impacts (see Section 3.10 – Social and Economic analysis). The information used in this analysis is from Appendix A – Suitability Evaluation Reports, suitability factor 3, and the water development discussion. Tables 3.12.3 and 3.12.4 will be used to analyze these impacts by Alternative.

Issue 4—Designations offers long-term protection of resources values. The measurement indicator for the long-term protection of the free-flowing character, water quality, DWSPZ, and stream related ORVs is miles of river by Wild, Scenic, and Recreational classification. This measurement indicator will also be used to analyze the impacts of existing and reasonably foreseeable water resource projects on the stream related ORVs that may result if streams are not recommended for suitability. The information used in this analysis is from Appendix A – Suitability Evaluation Reports, suitability factor 3, and the water development discussion. Table 3.12.6 will be used to analyze these impacts by alternative.

Issue 6—Conflicts with state, county, and local government plans. The measurement indicator for consistency with Section 63-38d-401 of the Utah Code Annotated is miles of stream by Alternative that do not meet the Utah Code criteria for having water present and flowing at all times; therefore segments with intermittent or ephemeral conditions would not be suitable. The information used in this analysis is from Appendix A – Suitability Evaluation Reports, suitability factor 4, and the physical description of river segment section and is compiled in Table 3.12.1. Flow regimes of Wild and Scenic River segments (perennial, intermittent, or ephemeral).

General Environmental Impacts

Table 3.12.1 will be source information for tracking Issue 6. Tables 3.12.3 and 3.12.4 will be used to track Issues 1 and 4. Table 3.12.4 lists the miles of stream with existing and potential water developments by classification and will be used with 3.1.1 to describe what restrictions will apply to which stream. Table 3.12.6 list the stream segments with potential water developments found not suitable by Alternative.

Table 3.12.6. River miles by classification of segments that have existing and reasonably foreseeable water developments (all mileage approximate).

	Class.	Miles Alt. 1 & 2	Miles Alt. 3	Miles Alt. 4	Miles Alt. 5	Miles Alt. 6	Miles in Alt. 7
Existing Water Projects	Rec.	119	66	23	9	71	40
	Scenic	129	46	22	61	74	13
	Wild	292	102	0	273	129	1
	Totals	540	214	45	343	274	54
Reasonably Foreseeable Water Projects	Class.	Miles Alt. 1 & 2	Miles Alt. 3	Miles Alt. 4	Miles Alt. 5	Miles Alt. 6	Miles Alt. 7
	Rec.	23	0	23	0	23	0
	Scenic	22	0	22	0	22	0
	Wild	0	0	0	0	0	0
	Totals	45	0	45	0	45	0

The information in the Tables 3.12.4, 3.12.5, and 3.12.6 will be used in combination to discuss the impacts of Alternatives 3 through 7 on the free-flowing condition and on water developments. Stream segments selected in an alternative may be found suitable and managed to protect the ORVs or the free-flowing condition within the Wild and Scenic River system. Stream segments not selected in an alternative would be found not suitable and would not be managed to protect the ORVs or the free-flowing condition within the Wild and Scenic system. The river segment's ORVs may be impacted by this lack of protection due to large-scale projects that change the landscape such as mining, road building, or water resource development projects. The impacts of these landscape changing activities are related to development within the stream corridor and can be managed to limit the impacts to the free-flowing condition and the river related ORVs, except for instance of water development projects. If a stream segment is not found suitable and designated under the Wild and Scenic River Act, there is no other protection available to protect the free-flowing condition of a stream. The free-flowing condition is crucial to sustain water quality, beneficial uses, and ORVs that depend on high quality water. Therefore, stream segments with that are not suitable, which are also identified as having reasonably foreseeable water development projects related to them may be impacted by reasonably foreseeable water projects. Stream segments that fall into this category will be listed in the following alternative discussions, please see Table 3.2.1 for the complete list of all the ORVs that may be impacted by reasonably foreseeable water developments.

Alternative 1 – No action, maintain eligibility of all river segments.

In Alternative 1, all 840 miles would be protected by the Forest Service as eligible for inclusion into the Wild and Scenic River system to maintain the free-flowing condition, the ORVs, and classification

criteria (see Table 3.1.1 and 3.1.2); free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant).

Choosing Alternative 1 would have no impact on the water resources related to the stream segments. There would be no negative impact on water quality or DWSPZs because there would be no change to current management in accordance with State and Federal standards through adherence to standard water quality monitoring directed by the Clean Water Act, the Environmental Protection Agency (EPA), and state laws including: Utah Code R309-605-7/8, Utah Code 19-4-101, the Utah Division of Water Quality, the Utah Safe Drinking Water Act (SDWA); Colorado law, Title 25-8, The Colorado Water Quality Act administered by the Water Quality Control Commission; and Wyoming law, Title 35-11, The Wyoming Environmental Quality Act and the Wyoming Water Quality Rules and Regulations.

Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

In Alternative 1, as Tables 3.12.3 and 3.12.4 show, all of the 540 miles of river with existing water developments and 45 miles with reasonably foreseeable water developments would be protected as eligible for inclusion into the Wild and Scenic River system to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2). The stream segments with existing water developments would continue to be managed based on the classification criteria for 292 miles of Wild river, 129 miles of Scenic river and 119 miles of Recreational river. The stream segments with reasonably foreseeable water developments would continue to be managed based on the classification criteria for 22 miles of Scenic, and 23 miles of Recreational river (see Table 3.12.5). For the implications of managing these miles by classification please refer to Tables 3.1.1 and 3.1.2.

Under Alternative 1, there are a number of streams that do not meet the State of Utah's prerequisite of having water present and flowing at all times, but in the case of Alternative 1, where streams are not recommended as suitable, this requirement does not apply. This list of streams is compiled from Table 3.12.1 to illustrate which streams would not be suitable under Section 63-38d-401 of the Utah Code Annotated. These include ephemeral and intermittent streams named: Mamie Creek, Moody Wash, Cottonwood Canyon, Slickrock Canyon, Chippean and Allen Canyons, Lower Dark Canyon (including Poison canyon, Deadman Canyon, and Woodenshoe and Cherry Canyons), and Miners Basin. There are also several streams that have a combination of flow regimes which are mainly perennial, but do have sections of intermittent or ephemeral flows in the headwater portions of the segments. These streams include: Death Hollow Creek, Hammond Canyon, and Upper Dark Canyon (including Horse Pasture, Peavine, and Kigalia Canyons).

Alternative 2 – No rivers recommended.

In Alternative 2, all 840 miles would be not be recommended as suitable and protection of segments as eligible for inclusion into the Wild and Scenic River system to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2) would not longer be required.

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study. The construction of reasonably foreseeable water developments may

have localized impacts the water quality and standards for project related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment. Under Alternative 2, 3 segments are related to reasonably foreseeable water developments and 35 contain DWSPZs (see Tables 3.12.2 and 3.12.4). In these cases, the construction of these water projects would have to be in accordance with State Law (Utah Code R309-605-7/8).

Under Alternative 2, there would be flexibility for managers of existing water projects on 540 miles of stream to make changes to the current management of flow through the segment. This means that reservoir managers could change the regulation of flow through the related stream segment by either reducing or increasing the flows from how they are currently managed. Table 3.12.3 describes the existing water developments. The developments on the segment (S) and upstream (U) are water developments that may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream (D) include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Table 3.12.4 shows that 3 eligible segments and 45 miles of stream with reasonably foreseeable water developments would not longer be restricted by the Wild and Scenic River Act; and there are 23 miles of Recreational stream, 22 miles of Scenic stream would have their free-flowing condition and river related ORVs threatened by water projects upstream, on the segment, or downstream. This value represents a maximum effect and is subject to decrease when more specific information on project location and development potential is presented and verified. At this time, with the information available, we were unable to confidently determine which of reasonably foreseeable water projects would be completed at what time and which would be contrary to suitability. Therefore it is only practical to analyze the effects as if all of the reasonably foreseeable water developments were developed, including potential management changes for existing water projects that would possibly increase the capacity of the project and further regulate flows within the segments.

Over time, without designation, the identified reasonably foreseeable future water projects could be approved for some segments, depending on area management standards. Under Alternative 2, the combined effect of existing and reasonably foreseeable water projects if managed to change the free-flowing character of the streams would be to 53 segments, with a total of 585 miles of stream (see Tables 3.12.3 and 3.12.4). The tables describe the water developments as on the segment (S), upstream of the segment (U), downstream (D), or a combination of where there are multiple projects in the drainage basin. The developments on the segment and upstream are water developments that may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

The issue of the streams meeting the requirements of Section 63-38d-401 of the Utah Code Annotated is not applicable to this Alternative since no streams would be recommended as suitable. For a list of streams that do not meet this requirement see the discussion in Section 3.12 Alternative 1.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

In Alternative 3, 370 miles of river would be recommended as suitable for inclusion into the Wild and Scenic River system and the Forest Service would manage the streams to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2); and 470 miles would be found not suitable. The free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study as per Federal and State laws and standards. In Alternative 3, three segments with reasonably foreseeable water development projects would be determined not suitable including Fish and Gooseberry Creek, Huntington Creek, and Left Fork Huntington Creek. Water development projects would become unrestricted, therefore, there could be localized impacts to water quality related to development of water development projects (see Tables 3.12.2 and 3.12.4). All three of these segments are within DWSPZs and Federal and State laws including State Law (Utah Code R309-605-7/8) and would require actions to protect drinking water sources within these areas during development.

This Alternative would not preclude construction of reasonably foreseeable water developments which may contribute to localized impacts the water quality and standards for project related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment.

In Alternative 3, Table 3.12.6 shows that 214 miles of river with existing water developments would be found suitable and 326 miles with existing water developments would be found not suitable. Segments recommended as suitable will be managed by the Forest Service based on classification of the segment for 102 miles of Wild, 46 miles of Scenic, and 66 miles of Recreational river (see Tables 3.12.5 and 3.1.1 for the list of streams and the applicable management implications). For the segments that have existing water developments that were not found suitable, there would be flexibility for managers of existing water projects to make changes to the current management that could change the regulation of flow through the related stream segment by either reducing or increasing the flows from how they are currently managed.

In Alternative 3, Table 3.12.4 shows that there are no rivers with reasonably foreseeable water developments would be found suitable. Therefore all of the reasonably foreseeable future water development projects on the 3 segments with 45 miles of stream would not be further restricted within these stream corridors by the Forest Service under the Wild and Scenic River Act. Table 3.12.6 lists the segments not found suitable and the related potential water projects. For the discussion of impacts to streams that are not found suitable, Tables 3.12.3 and 3.12.4 describe the existing and potential water developments or a combination of where there are multiple projects in the drainage basin. The water developments on the segment and upstream may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing

through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Under Alternative 3, there are a number of streams that do not meet the State of Utah's prerequisite of having water present and flowing at all times. This list of streams is compiled from Table 3.12.1 to illustrate which streams would not be suitable under Section 63-38d-401 of the Utah Code Annotated. Mamie Creek is ephemeral and Moody Wash is intermittent. There are also four streams that have a combination of flow regimes which are mainly perennial, but do have sections of intermittent or ephemeral flows in the headwater portions of the segments. These streams include: Mamie Creek, Death Hollow Creek, Hammond Canyon and Moody Wash.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

In Alternative 4, three river segments with 45 miles of river would be recommended as suitable for inclusion into the Wild and Scenic River system and managed by the Forest Service to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2); and 795 miles would be found not suitable. The free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant).

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study as per Utah Water Quality Act and Utah Code R309-605-7/8 and EPA standards. This Alternative would possibly preclude construction of reasonably foreseeable water developments which may prevent localized impacts the water quality and standards for project related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment. Under Alternative 3, 45 miles are related to reasonably foreseeable water developments and contain DWSPZs (see Tables 3.12.2 and 3.12.4). These segments include Fish and Gooseberry Creek, Huntington Creek, and Lower Left Fork Huntington Creek. In these cases, the suitability of these WSR segments may preclude construction of these water projects or would have to be in accordance with State Law (Utah Code R309-605-7/8).

In Alternative 4, Table 3.12.4 shows that 45 miles of river with existing water developments would be found suitable and 495 miles with existing water developments would be found not suitable. Segments recommended as suitable will be managed based on classification of the segment for 22 miles of Scenic, and 23 miles of Recreational river (see Tables 3.12.5 and 3.1.1 for the list of streams and the applicable management implications).

Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf). For the segments that have existing water developments that were not found suitable, there would be flexibility for managers of existing water projects to make changes to the current management that could change the regulation of flow through the related stream

segment by either reducing or increasing the flows from how they are currently managed.

In Alternative 4, Table 3.12.4 shows that 45 miles of river with reasonably foreseeable water developments would be found suitable. Segments recommended as suitable will be managed based on classification of the segment for 22 miles of Scenic, and 23 miles of Recreational river (see Tables 3.12.5 and 3.1.1 for the list of streams and the applicable management implications).

The free-flowing condition of rivers not found suitable would not be protected by the Forest Service under the Wild and Scenic River Act. Table 3.12.4 lists the segments not found suitable and the related potential water projects. For the discussion of impacts to streams that are not found suitable, Tables 3.12.3 and 3.12.4 describe the existing and potential water developments as on, upstream, or downstream of the segment, or a combination of where there are multiple projects in the drainage basin. The developments on the segment and upstream may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Under Alternative 4, there are no streams that do not meet the State of Utah's prerequisite of having water present and flowing at all times.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

In Alternative 5, 530 miles of river would be recommended as suitable for inclusion into the Wild and Scenic River system and managed by the Forest Service to maintain the free-flowing condition, the ORVs, and classification criteria (see Table 3.1.1 and 3.1.2); and 310 miles would be found not suitable. The free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant).

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study as per Utah Water Quality Act and Utah Code R309-605-7/8. The construction of reasonably foreseeable water developments may have localized impacts on the water quality and standards for projects related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment. Under Alternative 5, river segments with reasonably foreseeable water developments that also contain DWSPZs, construction of water projects would have to be in accordance with State Law (Utah Code R309-605-7/8) (see Tables 3.12.2 and 3.12.4).

In Alternative 5, Table 3.12.3 shows that 343 miles of river with existing water developments would be found suitable and 197 miles with existing water developments would be found not suitable. Segments recommended as suitable will be managed based on classification of the segment for 273 miles of Wild, 61 miles of Scenic, and 9 miles of Recreational river (see Tables 3.12.4 and 3.1.1 for the list of streams and the applicable management implications). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from

proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf). For the segments that have existing water developments that were not found suitable, there would be flexibility for managers of existing water projects to make changes to the current management that could change the regulation of flow through the related stream segment by either reducing or increasing the flows from how they are currently managed.

In Alternative 5, Table 3.12.6 shows that there are no streams segments with reasonably foreseeable water developments would be found suitable. The free-flowing condition of rivers not found suitable would not be protected by the Forest Service under the Wild and Scenic River Act, therefore all of the reasonably foreseeable future water development projects would not be further restricted within these stream corridors. Table 3.12.4 lists the segments not found suitable and the related reasonably foreseeable and existing water projects. For the discussion of impacts to streams that are not found suitable, Tables 3.12.3 and 3.12.4 describe the existing and potential water developments as on the segment, upstream or downstream of the segment, or a combination of where there are multiple projects in the drainage basin. The developments on the segment and upstream may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Under Alternative 5, there are a number of streams that do not meet the State of Utah's prerequisite of having water present and flowing at all times. This list of streams is compiled from Table 3.12.1 to illustrate which streams would not be suitable under Section 63-38d-401 of the Utah Code Annotated. Mamie Creek is ephemeral and Moody Wash is intermittent. There are also two streams that have a combination of flow regimes which are mainly perennial, but do have sections of intermittent or ephemeral flows in the headwater portions of the segments. These streams include: Death Hollow Creek, Mamie Creek, Moody Wash, Lower Dark canyon, Miners Basin, and Upper Dark Canyon.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

In Alternative 6, 441 miles of river would be recommended as suitable for inclusion into the Wild and Scenic River system and managed by the Forest Service to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2); and 399 miles would be found not suitable. The free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant).

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study as per Utah Water Quality Act and Utah Code R309-605-7/8 and EPA standards. The construction of reasonably foreseeable water developments may have localized impacts the water quality and standards for project related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment. Under Alternative 6, segments not found suitable with reasonably foreseeable water developments that also contain DWSPZs, construction of

water projects would have to be in accordance with State Law (Utah Code R309-605-7/8) (see Tables 3.12.2 and 3.12.4).

In Alternative 6, Table 3.12.3 shows that 274 miles of river with existing water developments would be found suitable and 266 miles with existing water developments would be found not suitable. Segments recommended as suitable will be managed based on classification of the segment for 129 miles of Wild, 74 miles of Scenic, and 71 miles of Recreational river (see Tables 3.12.5 and 3.1.1 for the list of streams and the applicable management implications). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf). For the segments that have existing water developments that were not found suitable, there would be flexibility for managers of existing water projects to make changes to the current management that could change the regulation of flow through the related stream segment by either reducing or increasing the flows from how they are currently managed.

In Alternative 6, Table 3.12.4 shows that 45 miles of river segments with reasonably foreseeable water developments would be found suitable.

The free-flowing condition of rivers not found suitable would not be protected by the Forest Service under the Wild and Scenic River Act. Table 3.12.4 lists the segments not found suitable and the related potential and existing water projects. For the discussion of impacts to streams that are not found suitable, Tables 3.12.3 and 3.12.4 describe the existing and potential water developments as on, upstream, and downstream of the segment, or a combination of where there are multiple projects in the drainage basin. The water developments on the segment and upstream may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

Under Alternative 6, there are a number of streams that do not meet the State of Utah's prerequisite of having water present and flowing at all times. This list of streams is compiled from Table 3.12.1 to illustrate which streams would not be suitable under Section 63-38d-401 of the Utah Code Annotated. Moody Wash is intermittent. There are also streams that have a combination of flow regimes which are mainly perennial, but do have sections of intermittent or ephemeral flows in the headwater portions of the segments. These streams include: Death Hollow Creek, Upper Dark Canyon, and Hammond Canyon.

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

In Alternative 7, 180 miles of river would be recommended as suitable for inclusion into the Wild and Scenic River system and the Forest Service would manage the streams to maintain the free-flowing condition, the ORVs, and classification criteria (see Tables 3.1.1 and 3.1.2); and 660 miles would be found not suitable. The free-flowing condition and related ORVs may be adversely affected by projects of others for which the Forest Service has no or limited authority over (e.g., development of a Federal dam or hydroelectric power plant). Rivers which are determined eligible or suitable for the National System through agency planning processes (Section 5(d)(1) study rivers) are not protected from proposed

hydroelectric facilities or other federally assisted water resources projects; because the protection afforded by Section 7(b) of the Act does not apply to Section 5(d)(1) study rivers. However, the managing agency should, within its authorities, protect the free-flowing values and ORVs which make the river eligible or suitable (http://www.rivers.gov/publications/q-a.pdf).

This decision would have no impact on the water resources related to the stream segments, because management and protection of water quality and DWSPZs is required by the State and of Federal agencies regardless of this study as per Utah Water Quality Act and Utah Code R309-605-7/8 and EPA standards. There are three reasonably foreseeable future water developments that would become unrestricted under a suitability finding under Alternative 7, therefore, there could be localized impacts the water quality related to development of water development projects on Fish and Gooseberry Creek, Huntington Creek, and Left Fork Huntington Creek. All three of these segments are within DWSPZs and Federal and State laws would require actions to protect drinking water sources within these areas during development.

In Alternative 7, Table 3.12.6 shows that 54 miles of river with existing water developments would be found suitable and 328 miles with existing water developments would be found not suitable. Segments recommended as suitable will be managed by the Forest Service based on classification of the segment for 1 mile of Wild, 13 miles of Scenic, and 40 miles of Recreational river (see Tables 3.12.5 and 3.1.1 for the list of streams and the applicable management implications). For the segments that have existing water developments that were not found suitable, there would be flexibility for managers of existing water projects to make changes to the current management that could change the regulation of flow through the related stream segment by either reducing or increasing the flows from how they are currently managed.

In Alternative 7, Table 3.12.4 shows that there are no rivers with reasonably foreseeable water developments that would be found suitable. Therefore all of the reasonably foreseeable water development projects on the 3 segments with 45 miles of stream would not be further restricted within these stream corridors by the Forest Service under the Wild and Scenic River Act. Table 3.12.6 lists the segments not found suitable and the related potential water projects. For the discussion of impacts to streams that are not found suitable, Tables 3.12.3 and 3.12.4 describe the existing and potential water developments as on, upstream, downstream, or a combination of where there are multiple projects in the drainage basin. The water developments on the segment and upstream may divert water away, import water to, or control the release of flow through the segment. The water developments that are downstream include dams and reservoirs that the segment may flow into, or may be located much further downstream, where water flowing through the segment is stored below. The reality of how each water development described in this section affects the stream segment is unique and is specific to the location, the stream, the flow, and the time of year, and the operation of the water development. Therefore this discussion is general in that it shows the stream segments and the general location of the water developments within the drainage.

This Alternative would not preclude construction of reasonably foreseeable water developments which may contribute to localized impacts the water quality and standards for project related segment. Beneficial uses and water quality standards may change to reflect drastic alterations to the flow of water through a segment if a stream was inundated by a reservoir or if water was diverted out of the segment. Under Alternative 7, the Fish and Gooseberry Creek, Huntington Creek, and Lower Left Fork Huntington Creek segments are related to reasonably foreseeable water developments and contain DWSPZs (see Tables 3.12.2 and 3.12.4). In these cases, by finding these 3 segments with reasonably foreseeable future water projects not suitable construction of these water projects or would have to be in accordance with State Law (Utah Code R309-605-7/8).

Under Alternative 7, there are a number of streams that do not meet the State of Utah's prerequisite of

having water present and flowing at all times. This list of streams is compiled from Table 3.12.1 to illustrate which streams would not be suitable under Section 63-38d-401 of the Utah Code Annotated. Mamie Creek is ephemeral and Moody Wash is intermittent. There are also two streams that have a combination of flow regimes which are mainly perennial, but do have sections of intermittent or ephemeral flows in the headwater portions of the segments. These streams include: Death Hollow Creek, and Mamie Creek.

3.13 Wildlife (Terrestrial) Resources

Introduction

River corridors are, in most cases, the most productive for terrestrial wildlife species. Depending on mobility, animals move in and out of these corridors at will. Species and species diversity depend on the vegetative community and in many instances the age class of the community in a given area.

Area of Influence

The area of influence is one quarter mile on each side of an identified stream segment.

General Wildlife

Big game species that exist in Utah include mule deer (*Odocoileus hemionus*), elk (*Cervis canidensis*), moose (*Alces alces*), pronghorn (*Antilocapra americana*), bighorn sheep (Rocky Mountain [*Ovis canadensis*], desert [*Ovis canadensis nelsoni] and California [Ovis Canadensis californiana]*), and mountain goats (*Oreamnos americanus*). White-tailed deer (*Odocoileus viginianus*) are moving into some areas in Northern Utah. These species can be expected along any stream segments in areas where the species exist.

Upland game species include pheasant (*Phasianus colchicus*), mourning dove (*Zenaida macroura*), band-tailed pigeon (*Columba fasciata*), chukar partridge (*Alectoris chukar*), sage grouse (*Centrocercus urophasianus*), forest grouse (ruffed [*Bonasa umbellus*]; blue grouse [*Dendragapus obscurus*]), California quail (*Callipepla californica*), Hungarian partridge (*Perdix perdix*), sharp-tailed grouse (*Tympanuchus phasianellus*), white-tailed ptarmigan (*Lagopus leucurus*), cottontail rabbit (*Sylvilagus nuttalli*), snowshoe hare (*Lepus americanus*), sandhill crane (*Grus canadensis*), and turkey (*Meleagris gallopavo*).

Other species that are hunted or trapped include black bear (*Ursus americanus*), cougar (*Felis concolor*), bobcat (*Lynx rufus*), and beaver (*Castor Canadensis*).

There are many other species of wildlife that are not hunted or trapped. Any of these species, and those listed as being hunted or trapped may occur within the area of influence on any stream segment depending on vegetation types and age classes of that vegetation that is present.

There are approximately 406 species of birds that are in the state for at least a portion of the year. Of these approximately 137 are summer residents and migrate out for the winter. The State of Utah has created their list of Partners in Flight species which are of concern in Utah. The U.S. Wildlife and Wildlife Service have created their list of Birds of Conservation Concern for Utah. These lists have been put together along with habitat associations in Table 3.13.1. The list contains 43 species, all of which are not migratory. Many of these birds are found in vegetation types and age classes contained in stream segments being considered in this document.

Table 3.13.1. Habitat associations for birds on the PIF and BCC lists in Utah.

	Utah Mountains	Basin and Range	Mojave Desert	Wyoming Basin	Colorado Plateau	Primary Breeding	Secondary Breeding	Winter Habitat
PIF[A] and FWS BCC[B] Priority Species[C]								
Abert's Towhee			X			Lowland Riparian	Lowland Riparian	Lowland Riparian
American Avocet *		X		X	X	Wetland	Playa	Migrant
American White Pelican		X		X		Water	Wetland	Migrant
Bell's Vireo *			X			Lowland Riparian	Lowland Riparian	Migrant
Bendire's Thrasher		X	X		X	Low Desert Scrub	Low Desert Scrub	Migrant
Black Rosy Finch	X					Alpine	Alpine	Grassland
Black Swift *	X					Lowland Riparian	Cliff	Migrant
Black-chinned Sparrow		X	X		X	Low Desert Scrub	High Desert Scrub	Migrant
Black-necked Stilt		X				Wetland	Playa	Migrant
Black-throated Gray Warbler	X	X	X		X	Pinyon-Juniper	Mountain Shrub	Migrant
Bobolink		X				Wet Meadow	Agriculture	Migrant
Brewer's Sparrow	X	X	X	X	X	Shrubsteppe	High Desert Scrub	Migrant
Broad-tailed Hummingbird	X	X			X	Lowland Riparian	Mountain Riparian	Migrant
Crissal Thrasher			X			Low Desert Scrub	Lowland Riparian	Low Desert Scrub
Ferruginous Hawk		X		X	X	Pinyon-Juniper	Shrubsteppe	Grassland
Flammulated Owl	X	X			X	Ponderosa Pine	Sub-Alpine Conifer	Migrant
Gambel's Quail		X	X		X	Low Desert Scrub	Lowland Riparian	Low Desert Scrub
Golden Eagle	X	X	X	X	X	Cliff	High Desert Scrub	High Desert Scrub
Grace's Warbler	X	X			X	Ponderosa Pine	Mixed Conifer	Migrant
Gray Vireo	X	X	X		X	Pinyon-Juniper	Northern Oak	Migrant
Greater Sage-grouse	X	X		X	X	Shrubsteppe	Shrubsteppe	Shrubsteppe
Gunnison Sage-grouse					X	Shrubsteppe	Shrubsteppe	
La Conte's Thrasher			X			Low Desert Scrub	Low Desert Scrub	Low Desert Scrub
Lewis' Woodpecker *	X	X		X	X	Ponderosa Pine	Lowland Riparian	Northern Oak
Loggerhead Shrike	X	X	X	X	X	High Desert Scrub	Pinyon-Juniper	High Desert Scrub
Long-billed Curlew *		X		X	X	Grassland	Agriculture	Migrant
Lucy's Warbler			X			Lowland Riparian	Low Desert Scrub	Migrant
Mountain Plover					X	High Desert Scrub	High Desert Scrub	Migrant
Northern Harrier	X	X	X	X	X	Wet Meadow	High Desert Scrub	Agriculture
Peregrine	X	X	X		X	Cliff	Lowland	Wetland

	Utah Mountains	Basin and Range	Mojave Desert	Wyoming Basin	Colorado Plateau	Primary Breeding	Secondary Breeding	Winter Habitat
Falcon							Riparian	
Pinyon Jay	X	X	X	X	X	Pinyon-Juniper	Ponderosa Pine	Pinyon-Juniper
Prairie Falcon	X	X	X	X	X	Cliff	High Desert Scrub	Agriculture
Pygmy Nuthatch	X				X	Ponderosa Pine	Aspen	Ponderosa Pine
Red-naped Sapsucker	X	X	X	X	X	Aspen	Mixed Conifer	Mountain Riparian
Sage Sparrow	X	X	X	X	X	Shrubsteppe	High Desert Scrub	Low Desert Scrub
Sharp-tailed Grouse	X	X				Shrubsteppe	Grassland	Grassland
Snowy Plover	X	X			X	Playa	Playa	Migrant
Swainson's Hawk	X	X		X	X	Agriculture	Aspen	Migrant
Three-toed Woodpecker	X					Sub-Alpine Conifer	Lodgepole Pine	Sub-Alpine Conifer
Virginia's Warbler	X	X	X		X	Northern Oak	Pinyon Juniper	Migrant
Williamson's Sapsucker	X	X			X	Sub-Alpine Conifer	Aspen	Migrant
Wilson's Phalarope		X		X		Wetland	Water	Migrant
Yellow-billed Cuckoo *	X	X	X		X	Lowland Riparian	Agriculture	Migrant

[A] PIF – Partners in Flight
[B] BCC – Birds of Conservation Concern (FWS)
[C] Bold = PIF
Regular = BCC
* = Both Lists
List provided by Diana Wittington, Utah Field Office, U.S. Wildlife and Wildlife Service
*The species listed in Table 3.13.1 have habitat within river corridors of at least one of the 86 eligible river segments. The species with an * are dependent on the river corridor for primary or secondary breeding, or winter habitat. Those species without an * are not river-dependent, i.e., they may use the river to obtain water, but are not dependent on it for part of their life cycle.

Management Indicator Species

Table 3.13.2 lists terrestrial Management Indicator Species (MIS) by forest.

Table 3.13.2. Management indicator species of the five National Forests of Utah.

Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Golden eagle *Aquila chrysaetos*	x			x		
Northern goshawk *Accipiter gentilis*	x	X	x	x	x	x
White-tailed ptarmigan *Lagopus leucurus*	x					
Sage grouse *Centrocercus urophasianus*	x					
Wild turkey *Meleagris gallopavo*		x				
Warbling vireo * *Vireo gilvus*	x					
Lincoln sparrow *Melospiza lincolnii*	x		x			
Red-naped sapsucker *Sphyrapicus nuchalis*	x					
Northern flicker *Colaptes auratus*		X				

Species	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Hairy woodpecker *Picoides villosus*			x			
Song sparrow *Melospiza melodia*	x		x			
Brewer's sparrow *Spizella breweri*			x			
Vesper sparrow *Pooecetes gramineus*			x			
Sage thrasher *Oreoscoptes montanus*			x			
Northern three-toed woodpecker *Picoides tridactylus*					x	
Western bluebird *Sialia mexicana*			x			
Mountain bluebird *Sialia currucoides*			x			
MacGillivray's warbler *Oporornis tolmiei*			x			
Yellow warbler * *Dendroica petechia*			x			
Elk *Cervus canadensis*	x	X	x	x		
Mule deer *Odocoileus hemionus*	x	X	x	x		
Abert squirrel *Sciurus aberti*				x		
Beaver * *Castor canadensis*					x	x
Snowshoe hare *Lepus americanus*						x

*The species listed in Table 3.13.1 have habitat within river corridors of at least one of the 86 eligible river segments. The species with an * are dependent on the river corridor for primary or secondary breeding, or winter habitat. Those species without an * are not river-dependent, i.e., they may use the river to obtain water, but are not dependent on it for part of their life cycle.

Endangered, Threatened, Proposed, Candidate, and Sensitive Species

Table 3.13.3 lists terrestrial endangered, threatened, and Forest Service sensitive species (TES) by forest. A complete listing of all TES by forest is contained in Appendix C.2

Table 3.13.3. Five National Forests in Utah proposed, endangered, threatened and sensitive terrestrial species (from regional list (12/03) (technical edits 7/04). Known/suspected distribution by forest.

	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
ENDANGERED						
Birds						
Southwestern willow flycatcher * *Empidonas trallii extimus*		X	x	x		
THREATENED						
Mammals						
N. American lynx *Lynx canadensis*	?			?	?	?
Utah prairie dog *Cynomys parvidens*		X	x			
Birds						
Mexican spotted owl Strix occidentalis lucida		X	x	x		
Reptiles/Amphibians						

	Ashley NF	Dixie NF	Fishlake NF	Manti-La Sal NF	Uinta NF	Wasatch-Cache NF
Desert tortoise *Gopherus agassizii*		?				
CANDIDATE						
Birds						
Mountain plover *Charadrius montanus*	x					
FOREST SERVICE SENSITIVE						
Mammals						
Pygmy rabbit *Brachylagus idahoensis*		X	x		?	?
Spotted bat *Euderma maculatum*	x	X	x	x	x	x
N. American Wolverine *Gulo gulo*	?					?
Western big-eared bat *Corynorthinus townsendii pallescens*	x	X	x	x	x	x
Birds						
Bald eagle * *Haliaeetus leucocephalus*	x	X	x	x	x	x
Boreal owl *Aegolius funereus*	x					x
Greater sage grouse *Centrocercus urophasianus*	x	?	x	x	x	x
Peregrine falcon *Falco peregrinus anatum*	x	X	x	x	x	x
Flammulated owl *Otus flammeoulus*	x	X	x	x	x	x
Three-toed woodpecker *Picoides tridactylus*	x	X	x	x	x	x
Great gray owl *Strix nebulosa*	x					x
Columbia sharp-tail grouse *Tympanuchus phasianellus columbianus*						x
Northern goshawk Accipiter gentillis	x	X	x	x	x	x
Reptiles/Amphibians						
Columbia spotted frog * *Rana luteiuentris*	?			x	x	x

x = known distribution species and/or habitat
? = suspected or potential habitat
o = offsite impacts (e.g., downstream)
*The species listed in Table 3.13.1 have habitat within river corridors of at least one of the 86 eligible river segments. The species with an * are dependent on the river corridor for primary or secondary breeding, or winter habitat. Those species without an * are not river-dependent, i.e., they may use the river to obtain water, but are not dependent on it for part of their life cycle.

Environmental Consequences
Introduction

There are two factors that run consistently through a discussion of comparing alternatives to designate suitable segments of wild, scenic and recreational streams. These are:

1. There will be no ground disturbing activities in determining suitability.
2. Designation of a stream segment as wild, scenic or recreational is another layer of protection for that segment.

Appendix VIII in the Wasatch-Cache Forest Plan, "Protection Standards for Eligible Wild and Scenic River Segments," lists standards to be applied for each designation. These standards are essentially the same for all five National Forests. They are:

Wild Rivers: No protection specifically for wildlife. Standards that regulate timber production, water supply, hydroelectric power, flood control, mining, road construction, agriculture, recreational development, structures, utilities and motorized travel all protect habitat and excessive intrusions into these river corridors.

Scenic Rivers: No protection specifically for wildlife. Standards that regulate timber production, water supply, hydroelectric power, flood control, mining, road construction, agriculture, recreational development, structures, utilities and motorized travel are identified but are somewhat less restrictive than those for wild rivers.

Recreational Rivers: Standards are less regulatory than with wild and scenic rivers but still somewhat restrictive. "Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, wildlife, and other values."

Discussion

The decision being made does not include any ground disturbing activities. Some alternatives and stream segment classifications allow ground disturbing activities, but when they come out in an official project proposal they will be subject to site specific NEPA.

Alternative 1 – No action, maintain eligibility of all river segments.

All 86 river segments (840 miles) would continue to be managed as eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification, and ORVs (see Table 3.1.2 for description of interim management). All Alternative 1 would provide the most protection to wildlife since all 86 segments (840 miles) would be managed as "eligible."

Alternative 2 – No rivers recommended.

In this alternative, a determination would be made that all 86 segments (840 miles) are found not suitable and released from Wild and Scenic River interim protection. Protection of river values would continue to be managed by existing laws and regulations and standards provided in Forest Plans. Alternative 2 would provide the least protection to wildlife since no stream segment would be identified as suitable and all eligible designations would be dropped.

Effects Common to Alternatives 3 through 7

In descending order of protection come Alternative 5 (50 segments, 530 miles), Alternative 6 (40 segments, 441 miles), Alternative 3 (43 segments, 370 miles), Alternative 7 (10 segments, 108 miles), and Alternative 4 (3 segments, 45 miles).

All terrestrial species can be affected by successional stages and age class in a vegetation community. Any change in vegetation diversity, juxtaposition, or age class will be beneficial to some species and a detriment to others. Big game is affected the least because of mobility and how they use variations in vegetation (hiding cover, thermal cover, and foraging). Many species (game and non-game) have adapted, to some degree, in the same way. Migratory birds may be the least adapted. Ground nesting migratory birds prefer an abundance of grasses, forbs, and shrubs to help hide nests and make little use of areas without ground cover. Canopy nesting birds may pay little attention to ground cover but are tied to canopies, canopy cover and their height above the ground.

Management indicator species (MIS) are listed by Forest are found in Table 3.13.2 (terrestrial species only). With no ground disturbing activities there is no change expected in population trends for any terrestrial species. Aquatic species are discussed in Section 3.5 – Fish and Other Aquatic Species and plant species is discussed in Section 3.4 – Botanical Resources section of this document.

Federally listed species and Forest Service sensitive species are listed by Forest in Table 3.13.3 (terrestrial species only). It has been determined that there will be no effect/no impact on terrestrial TES species because there are no ground disturbing activities proposed in this action. Determinations for aquatic and botanical species will be discussed in their appropriate sections of this document. All will be covered in the biological evaluation and biological assessment.

Protection of an area from ground disturbing activities allows the area to proceed through natural successional stages and leads to mature and old age classes of vegetation favoring species that prefer mature and old age classes. Whether protected or not, catastrophic natural events such as fire, flood, wind, and disease can affect succession and age class diversity within vegetation types in all stages of succession.

3.14 Cumulative Effects Analysis

"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (§ 1508.7, CEQ Regulations).

Decisions as a result of this National Environmental Policy Act (NEPA) process could combine with other past, present, and reasonably foreseeable future actions to produce cumulative impacts to resources within the National Forests in Utah. During the eligibility process, Forests worked with other surrounding Federal agencies (where applicable). As the Forest Service moved forward into this NEPA process, the BLM and the State of Utah became cooperating agencies.

Assessing the cumulative impacts of designation involved the following assumptions:

- Wild and scenic river management actions are restricted to National Forest System lands in Utah, Colorado, and Wyoming managed by the National Forests in Utah.
- Portions of the river corridor under nonfederal ownership or management would be excluded.
- Congressional action to include rivers in the National Wild and Scenic River System would not affect the use of private property.
- Designation does not open nonfederal lands to public access. The right to buy and sell property will not be affected.
- Ongoing management actions currently being implemented would occur on National Forest System lands in which the river corridors are located.

In March 1999, the St. George Field Office completed their Record of Decision and Resource Management Plan (USDI BLM 1999). In February 2000, the Grand Staircase-Escalante National Monument completed their Approved Management Plan Record of Decision (USDI BLM 2000). In September 2008, the Monticello Field Office completed its Proposed Resource Management Plan and Final Environmental Impact Statement, but has not signed a final decision. It is possible that when the BLM approves the final decision for the Monticello Field Office that the Preferred Alternative and determination of suitability may differ from what is presented in Appendix B. However, this is the best available data. In October 2008, the Kanab Field Office, Moab, Price, Richfield, and Vernal Field Offices

of the BLM completed their Record of Decisions and Approved Resource Management Plans (USDI BLM 2008). Appendix B has a list of rivers considered by the Grand Staircase-Escalante National Monument and Kanab, Moab, Monticello, Price, Richfield, St. George, and Vernal Field Offices (BLM) and a determination of suitability or eligibility.

The Grand Staircase-Escalante National Monument (BLM) considered wild and scenic rivers in the Grand Staircase-Escalante National Monument Management Plan (effective February 2000). The GSENM found five segments eligible and suitable on BLM land. At that time, eight stream segments on the Dixie National Forest were found eligible for a suitability analysis and potential recommendation by the interagency planning process that included the Grand Staircase Escalante National Monument (BLM) and the Glen Canyon National Recreation Area (National Park Service). The eligibility results of this process are found within the Grand Staircase Escalante National Monument Management Plan and Final Environmental Impact Statement, which can be found on the web at: http://www.ut.blm.gov/monument/planning-index.php.

In addition to the BLM, there are National Park Service (NPS) lands located in Utah that could find segments eligible and/or suitable. Two National Park Service units in Utah have completed Wild and Scenic River suitability determinations during their General Management Plan process. They are Natural Bridges National Monument and Zion National Park. Those river segments are listed in Appendix B.

Some of the Forest Service's eligible river segments are adjacent to or have State of Utah and Utah School and Institutional Trust Land Administration (SITLA) Lands in between eligible portions of segments. There are no rivers being recommended as eligible on these State lands.

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,400 free-flowing river segments in the United States that are believed to possess one or more "outstandingly remarkable" natural or cultural values judged to be of more than local or regional significance. Under a 1979 Presidential Directive, and related Council on Environmental Quality procedures, all federal agencies must seek to avoid or mitigate actions that would adversely affect one or more NRI segments. The Team reviewed the NRI list and made a table of river segments that are eligible and being studied in this NEPA process (see project record - Barker 2007). For the complete list, see the NRI website, available on the web at: http://www.nps.gov/ncrc/programs/rtca/nri/index.html.

The Wild and Scenic Rivers Team also reviewed the NRI list for Wyoming and Colorado for the Roc Creek (Montrose County, Colorado) and West Fork Smiths Fork (Uinta County, Wyoming) river segments. These were not on the NRI list and will not be discussed further under cumulative effects.

The Wild and Scenic Rivers Team reviewed the BLM and NPS tables in Appendix B of this document and Appendix A – Suitability Evaluation Reports of this document, and the National Rivers Inventory (Barker 2007) and developed Table 3.14.1. The table lists all segments determined to be eligible on National Forest System lands in Utah that may connect or lie adjacent to other public lands and whether or not they will be discussed further.

Table 3.14.1. Eligible river segments on National Forest System lands in Utah, which agency they connect or lie adjacent to, and whether they will be analyzed further in this section.

Eligible National Forest River Segment	River Mile Segment Description	BLM	NPS	Will these segments be discussed further?
Ashley NF				
Ashley Gorge Creek	• 0-9.09 Ashley NF • 9.09-10.16 BLM	Vernal FO - Not Eligible.	N/A.	No
Green River * Note – The Green River	• 0-5 Ashley NF • 5-7 DWR, State of Utah (south side of river) and	Vernal FO – Eligible and Suitable Upper Green River – Between Little	Multiple - Eligible.	Yes, but only portion connected to Ashley National Forest (Vernal

Eligible National Forest River Segment	River Mile Segment Description	BLM	NPS	Will these segments be discussed further?
is considered eligible across multiple Federal boundaries (i.e., NPS, BLM) throughout the State of Utah, but only on the Ashley NF for this process.	Ashley NF (north side) • 7-12.6 BLM (south side) Ashley NF (north side)	Hole and Utah state line. Moab FO – Suitable. Price FO – Suitable.		FO) will be analyzed - State of Utah, BLM, NPS
Lower Dry Fork	• 0-4.6 Ashley NF • 4.6-5.6 Private land • 5.6-7.35 BLM	Vernal FO - Not Eligible.	N/A.	No
Dixie NF				
Death Hollow Creek	0-9.6 Dixie NF (from headwaters to forest boundary). Segment flows from Dixie NF to GSENM.	GSENM - Eligible and Suitable.		Yes - BLM
Mamie Creek	0-2 Dixie NF (from headwaters to Forest boundary (Box-Death Hollow Wilderness Boundary)	GSENM - Eligible and Suitable.		Yes - BLM
North Fork Virgin River *Note East Fork Virgin River, North Fork Virgin River, and Virgin River being considered across multiple Federal boundaries (i.e., BLM, NPS) and in Arizona and Nevada.	0-9.6 Dixie NF (from headwaters to forest boundary).	Kanab FO - North Fork Virgin River Eligible and Suitable. • Segment 48-49 Section 31 - 33 (northeast of Zion NP). St. George FO – BLM managed portion of Zion NP.	Zion NP – Eligible and Suitable.	Yes - BLM, NPS
Fishlake NF				
Cottonwood Canyon *Located on Dixie NF, but administered by Fishlake NF	0-6.3 *Dixie NF (flows from Dixie NF to GSENM)	Moab Field Office – Not Suitable. GSENM - Eligible, but not Suitable.		No
Fish Creek	0-17 Fishlake NF (from its point or origin to confluence with clear creek)	Richfield FO – Not Suitable.		No
Slickrock Canyon *Located on Dixie NF, but administered by Fishlake NF	0-1.6 *Dixie NF (flows from *Dixie NF to GSENM)	GSENM - Eligible and Suitable.		Yes - BLM
Steep Creek *Located on Dixie NF, but administered by Fishlake NF	• 0-5.3 *Dixie NF • 5.3-5.6 GSENM • 5.6-7.6 *Dixie NF	GSENM - Eligible and Suitable.		Yes - BLM
The Gulch *Located on Dixie NF, but administered by Fishlake NF	0-2.1 *Dixie NF (flows from *Dixie NF to GSENM)	GSENM - Eligible and Suitable.		Yes - BLM
Manti-La Sal NF				
Hammond Canyon	• 0-7.2 Manti-La Sal NF • 7.2-7.6 Tribal land • 7.6-8.2 Manti-La Sal NF • 8.2-8.3 Tribal land • 8.3-10.7 Manti-La Sal NF	Monticello FO - Not Eligible.		Yes - Tribal Land
Huntington Creek	• 0-16.01 Manti-La Sal NF mixed with private land	16.01-18.34 BLM mixed with private land. The BLM Price Field Office has coordinated with the Manti-La Sal NF and agrees with their		No, In a meeting prior to establishing eligible rivers, the Manti-La Sal and Price Field Office agreed on an ending point for Huntington

Eligible National Forest River Segment	River Mile Segment Description	BLM	NPS	Will these segments be discussed further?
		preliminary determination that Huntington Creek is eligible for Wild and Scenic River Designation. The BLM defers to the Forest Service for determinations of eligibility and suitability on these lands.		Creek. Since there was little BLM land involved, the BLM asked the Forest to analyze this segment. Nineteen miles of this segment, which includes BLM and National Forest System lands has been analyzed in direct and indirect effects. Therefore, it won't be analyzed in the cumulative effects section.
Chippean Canyon & Allen Canyon	• 0-9.6 Manti-La Sal NF mixed with private land • 9.6-14.6 Private land • 14.6-14.7 BLM	Monticello FO - Not Eligible.		No
Lower Dark Canyon	0-41.2 Manti-La Sal NF	Monticello FO – Eligible and Suitable. • Forest boundary to Glen Canyon NRA below Young's Canyon		Yes - BLM
Wasatch-Cache				
Beaver Creek: South boundary of State land to confluence with Logan River	• 0-2.5 Wasatch-Cache NF • 2.5-3.1 Utah State Land (SITLA)	¼ mile corridor on SITLA at beginning of segment.		Yes – State of Utah Land
Boundary Creek: source to confluence with East Fork Bear River	• 0-3.8 - Wasatch-Cache NF • 3.8-4.3 – Utah State land, administered by Boy Scouts of America			Yes – State of Utah Land
Logan River: Idaho state line to confluence with Beaver Creek	• 0-0.6 Wasatch-Cache NF • 0.6-1.7 Private Land • 1.7-5.6 Wasatch-Cache NF • 5.6-5.8 Utah State Land (SITLA) • 5.8-5.9 Wasatch-Cache NF • 5.9-6.2 Utah State Land (SITLA)			No
Temple Fork: source to confluence with Logan River	0-6.3 Wasatch-Cache NF * Utah State Land within ¼ mile buffer			Yes – State of Utah Land

Cumulative Effects Analysis Area

The cumulative effects analysis area is composed of the Forest Service's eligible river segments and those eligible and/or suitable segments being considered by other Federal agencies for designation that lie within the river segment or river corridor and connect directly to the eligible river segment. This section also briefly discusses the river segments that have Tribal or State of Utah lands within or adjacent to the Forest Service's eligible river segments.

The Green River and North Fork Virgin River National Park Service (NPS) eligible segments are outside of the cumulative effects analysis area, therefore, they will not be discussed further under the NPS context. They will be discussed where river segments located on National Forest System lands connect

directly to BLM segments.

Cumulative Effects to BLM River Segments

The Green River, Death Hollow Creek, Mamie Creek, North Fork Virgin River, Slickrock Canyon, Steep Creek, The Gulch, and Lower Dark Canyon are BLM river segments that connect to or lie adjacent or within eligible river segments being considered on National Forests in Utah. Table 3.14.2 displays a summary of mileage, classification, and ORV and which Forest Service action alternative they are currently in.

Table 3.14.2. A description of mileage, classification, ORVs, and alternatives for river segments eligible on both USFS and BLM lands.

River Segment	River Mile Segment Description	Miles	Classification	ORVs	County	Found Suitable in USFS Alternative
Green River (USFS Ashley NF)	• 0-5 Ashley NF • 5-7 Ashley NF (north side) • 7-12.6 BLM (south side) Ashley NF (north side)	13	Scenic	Scenic, Recreational, Fish, Wildlife, Historic, Cultural	Daggett	3, 5, 6, 7
Green River (BLM - Vernal Field Office)	Upper Green River • Between Little Hole and Utah state line.	22	Scenic	Scenic, Recreational, Fish and Wildlife Habitat, Cultural	Uintah	
Death Hollow Creek (USFS Dixie NF)	0-9.6 Dixie NF (from headwaters to forest boundary). Segment flows from Dixie NF to GSENM.	10	Wild	Scenic, Recreational	Garfield	3, 5, 6, 7
Death Hollow Creek (BLM GSENM)	GSENM Boundary to (T34S, R3E, S3) to Mamie Creek (T34S, R3E, S36).	9.9	Wild	High scenic quality, part of ONA, southwestern willow flycatcher habitat, prehistoric sites, dinosaur tracks, and riparian areas.	Garfield	
Mamie Creek (USFS Dixie NF)	0-2 Dixie NF (from headwaters to Forest boundary (Box-Death Hollow Wilderness Boundary)	2	Wild	Scenic, Recreational	Garfield	3, 5, 7
Mamie Creek and west tributary (BLM GSENM)	GSENM Boundary to (T34S, R3E, S16) to Escalante River (T35S, R4E, S10).	9.2	Wild	High scenic quality, part of ONA, high recreational use, natural bridge, fish and wildlife habitat, prehistoric and historic sites including an historic mail trail, and riparian area.	Garfield	
North Fork Virgin River (USFS Dixie NF)	0-9.6 Dixie NF (from headwaters to forest boundary).	1	Scenic	Scenic/Geologic, Recreational	Kane	3, 5, 6, 7
North Fork Virgin River (BLM GSENM and Kanab Field Office)	Kanab FO - North Fork Virgin River • Segment 48-49 Section 31-33 (northeast of Zion NP)	Kanab FO – 2.2	Wild	Scenic, Wildlife, Recreational	Kane	
Slickrock Canyon (USFS Dixie NF) *Located on Dixie NF,	0-1.6 *Dixie NF (flows from *Dixie NF to GSENM)	2	Wild	Scenic, Recreational, Cultural, Ecological	Garfield	5

River Segment	River Mile Segment Description	Miles	Classification	ORVs	County	Found Suitable in USFS Alternative
but administered by Fishlake NF						
Slickrock Canyon (BLM GSENM)	GSENM boundary (T33S, R5E, S22) to Deer Creek (T33S, R5E, S33)	2.8	Wild	High quality scenery, recreational values, prehistoric sites, and riparian areas.	Garfield	
Steep Creek (USFS Dixie NF) *Located on Dixie NF, but administered by Fishlake NF	• 0-5.3 *Dixie NF • 5.3-5.6 GSENM • 5.6-7.6 *Dixie NF	7	Wild	Scenic, Recreational, Ecological	Garfield	(4 miles Alt 3), 5
Steep Creek (BLM GSENM)	GSENM boundary (T33S, R5E, S24) to The Gulch (T34S, R5E, S12).	6.4	Wild	High quality scenery, recreational values, and riparian areas	Garfield	
The Gulch (USFS Dixie NF) *Located on Dixie NF, but administered by Fishlake NF	0-2.1 *Dixie NF (flows from *Dixie NF to GSENM)	2	Recreational	Scenic, Recreational, Cultural	Garfield	3, 5
The Gulch 1 (BLM GSENM)	GSENM boundary (T32S, R6E, S32) to Burr Trail Road (T34S, R5E, S13)	11	Wild	High quality scenery, outstanding recreation, natural arch, peregrine falcon habitat, riparian area, and petrified wood	Garfield	
The Gulch 2 (BLM GSENM)	Along Burr Trail Road to T34S, R5E, S13	0.6	Recreational	Same	Garfield	
The Gulch 3 (BLM GSENM)	Below Burr Trail Road to Escalante River (T35S, R5E, S36)	13	Wild	Same	Garfield	
Lower Dark Canyon (USFS Manti-La Sal NF)	0-41.2 Manti-La Sal NF	41	Wild	Cultural	San Juan	5, 6
(Lower) Dark Canyon (BLM Monticello FO)	Dark Canyon • Forest boundary to Glen Canyon NRA below Young's Canyon.	6.4	Wild	Scenic, Recreation, Wildlife	San Juan	

Effects Common to All Alternatives

State or Tribal lands occur adjacent or within the following river corridors: the Green River, Hammond Canyon, Beaver Creek, Boundary Creek, and Temple Fork. Designation of a Wild, Scenic, and/or Recreational river could cumulatively impact State of Utah lands or Tribal Nation lands with split estates because designation of a Wild and Scenic River could lead to no surface occupancy or no leasing of Federal land for ¼ mile on each side of the center of the river segment. The inability to lease or develop Federal lands may make it unfeasible to lease or develop adjacent State or Tribal lands. However, other activities could continue of those lands where the State of Utah or Tribal Governments own both surface and the estate below ground, regardless of a Wild, Scenic, or Recreational designation on National Forest System lands thus leaving them relatively unaffected.

Alternative 1 – No action, maintain eligibility of all river segments.

Under the No Action Alternative, all 86 river segments (840 miles) would continue to be managed as

eligible for their potential inclusion into the National System, and the Forest Service would continue to use its existing authorities to protect free flow, water quality, recommended classification, and ORVs. This would include those eight segments in the cumulative effects analysis area: Green River, Death Hollow Creek, Mamie Creek, North Fork Virgin River, Slickrock Canyon, Steep Creek, The Gulch, and Lower Dark Canyon. Refer to Table 3.1.2 for a description of interim management. Management would continue to be in accordance with existing laws and regulations and Forest Plans. If Alternative 1 is selected, regardless of future BLM decisions, the eligible river segments on National Forest System lands will continue to be protected and managed by the Forest Service.

In this alternative, no Comprehensive River Management Plan would be created to protect ORVs, so coordination between agencies would not necessarily occur.

On approximately 10 miles of segments classified as Wild not in a designated Wilderness area, mineral leasing and claims would continue as there would be no withdrawal from mineral entry. For most segments there are no Bureau of Reclamation Withdrawals and there would be no dramatic change in ecological resources, as this resource would be managed as per Forest Plan standards. For Huntington Creek and the Green River where there are existing BOR withdrawals, the potential for dam enlargement and other water projects continues to exist. These projects could dramatically change the ability to protect river values.

Alternative 2 – No rivers recommended.

Under this alternative, a determination is made that all 86 river segments (840 miles) are not suitable and released from Wild and Scenic River interim protection, including those eight segments in the cumulative effects analysis area: Green River, Death Hollow Creek, Mamie Creek, North Fork Virgin River, Slickrock Canyon, Steep Creek, The Gulch, and Lower Dark Canyon. Protection of river values would revert to the direction provided in the underlying Forest Plans for the area, and existing laws and regulations. Choosing this alternative would not in itself initiate any changes to river segments nor would it provide any additional protection.

Over time, without designation, dams and other water projects could be approved for some segments, depending on area management standards, possibly resulting in the creation of reservoirs and associated facilities. If reservoirs are developed on some of the main rivers such as Huntington Creek, the change would be dramatic. The change could be from a moving river and associated canyon and riparian areas, to a flat water reservoir. Values associated with rivers would be greatly affected, as would the values on adjoining river segments managed by the BLM.

Seventeen segments (52 miles) will not be affected by water development projects or other activities. Segments would be managed as per land management plan objectives and existing laws and regulations. Segments without water resource development potential, or in extremely rugged, inaccessible areas, may remain undeveloped. Additionally, approximately 400 miles of eligible river segments are located in Wilderness and Research Natural Areas will generally remain unaffected.

Alternative 3 – Recommend rivers that best represent Utah ORVs while having the least affect on existing or reasonably foreseeable future water resources projects and other developmental activities.

Under this alternative, the Forest Service would find suitable all segments listed in Chapter 2, Table 2.2.1. Direct and indirect effects to that list of rivers have been analyzed by resource area in Chapter 3. Alternative 3 would include the following six river segments in the cumulative effects analysis area: Green River, Death Hollow Creek, Mamie Creek, North Fork Virgin River, Steep Creek (4 miles only),

and The Gulch. On all segments under this alternative, Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, recommended classification, and ORVs, and require that a comprehensive river management plan within three years of designation.

The **Green River** is currently eligible and classified as Scenic by the Vernal Field Office (BLM) and the Ashley National Forest. The BLM has also recommended it as suitable in their Record of Decision and Resource Management Plan (USDI BLM 2008). If the USFS and BLM find the Green River suitable, it would protect 35 miles (13 miles USFS and 22 miles BLM). It would also protect the following ORVs: Scenic, Recreational, Fish, Wildlife, Historic, Cultural (USFS) and Scenic, Recreational, Fish and Wildlife Habitat, Cultural (BLM). This river segment would be located in both Daggett (USFS) and Uintah (BLM) Counties, and essentially stretch from the Ashley NF below Flaming Gorge Dam to the Utah State line.

The Green River has one road right of way and other right of ways (see Section 3.9). Although the Green River has an existing BOR withdrawal, there are no reasonably foreseeable future water resources projects or activities that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 35 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

The Green River is considered eligible across multiple Federal boundaries (i.e., NPS, BLM) throughout the State of Utah, but the segment is only being analyzed on the Ashley National Forest. The Green River has a total of 565 additional miles (outside the cumulative effects analysis area) being considered in the State of Utah. If both the BLM and the Forest Service find this segment suitable, it could possibly result in one of the larger river segment systems in the State of Utah.

Death Hollow Creek is currently eligible and classified as Wild and by both the USFS and the GSENM (BLM). The BLM has also determined it is suitable (USDI BLM 2000). If the USFS and BLM find Death Hollow Creek suitable, it would protect 19.9 miles (10 miles USFS and 9.9 miles BLM). It would also protect the following ORVs: Scenic, Recreational (USFS) and High scenic quality, part of ONA, southwestern willow flycatcher habitat, prehistoric sites, dinosaur tracks, and riparian areas (BLM). It is located in Garfield County and would stretch from its headwaters on the Dixie NF to Mamie Creek (T34S, R3E, S36) on the GSENM.

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 19.9 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

Mamie Creek is currently eligible and classified as Wild by the GSENM (BLM) and USFS. The BLM has also determined it is suitable (USDI BLM 2000). If the USFS and BLM find Mamie Creek suitable, it would protect 11.2 miles (2 miles USFS and 9.2 miles BLM). It would also protect the following ORVs: Scenic, Recreational, (USFS) and High scenic quality, part of ONA, high recreational use, natural bridge, fish and wildlife habitat, prehistoric and historic sites including an historic mail trail, and riparian area (BLM). It is located in Garfield County and would stretch from its headwaters on the Dixie NF to the Escalante River (T35S, R4E, S10) on the GSENM.

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it

would protect 11.2 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

North Fork Virgin River is currently eligible and classified as Wild by the Kanab Field Office (BLM), Wild and Recreational by Zion National Park, and Scenic by the Dixie National Forest. It is also recommended as suitable by the Kanab Field Office in their Record of Decision and Approved Management Plan (USDI BLM 2008) and Zion National Park in their General Management Plan (USDI NPS 2001). The North Fork Virgin River would stretch from its headwaters on the Dixie NF to the Forest boundary (1 mile), exclude approximately 7 miles of private property and BLM lands, include 2.2 miles located in Section 31-33 on the BLM lands (Kanab Field Office), and include 18 miles located at the northeast corner of Zion National Park. If the USFS, BLM, and NPS find North Fork Virgin River suitable, it would protect 21.2 miles (1 mile USFS, 2.2 miles BLM, and 18 miles NPS). It would also protect the following ORVs: Scenic, Geologic, Recreational (USFS) and Scenic, Wildlife, Recreational (BLM). It is located in Kane County and would stretch from its headwaters on the Dixie NF to the Forest boundary and include Segment 48-49 Section 31-33 (northeast of Zion NP) located on the BLM (Kanab Field Office).

There is a potential coal reserve on the North Fork Virgin River. There are no reasonably foreseeable future water resources projects or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 3.2 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

The East Fork Virgin River, North Fork Virgin River, and Virgin River are being considered across multiple Federal boundaries (i.e., BLM, NPS) and in Arizona and Nevada. The Virgin River (including North and East Forks) has an additional 104 miles outside of the cumulative effects analysis area being considered in Utah. The Virgin River is also being considered in Arizona and 106 miles in Nevada. If Congress decides to add this to the National Wild and Scenic River System, it could quite possibly result in one of the larger river segments in the State of Utah.

Steep Creek is currently eligible and classified as Wild by the GSENM (BLM) and the USFS. The BLM has also determined it is suitable (USDI BLM 2000). If the USFS and BLM find Steep Creek suitable, it would protect 10.4 miles (4 miles only for this alternative USFS and 6.4 miles BLM). It would also protect the following ORVs: Scenic, Recreational, Ecological (USFS) and High quality scenery, recreational values, and riparian areas (BLM). It is located in Garfield County and would include segments on the Dixie NF and a segment from the GSENM boundary (T33S, R5E, S24) to The Gulch (T34S, R5E, S12).

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 10.4 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

The Gulch is currently eligible and classified as Wild and Recreational by the GSENM (BLM) and Recreational by the USFS. The BLM has also determined it is suitable (USDI BLM 2000). If the USFS and BLM find The Gulch suitable, it would protect 26.6 miles (2 miles USFS and 24.6 miles BLM). It would also protect the following ORVs: Scenic, Recreational, Cultural (USFS) and High quality scenery, outstanding recreation, natural arch, peregrine falcon habitat, riparian area, and petrified wood (BLM). It is located in Garfield County and would stretch from (T32S, R6E, S28) on the Dixie NF to the GSENM

boundary (T33S, R6E, S32) and include The Gulch 1, 2, and 3 segments to the Escalante River (T35S, R5E, S36).

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 26.6 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

Segments not found suitable would be released from Wild and Scenic River interim protection and effects similar to Alternative 2 may occur.

Alternative 4 – Recommend rivers that best represent Utah ORVs that could be adversely affected by existing or reasonably foreseeable future water resources projects and other developmental activities.

In a meeting prior to establishing eligible rivers, the Manti-La Sal and Price Field Office agreed on an ending point for Huntington Creek. Since there was little BLM land involved, the BLM asked the Forest to analyze this segment. Nineteen miles of Huntington Creek, which includes BLM and National Forest System lands has been analyzed in direct and indirect effects. Therefore, it won't be analyzed in the cumulative effects section.

Alternative 5 – Recommend rivers with low cost for management that are consistent with other Federal wild and scenic studies and which have limited negative impact to community economic development.

Under this alternative, the forest would find suitable all segments listed in Table 2.2.3. Direct and indirect effects to that list of rivers have been analyzed by resource area in Chapter 3. This would include eight segments in the cumulative effects analysis area, including: Green River, Death Hollow Creek, Mamie Creek, North Fork Virgin River, and The Gulch (see analysis under Alternative 3), and Slickrock Canyon, Steep Creek, and Lower Dark Canyon. On all segments under this alternative, Congressional action would protect segments from all federally assisted water development projects that would adversely affect a river's free flowing condition, water quality, recommended classification, and ORVs, and require that a comprehensive river management plan within three years of designation.

Steep Creek is currently eligible and classified as Wild by the GSENM (BLM) and the USFS. The BLM has also determined it is suitable (USDI BLM 2000). If the USFS and BLM find Steep Creek suitable, it would protect 13.4 miles (7 miles USFS and 6.4 miles BLM). It would also protect the following ORVs: Scenic, Recreational, Ecological (USFS) and High quality scenery, recreational values, and riparian areas (BLM). It is located in Garfield County and would include segments on the Dixie NF and a segment from the GSENM boundary (T33S, R5E, S24) to The Gulch (T34S, R5E, S12).

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 13.4 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

Slickrock Canyon is currently eligible and classified as Wild by the GSENM (BLM) and the USFS. The BLM has also determined it is suitable (USDI BLM 2000). If the USFS also finds Steep Creek suitable, it would protect 4.8 miles (2 miles USFS and 2.8 miles BLM). It would also protect the following ORVs:

Scenic, Recreational, Cultural, Ecological (USFS) and High quality scenery, recreational values, prehistoric sites, and riparian areas (BLM). It is located in Garfield County and would stretch from (T33S, R5E, S9) on the Dixie NF to Deer Creek on the GSENM (T33S, R5E, S33).

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segment. If both the BLM and Forest Service found this segment suitable, it would protect 4.8 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

Lower Dark Canyon is currently eligible and classified as Wild by the Monticello Field Office (BLM) and the USFS (USDI BLM 2008). If the USFS and BLM find Lower Dark Canyon suitable, it would protect 47.4 miles (41 miles USFS and 6.4 miles BLM). It would also protect the following ORVs: Cultural (USFS) and Scenic, Recreation, Wildlife (BLM). It is located in San Juan County and would include a segment on the Manti-La Sal NF and the Youngs Canyon to Glen Canyon National Recreation Area on the BLM.

There are no reasonably foreseeable future water resources projects, mineral activities, or rights of ways that would impact the river segments. If both the BLM and Forest Service found this segment suitable, it would protect 47.4 miles of the ORVs listed in the previous paragraph. In addition, both agencies would continue to protect free-flow and water quality which could result in long-term beneficial impacts to plants, wildlife, and aquatic species.

Segments not found suitable would be released from Wild and Scenic River interim protection and effects similar to Alternative 2 may occur.

Alternative 6 – Recommend river segments recognized by public groups that represent a diversity of river systems in Utah and those that face future threats.

Under this alternative, the forest would find suitable all segments listed in Chapter 2, Table 2.2.4. Direct and indirect effects to that list of rivers have been analyzed by resource area in Chapter 3. This would include four segments in the cumulative effects analysis area, including: Green River, Death Hollow Creek, North Fork Virgin River (see cumulative effects analysis under Alternative 3), and Lower Dark Canyon (see cumulative effects analysis under Alternative 5).

Segments not found suitable would be released from Wild and Scenic River interim protection and effects similar to Alternative 2 may occur.

Alternative 7 - Recommend river segments that reflect the broad range of public comments and emphasize specific suitability factors.

Under this alternative, the forest would find suitable all segments listed in Chapter 2, Table 2.2.5. Direct and indirect effects to that list of rivers have been analyzed by resource area in Chapter 3. This would include four segments in the cumulative effects analysis area, including: Green River, Death Hollow Creek, Mamie Creek, and North Fork Virgin River (see cumulative effects analysis under Alternative 3).

Segments not found suitable would be released from Wild and Scenic River interim protection and effects similar to Alternative 2 may occur.

3.15 Short-term Uses and Long-term Productivity

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). As declared by the Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

Forest management, practiced under either federal or state standards, ensures that short-term resource activities do not significantly impair the land's long-term productivity. However, in some cases, implementation of the alternatives could impede short-term resource yields, such as water developments, and oil and gas. See Sections 3.12 – Water Resources and Water Developments and Section 3.6 – Mineral Resources for an in depth description of effects by alternative.

3.16 Unavoidable Adverse Effects

None of the alternatives result in use or modification of a resource (ground disturbance); therefore, there would be no unavoidable adverse effects. If a river segment is designated, individual comprehensive river management plans would address mitigation actions to reduce any environmental problems along the recommended river segments.

3.17 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. None of the alternatives result in use or modification of a resource; therefore, there would be no irreversible commitment of resources. Designation of a river segment could protect threatened, endangered, or sensitive fish, wildlife, and plants and eligible or listed historic properties from becoming irreversibly lost due to dam construction.

Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line rights-of-way or a road. Implementation of the alternatives may eliminate or reduce the management of some resources, while increasing management opportunities of others.

In the six action alternatives, there is the potential for some level of irretrievable loss of reasonably foreseeable future water development for those rivers recommended for designation. Designation of a river clearly precludes future dam construction. Several of the rivers have been identified in the past for potential projects at specific sites, the Forest Service has determined that there are reasonably foreseeable projects that could affect 45 miles of river segments. Alternatives 1, 2, and 7 would have the least impact to the irretrievable loss of future options for water development. Alternative 3 would have a moderate impact and Alternative 5 would have a slight impact on the irretrievable loss of future options for water development. Alternatives 4 and 6 would have the most impact.

The withdrawal of lands from mineral entry for Wild rivers is an irretrievable commitment (subject to valid existing rights) if a given river is ultimately designated as Wild and the area is not already withdraw from mineral entry. Alternatives 1 and 2 would have no irretrievable commitment of resources because no Wild rivers found suitable. If designated, 4.3 miles (approximately 1,376 acres) of Fish Creek classified as Wild and located in a Research Natural Area on the Fishlake National Forest would have an irretrievable loss of mineral entry. There would be no impact to river segments with a Wild classification that have been withdrawn from mineral entry previously due to a Wilderness Area designation and

subject to existing, valid rights. Alternatives 3, 5, and 7 would have the largest irretrievable commitment because a portion of Fish Creek (4.3 miles) would be withdrawn from mineral entry if determined suitable.

3.18 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and Departmental Regulation 5600-2 direct federal agencies to integrate environmental justice considerations into federal programs and activities. Environmental justice means that, to the greatest extent practicable and permitted by law, all populations are provided the opportunity to comment before decisions are rendered on, are allowed to share in the benefits of, are not excluded from, and are not affected in a disproportionately high and adverse manner by, government programs and activities affecting human health or the environment. Implementation of any of the alternatives will be consistent with this Order and will not have a discernible effect on minorities, American Indians, women, or the civil rights of any United States Citizen. Nor will it have a disproportionate adverse impact on minorities or low-income individuals. No civil liberties will be affected. Public involvement and comment was sought and incorporated into this document. The Forest Service has considered all public input from individuals or groups regardless of age, race, income status, gender, or other social/economic characteristics. (See project record – scoping letters/DEIS letters).

Executive Order 12898 also directs agencies to consider patterns of subsistence hunting and fishing when an agency action may affect fish or wildlife. While the decision resulting from this analysis may alter the amount of access in the project area provided by the National Forests in Utah, the decision would not alter opportunities for subsistence hunting by Native American tribes. Native American tribes holding treaty rights for hunting and fishing on the National Forests in Utah were provided an opportunity to comment on the proposal. (See project record – scoping letters/DEIS letters).

Based on experience with similar projects, none of the alternatives would substantially affect minority or low-income individuals, women, or civil rights.