

TECHNICAL CORE COMPETENCIES RIVER MANAGEMENT SPECIALISTS AND NON-SPECIALISTS

Version 1.0 – Approved/Recommended for Reference by the Interagency Wild & Scenic Rivers Coordinating Council (3/6/2018)*

This document identifies interagency River Management Technical Core Competencies (knowledge, skills and abilities) needed to implement river management stewardship law, regulation, and policy at three different levels of expertise for two different groups of employees; river management specialists and river management non-specialists. These competencies are intended to be applied to federally designated Wild and Scenic Rivers, non-designated rivers managed by federal agencies, and rivers managed through partnership with federal agencies and state, local and non-governmental organizations.

River Management Specialists are employees having varying levels of responsibilities for river program planning, coordination, partnership development, stakeholder communication, implementation and decision-making, visitor management and safety, natural and cultural resource management, impact monitoring and assessment and other activities.

River Management Non-specialists are employees having varying levels of river program responsibilities, but whose primary duty is not river program management.

River managers and other employees having responsibility for river management, no matter how limited, can use these Competencies to identify gaps between existing and needed river management knowledge, skills, and abilities. With this information, they and their supervisors can develop and prioritize Individual Training and Development Plans. These Competencies can be used by each agency to identify training gaps and to guide development and delivery of training courses specifically designed to bridge these gaps. In 2018, the IWSRCC established a partnership with the River Management Society to create a comprehensive training program. Please contact your agency WSR/River Lead for more information.

Levels of Expertise

Whether 10 percent or 100 percent of an employee's time is dedicated to river management, the

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^{*} NOTE: The intent of this document is to assist river management specialists and non-specialists (and their supervisors) to prioritize individual training and development plans. These competencies can also be used to identify agency and organization training needs, and to help inform the development and delivery of training courses to meet these needs. THIS DOCUMENT DOES NOT REFLECT THE ENDORSEMENT OF ANY AGENCY'S HUMAN RESOURCES OFFICE OR THE OFFICE OF PERSONNEL MANAGEMENT.

complexity of the job remains the same and requires expertise across a number of disciplines. Expertise needed varies, depending on position. Three different levels of expertise for river management specialists and non-specialists have been identified. Levels of Expertise are so named to ensure consistency with Office of Personnel Management nomenclature while accommodating agency differences.

River Management Specialists Levels of Expertise

- 1. Entry Level: KSAs (knowledge, skills, and abilities) needed to recognize river management components, opportunities and needs, and to refer opportunities and needs to appropriate specialists.
- 2. Full Performance Level: KSAs needed to fully and independently identify and analyze river management opportunities and needs for most situations, to develop interdisciplinary solutions with appropriate specialists, and to make recommendations for making decisions. Individual may train other professionals and technicians in the principles, terminology, and field practice of the subject.
- **3. Expert Level:** KSAs needed to fully and independently identify and analyze river management opportunities and needs in complex situations, develop programmatic interdisciplinary solutions with appropriate specialists, and make recommendations for making decisions and policy changes. Individual may train other professionals and technicians in the principles, terminology, and field practice of the subject.

River Management Non-Specialists Levels of Expertise

- **1. Recognition Level:** KSAs needed to convey or implement basic river management principles.
- **2.** Coordination Level: KSAs needed to develop interdisciplinary solutions to river management issues with river management specialists.
- 3. Leadership Level: KSAs needed for making river management decisions.

Competency Areas

Both river management specialists and non-specialists must demonstrate varying levels of skill in each of eight Competency Areas:

- 1. Wild and Scenic Rivers Act History, Law, Regulation and Policy Knowledge, skills and abilities (KSAs) needed to interpret and implement the provisions of the Wild and Scenic Rivers Act and agency management regulations and policies.
- 2. Other Relevant Laws, Policies and Tools for River Management KSAs needed to implement agency river management regulations and policies, acquire and manage easements and acquisitions, create and manage cooperative agreements, and work with relevant federal, state and local laws and regulations on designated and non-designated rivers (e.g., laws addressing topics such as federal, state, tribal, and private water rights; navigability; bed and bank ownership; public access; property rights and zoning; riparian issues; and water quality).

- 3. River Management Planning KSAs needed to address river management needs in land use, programmatic, and project level planning processes. These include knowledge of eligibility and suitability analyses, protection and enhancement of WSR values (free-flowing condition, water quality, and outstandingly remarkable values) for designated rivers, and analyses of values for which non-designated rivers are being protected and managed (e.g., ecological, cultural/historical, and social).
- **4. River Management Field Skills** KSAs needed to accomplish specific field tasks in a variety of river settings including public and private lands and easements within river corridors. These include swiftwater rescue, water quality related data collection and monitoring, river use sampling and monitoring, riverine ecosystem assessment and restoration techniques.
- **5. Visitor Use Management and Monitoring -** KSAs needed to manage and monitor visitor use and behavior on Wild and Scenic Rivers, eligible and suitable study rivers, and other non-designated river corridors. These include: outfitting & guiding and other special recreation/special use permits, commercial use management, facility design and maintenance, and project funding.
- **6.** Natural, Cultural and Recreational Resources Management and Monitoring KSAs needed to manage and monitor natural, cultural, aesthetic/visual, and recreational resources within designated Wild and Scenic Rivers and other non-designated river corridors.
- 7. River Information Management Skills KSA's needed to collect, manage and use spatial and non-spatial information in developing proposed management actions,, developing strategies and making decisions concerning managed river corridors and determining if trigger points have been reached.
- **8.** Collaboration and Engagement Techniques KSA's needed to educate, inform and collaborate with constituency groups, contact and engage partners, and work with diverse stakeholders (e.g., construction project proponents & opponents, private landowners, state and local governments, education groups and non-profit organizations) to forge mutual understanding of each other's missions and perspectives.

To identify the skills you need to develop, simply identify your agency and position on the table on this page. This will inform you if you are a River Management Specialist or Non-Specialist and your expected level of expertise. With that information, go to each of the eight Competency Areas to identify the competencies you need to have to qualify for the position. You can use this information with your supervisor to develop and prioritize your Individual Development and Training Plan.

These competencies were developed by an interagency team patterned after work originally produced by the Forest Service and by the National Park Service for Wilderness management specialists and non-specialists and approved by the Office of Personnel Management. At this time, use of these river related competencies should focus on developing competency based training and

maintaining and improving employee knowledge, skills, and abilities through that training. A future use of these competencies may be for the Interagency WSR Coordinating Council and other agency program staff to work with agency Human Resource Personnel and OPM to establish a River Management Specialist position.

	River Management Specialists			
		Agency		
	Bureau of Land Management	Fish and Wildlife Service	Forest Service	National Park Service
Entry Level	 Field Office river staff River rangers Seasonal river staff 	 Seasonal river rangers Seasonal public use specialists 	 River rangers Seasonal river staff River Crew Leads River Mgt. Assistant 	 Field and regional river staff Seasonal river and backcountry park rangers
Full Performance Level	 Field Office river lead District Office river lead Field and District staff with river management as part of their duties 	 Refuge Managers and Deputy Refuge Managers Refuge operations specialists Public use specialist 	 District or Forest river management lead District ranger on a multi-WSR district Regional, Forest and District staff with river management as part of their duties 	 Field and regional river staff Permanent river and backcountry park rangers Park river specialists Park Superintendent with river management as part of their duties. Partnership WSR Managers Some Rivers Trails and Conservation Assistance staff
Expert Level	 Washington Office WSR/River lead staff State Office WSR/River recreation lead Managers with river management as major part of their duties Interagency WSR Coordinating Council representatives 	 National public uses coordinator specialist Regional public uses specialist Interagency WSR Coordinating Council representatives 	 Forest program managers and staff officers with river management as a major part of their duties Regional WSR program managers National WSR program manager Interagency WSR Coordinating Council representatives 	Washington Support Office river lead staff Regional river coordinators Park Superintendent with river management as a major part of their duties. National WSR Steering Committee representatives Interagency WSR Coordinating Council

		representatives

	River Management Non-Specialists			
	Agency			
	Bureau of Land Management	Fish and Wildlife Service	Forest Service	National Park Service
Recognition Level	 Front Office staff Non-river field staff 	 Field Biotechnicians Front Office staff 	 Non-river field technicians and trail crews Visitor Information Services staff 	 Seasonal resource technicians, rangers, and trail crews Interpreters
Coordination Level	 Field and District Office non-river program leads State and Washington Office non- river program leads 	 Resource Specialists Planners Education and Interpretation Specialists Rangers 	 Non-river resource specialists Engineers Planners 	 Natural or cultural resource specialists Trail crew supervisors Interpreters Planners Permanent Park Rangers Rivers, Trails & Conservation Assistance Staff
Leadership Level	Field Office Manager and higher line officers	 Regional Chiefs Refuge Supervisors 	 Line Officers National and Regional directors with oversight of river programs 	 Superintendents Deputy and Assistant Superintendents National and Regional directors/assistant directors with oversight of river programs Division Chiefs and program leaders with oversight of river programs

1. Wild and Scenic Rivers Act History, Law, Regulation, and Policy – (River

Management Specialists) – Knowledge, skills and abilities (KSAs) needed to interpret and implement the provisions of the Wild and Scenic Rivers Act and agency management regulations and policies.

Entry Level

Knowledge and understanding of:

- the Wild and Scenic Rivers Act of 1968, as amended, and subsequent enabling legislation.
- the benefits and values of Wild and Scenic Rivers
- eligible and suitable study rivers
- agency regulation, policy, and guidelines

Ability to:

- describe the origin and purpose of the Act
- describe the WSR values (including free flow, water quality, and outstandingly remarkable values) for which rivers in their management area were designated

Skilled in:

• communicating to public the basic Wild and Scenic Rivers concepts and management policies

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- the Wild and Scenic Rivers Act of 1968, and subsequent substantive amendments and enabling legislation
- Wild and Scenic Rivers case law
- other legislation affecting the National Wild and Scenic Rivers System, i.e., Americans with Disabilities Act (ADA), Clean Water Act (CWA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Wilderness Act, National Environmental Policy Act (NEPA), Mining Law of 1872, Federal Power Act, etc.
- the history of the Wild and Scenic Rivers system, river management concepts and the people and events which influenced it
- agency Wild and Scenic Rivers regulations, policies, and guidelines, including resources available from the Interagency WSR Coordinating Council (IWSRCC)
- differences in policy among the Wild and Scenic Rivers management agencies where applicable
- key NGOs and their perspectives on river management law, regulation, policy and conservation

Full Performance Level (continued)

Ability to:

- same as *Entry Level*
- apply the above knowledge to local and regional river management issues and projects (e.g., conducting Section 7 determinations on water resource projects)

Skilled in:

- same as Entry Level
- interpret agency regulation and policy for staff
- provide river management recommendations to decision makers
- providing support and information concerning legislative decisions on designation

Expert Level

Knowledge and understanding of:

- same as Full Performance Level
- local, regional and national issues and politics with respect to Wild and Scenic River management
- court decisions and their implication for interpretation of existing law, regulation, and policy
- future trends in river management, including an understanding of how changes in society, the environment and technology may influence management direction
- legislative affairs procedures and processes sufficient to evaluate, comment and prepare testimony on proposed new designations and external river management proposals that have the potential to affect Wild and Scenic Rivers management

Ability to:

- develop and interpret Wild and Scenic Rivers policy and implementation strategies
- analyze and assess proposed new designations and legislation that would affect long-term Wild and Scenic Rivers management and benefits; facilitate appropriate department and agency interactions with proposed legislation
- facilitate use of new river management methods and techniques
- develop answers to questions and solutions for issues of law, regulation, and policy raised both internally and externally
- coordinate with other agencies in the management of Wild and Scenic Rivers
- develop training and train others in WSR Act history, law, regulation, policy and application

- applying river management regulations and policies to make decisions regarding river management
- coordinating with agency attorneys and others to address litigation
- coordinating with agency topic experts, including attorneys, to obtain legal opinions and implement resulting requirements

2. Other Relevant Laws, Policies and Tools for River Management – (River

Management Specialists) – KSAs needed to implement agency river management regulations and policies, acquire and manage easements and acquisitions, create and manage cooperative agreements, and work with relevant federal, state and local laws and regulations on designated and non-designated rivers (e.g., laws addressing topics such as federal, state, tribal, and private water rights; navigability; bed and bank ownership; public access; property rights and zoning; riparian issues; and water quality).

Entry Level

Knowledge and understanding of:

- federal, state and local policies and laws which apply to rivers in management area
- existing cooperative management agreements and inholding restrictions which apply to rivers in their management area
- in Alaska, ANILCA and ANCSA

Ability to:

monitor compliance of approved uses and easements and report violations

Skilled in:

• communicating the above with affected parties

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- water rights, navigability, riparian zone requirements and bed and bank ownership and public access provisions which apply to rivers in their management area
- management practices, general technical considerations, law, regulation, and policy related to river management (e.g., US Army Corps of Engineers 404 permits, Federal Highway policies, FERC regulations)

Ability to:

- same as Entry Level
- identify access and easement needs
- initiate, develop and administer cooperative management agreements

- same as Entry Level
- coordinating with other specialists and partners to determine appropriate management direction and providing technical assistance

Expert Level

Knowledge and understanding of:

- same as Full Performance Level
- programs and issues to recognize potential precedent-setting situations
- court decisions and their implication for interpretation of existing law, regulation, and policy
- legal implications of management decisions

Ability to:

- same as Full Performance Level
- provide solutions where there are conflicting or unclear legislation and regulatory processes
- provide support as needed in coordination with other laws, settlement negotiations, and legal proceedings involving river issues (e.g., FERC hydropower proceedings, endangered species issues, transportation issues, clean water management, water rights quantification and settlement, other litigation)
- develop training and train others in laws, policies and tools for river management

- same as Full Performance Level
- applying river management regulations and policies to make decisions regarding river management
- interest-based negotiations
- coordinating with agency attorneys and others to address litigation
- coordinating with agency topic experts, including attorneys, to obtain legal opinions and implement resulting requirements
- coordinating with agency legislative affairs staff to respond to legislative inquiries and initiatives

3. River Management Planning – (River Management Specialists) – KSAs needed to address river management needs in land use, programmatic, and project level planning processes. These include knowledge of eligibility and suitability analyses, protection and enhancement of WSR values (free-flow, water quality, and outstandingly remarkable values) for designated rivers, and analyses of values for which non-designated rivers are being protected and managed (e.g., ecological, cultural/historical, and social)

Entry Level

Knowledge and understanding of:

- basic planning principles and processes, including stakeholder involvement
- the WRS Act requirements regarding eligibility, suitability and classification
- the WRS Act and agency policy requirements for a comprehensive river management plan
- legal requirements and IWSRCC guidance on addressing user capacity for Wild and Scenic Rivers
- the specific land management plan direction for river management
- the relationship between river management plans and other resource management plans
- the project planning process and its relationship to land management plan direction
- steps required in conducting the NEPA process
- connection between land management practices and water quality

Ability to:

• discuss and educate the public about the river management planning concepts

Skilled in:

• (not applicable at this level)

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- case law addressing user capacity for Wild and Scenic Rivers
- the guidance of the Interagency Visitor Use Management Council and the underpinning planning frameworks and concepts of Limits of Acceptable Change and other similar planning processes
- agency land management planning process
- agency information databases
- the river or unit's resources, values, and management issues
- NEPA requirements and process
- the river resource and management concepts sufficient to participate in interdisciplinary planning processes with other resource specialists
- the diversity of river recreation corridor uses and the interaction among them
- the diversity of other river resources and values (e.g., natural, cultural and /historical) and the interplay among them

Full Performance (continued)

Ability to:

- conduct collaborative planning efforts at both the project and programmatic level
- develop river management plans and implementation schedules
- implement the steps on addressing user capacity within WSR corridors (IWSRCC guidance)
- develop and implement project plans
- identify and communicate river management research and technology development needs
- apply research results to management planning and decision making
- ensure that river planning is interdisciplinary and integrated with other planning efforts
- complete WSR study process (inventory for eligibility and suitability) for land use planning or congressional authorization

Skilled in:

- involving other government agencies and the public in the planning process
- interdisciplinary planning
- training other employees in river planning
- communicating complex issues to diverse audiences
- developing partnerships

Expert Level

Knowledge and understanding of:

• same as Full Performance

Ability to:

- provide river related technical assistance for National Environmental Policy Act (NEPA) and other resource management planning and comprehensive river management planning activities
- accomplish collaborative planning at the program level and identify and develop regional planning strategies and initiatives
- identify and assist with resolving regional scale issues
- prioritize and communicate research and technology development needs
- transfer knowledge from research results
- review or respond to appeals and lawsuits on various river management issues
- interpret effects from changes in planning policies to river management
- provide advice in the inventory, evaluation and study process requirements for agency Wild and Scenic Rivers eligibility and suitability recommendations or congressionally authorized Wild and Scenic River studies
- complete analyses, devise new procedures, and provide advice on complex problems using technical information or resource data that is often inconclusive or unclear
- develop training or update existing training for river planning

Skilled in:

• same as Full Performance

4. River Management Field Skills – (River Management Specialists) –KSAs needed to accomplish specific field tasks in a variety of river settings including public and private lands and easements within river corridors. These include swiftwater rescue, water quality related data collection and monitoring, river use sampling and monitoring, riverine ecosystem assessment and restoration techniques.

Entry Level

Knowledge and understanding of:

- the river's resources and basic stream processes
- regionally appropriate "Leave No Trace" principles and ethics
- river safety and search and rescue
- river management rules, regulations and policies specific to the management area
- restoration practices and techniques needed to address impacts
- law enforcement techniques as appropriate to agency
- non-law enforcement techniques to educate the public on rules and regulations
- water quality sampling techniques
- ecosystem assessment techniques, including invasive species
- river recreation sampling techniques

Ability to:

- effectively communicate with river corridor users and private landowners
- act decisively and calmly under conditions of emotional and physical duress
- collect evidence and prepare case reports on violations as appropriate to agency
- safely navigate in a river setting using the mode of travel appropriate for the setting
- implement revegetation or other restoration techniques
- identify project needs based upon field observations
- identify, monitor and treat invasive species
- implement law enforcement procedures depending on agency guidelines
- work with volunteers and partners on project work
- conduct water quality sampling, ecosystem assessments, and river recreation sampling

- the safe use of appropriate water craft
- employing appropriate search and rescue techniques
- river information and education techniques
- maintaining access sites, campsites, and facilities
- safe river navigation, travel, and camping including "Leave No Trace" techniques
- following impact, resource and monitoring technique protocols

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- impact, resource and visitor monitoring protocols
- importance of skills necessary for staff safety and competency in river settings
- WSR Act Section 7 determination process
- the effects of dam releases and flow ramping techniques

Ability to:

- same as Entry Level
- oversee outfitter and guiding operations and commercial and special use permits
- develop training for staff safety and competency in river settings
- develop and direct project work plans
- resolve user conflicts
- develop and implement monitoring and assessment strategies
- advise agency administrators regarding emergency operations (e.g., search and rescue, fire suppression, post-fire operations) in river settings and to participate in oversight of such operations

Skilled in:

- same as Entry Level
- training and supervision of field skills
- identifying opportunities and developing volunteer programs and partnerships
- providing support for developing and administering contracts and agreements

Expert Level

Knowledge and understanding of:

- river management rules, regulations and policies specific to field operations
- emerging field practices and skills

Ability to:

- same as Full Performance Level
- provide advice and oversight to coordinate skills, knowledge, and resources necessary for field operations in river corridors

- working across program areas related to field operations such as with engineering programs; procurement, contract, and agreements specialists; natural, cultural, or recreational resource programs; fire programs; etc.
- addressing regulatory requirements that affect field projects and coordinating with regulatory agencies to facilitate field project work

5. Visitor Use Management and Monitoring – (River Management Specialists) – KSAs needed to manage and monitor visitor use and behavior in Wild and Scenic Rivers and other non-designated river corridors. These include special recreation/use permits, commercial use management including outfitting and guiding, facility design and maintenance, and project funding.

Entry Level

Knowledge and understanding of:

- agency commercial services policies and procedures
- special recreation/use permits
- recreation inventory
- recreation opportunities and experiences
- visitor use and impacts monitoring techniques
- visitor use management techniques including those specific to WSRs
- baseline and current conditions for uses in WSRs
- public contact principles and techniques
- visitor safety
- river user education tools and methods

Ability to:

- conduct inspections and report on permit/authorization compliance issues
- communicate effectively with staff and the public
- conduct educational programs
- lead other employees or volunteers

Skilled in:

- following protocols to inventory and monitor visitor use and impacts
- effective communication with river corridor users
- using web-based resources for river management

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- processes to develop standards, measure visitor impacts, and analyze tradeoffs among alternatives when recreation impacts exceed standards (e.g., indicators, thresholds, and triggers)
- rationing systems and allocation processes
- local and national river visitor use trends
- the relationship between visitor use management and non-recreation uses
- the relationship between user capacity management and river values of WSRs
- recreation use conflicts
- visitor education programs and tools
- key NGOs and local and regional river issues
- techniques for measuring and understanding visitor experiences
- outdoor recreation management principles and literature
- relevant agency manuals and guidance

Full Performance Level (continued)

Ability to:

- same as *Entry Level*
- monitor visitor use and impacts
- compare use, experiences, opportunities and impact levels with planning objectives
- implement required actions when use or impact levels trigger a threshold
- identify and implement visitor use management actions
- determine the level and need for commercial services and all permitted activities
- issue and administer permits or use authorizations for commercial services, competitive uses, and special recreation area uses identify visitor use research needs and partner with researchers
- work with local NGOs and interested publics to address river management issues
- train and lead other employees or volunteers

Skilled in:

- same as Entry Level
- developing and using river education programs and tools
- applying visitor research findings to visitor management
- evaluating research, science and other project proposals

Expert Level

Knowledge and understanding of:

- same as Full Performance
- relevant research literature

Ability to:

- identify strategies for determining the characteristics, expectations and demands of visitors, and how their expectations will affect the river resource
- apply understanding of law, regulation, and policy to recommend or make decisions related to visitor use management
- work with NGOs and other interest groups to address regional and national river issues
- complete a thorough analyses, devise new procedures, and provide advice on complex problems using technical information or resource data, especially when there are inconclusive data or competing data sets
- train other employees in visitor use management and monitoring

- developing understanding and support for agency objectives and actions
- responding to complaints or protests
- exchanging information on current technical developments
- maintaining relationships with special interest groups or organizations
- building consensus through compromise or by development of suitable alternatives

6. Natural, Cultural and Recreational Resources Management and Monitoring – (River Management Specialists) – KSAs needed to manage and monitor natural, cultural, aesthetic/visual, and recreational resources within designated Wild and Scenic Rivers and other non-designated river corridors.

Entry Level

Knowledge and understanding of:

- plant and animal species common to the area
- species of special concern including threatened and endangered or non-native invasive species
- the story of human occupancy of the area
- aesthetics/visual resource management
- monitoring approaches and data collection methods
- threats to biophysical, scenic, social and cultural resources
- Best management practices for protecting water quality and other river-related resources
- recreation values of the river corridor
- local and state zoning, ordinances, rules, and regulations within river corridor

Ability to:

- work with resource management specialists to assist in inventory and monitoring of biophysical, scenic, social, and cultural resources
- identify and report violations

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- the role that natural processes play in the river environment
- natural history and ecological principles
- The National Historic Preservation Act and other cultural resource protection laws
- The Mining Law of 1872

Ability to:

- effectively represent the river resource when working with other resource specialists to reach a common understanding of goals and objectives unique to the river corridor
- coordinate with other resource specialists in determining monitoring needs and developing monitoring plans
- train personnel in data collection and analysis
- assess potential threats to the river corridor and recommend actions to reduce or eliminate them
- develop and implement monitoring programs at a variety of scales
- coordinate, facilitate, monitor, advise, and communicate practices used to preserve, protect, the natural and cultural resources
- maintain databases
- identifying research and science needs

Full Performance Level (continued)

Skilled in:

- inventory and monitoring natural and cultural resources and impacts where resource specialists are unavailable
- developing and using river education programs and tools
- evaluating research and science project proposals
- compiling, analyzing and using data when making short and long term program recommendations

Expert Level

Knowledge and Understanding of:

- same as Full Performance Level
- biophysical sciences and professional disciplines such as ecology, hydrology, fluvial geomorphology, botany, fire management, water quality protection, wildlife and fisheries management, soil science, range management, and cultural resources
- social and cultural sciences professional disciplines such as sociology, anthropology, economics, recreation management, and cultural resource management
- relevant research literature

Ability to:

- apply natural and cultural management concepts to decision making processes and integrate them with other resource programs
- coordinate inventory and monitoring programs at the regional or larger scales if appropriate within the agency
- analyze, devise new procedures, and provide advice on complex natural and cultural resource problems using technical information or resource data that is often inconclusive or unclear

- applying understanding of law, regulation, and policy to recommend or make decisions related to natural, cultural, and recreational resource management
- compiling, analyzing and using natural, cultural, and recreational resource data to support program recommendations
- collaboration and coordination with related natural, cultural, and recreational resource programs for river administration

7. River Management Information Skills – (River Management Specialists) – KSAs needed to collect, manage and use spatial and non-spatial information in developing proposed management actions, developing strategies and making decisions concerning managed river corridors and determining if trigger points have been reached.

Entry Level

Knowledge and understanding of:

- agency adopted software and technology to assemble, store and process different kinds of information/data relevant to river management
- official standard units of measure (e.g., recreation visit, recreation visitor hour, recreation visitor day, animal unit months) used by the agency
- field level data collection/generation methods commonly used to collect biophysical, social-cultural and visitor information/data in river corridors
- the basics of probability and non-probability sampling

Ability to:

- employ field level data sampling and collection/generation methods to assemble relevant and defensible river management related information and data
- use software and technology to assemble, store, process and access information and data and ensure transparency

Skilled in:

• following protocols to collect/generate data at the field level

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- probability and non-probability sampling including an understanding of how sampling approaches affect the potential use of resulting information and data in terms of making projections
- bias, validity, reliability, trustworthiness, authenticity of data/information to ensure data quality
- alternative methods to collect bio-physical, social-cultural and visitor information and data in river corridors
- forms of data and information qualitative, quantitative, numeric and text
- the difference between spatial and non-spatial information /data
- spatial and non-spatial statistical analysis
- qualitative data analysis techniques
- relevant agency manuals and literature

Ability to:

- same as *Entry Level*
- select appropriate data collection/generation techniques to address issues and concerns relevant to river management
- apply statistical procedures (spatial and non-spatial) to evaluate change, determine differences, identify trends, and make projections

Full Performance Level (continued)

- use data and information to effectively characterize the river resource when working with other resource specialists
- display data and information in formats (i.e., charts, graphs, videos, social media) in formats relevant and effective for diverse audiences

Skilled in:

- compiling, analyzing and using data and information in support of program recommendations
- identifying data needs associated with inventory and monitoring of natural and cultural resources; social, cultural, economic and physical impacts; and visitor behavior where other resource specialists are unavailable

Expert Level

Knowledge and Understanding of:

- same as Full Performance Level
- interdisciplinary data and information needs
- relevant research literature

Ability to:

- same as Full Performance Level
- develop information-based education programs that present complex data and information effectively to a variety of public audiences
- coordinate inventory and monitoring programs at the regional or larger scales if appropriate within the agency
- devise innovative and more efficient sampling, and data collection and generation protocols to improve data quality; and diversify and improve data analysis and reporting to more adequately address river management issues and concerns
- train personnel in data collection and generation, processing and analysis and the maintenance of databases

- same as Full Performance Level
- evaluating research proposals
- collaborating and coordinating data and information needs with related natural and cultural resource programs, and across scientific disciplines, and across agencies

8. Collaboration and Engagement Techniques – (River Management Specialists) –

KSA's needed to educate, inform and collaborate with constituency groups, contact and engage partners, and work with diverse stakeholders (e.g., construction project proponents & opponents, private landowners, state and local governments, education groups and non-profit organizations) to forge mutual understanding of each other's missions and perspectives.

Entry Level

Knowledge and understanding of:

- conservation partnerships and collaborative models in use on relevant management area
- basic public engagement techniques and participatory activities
- concepts of citizen science and collaborative learning
- interested publics, stakeholders and constituencies
- agency procedures and practices for engaging volunteers

Ability to:

- orally communicate with diverse audiences
- employ listening techniques

Skilled in:

• working as a member of a team

Full Performance Level

Knowledge and understanding of:

- same as *Entry Level*
- conservation partnership and collaborative models in use across the US
- group behavior theory and the dynamics of collaboration
- group facilitation techniques and processes
- collaborative learning techniques
- conflict resolution techniques
- relevant agency manuals and literature

Ability to:

- same as *Entry Level*
- identify and map relationships among stakeholder groups
- implement monitoring programs to track effectiveness of collaboration and engagement efforts
- design presentation materials to assist diverse audiences to understand complex river management problems, technical procedures, engineering and science used in planning and decision-making
- design public engagement procedures that involve public participation throughout planning and decision-making processes
- use computer technology to store qualitative, quantitative, spatial, and non-spatial data and findings from public engagement efforts in an easily accessible electronic format

Skilled in:

Full

- conducting public engagement and collaborative learning techniques
- conducting public education programs for diverse audiences

Performance Level (continued)

- compiling, analyzing and presenting data from public engagement processes to inform decision-making and developing short and long term program recommendations
- collaborating and coordinating outcomes of public engagement with other resource programs

Expert Level

Knowledge and Understanding of:

- same as Full Performance Level
- relevant research literature

Ability to:

- same as Full Performance Level
- design public engagement procedures and protocols that involve interested publics and citizens throughout river planning and decision-making processes
- work with agency specialists to develop and train personnel in how to facilitate public sessions, conduct public engagement techniques and analyze the outcomes and findings to produce outputs for use in planning and decision-making
- develop monitoring programs for tracking issues and concerns of publics and stakeholders
- coordinate, facilitate, monitor, and advise on communication practices used to keep local, regional and national publics informed

- same as Full Performance Level
- collaborating and coordinating outcomes of public engagement with other resource programs, line officers for planning and decision-making purposes to ensure river management issues are given adequate consideration

1. Wild and Scenic Rivers Act History, Law, Regulation, and Policy – (River

Management Non-Specialists) – KSAs needed to interpret and implement the history and laws of the Wild and Scenic Rivers Act and agency management regulations and policies.

Recognition Level

Knowledge and understanding of:

- the Wild and Scenic Rivers Act of 1968 and other enabling legislation for relevant management areas
- the river resource and the benefits and values
- eligible and suitable study rivers, including interim protection

Ability to:

- ability to explain the meaning of Wild and Scenic River designation and the three types of classification
- ability to explain the values for which it was designated
- ability to explain eligible and eligible/suitable study rivers, including interim protection

Coordination Level

Knowledge and understanding of:

- same as *Recognition Level*
- agency Wild and Scenic Rivers regulations, policies, and guidelines which affect their resource specialty

Ability to:

- same as Recognition Level
- apply the above knowledge to local river issues and projects
- to understand WSR values (free flow, water quality, and outstandingly remarkable values) and how they can be affected by other resources and uses
- to understand how other resource values can be affected by Wild and Scenic River designation

Leadership Level

Knowledge and understanding of:

- same as *Recognition Level*
- other legislation affecting the Wild and Scenic Rivers System
- the evolution of wild and scenic river history, river management concepts and the people and events which influenced that evolution
- agency Wild and Scenic Rivers regulations, policies and guidelines
- local, regional and national politics with respect to river management
- future trends in river management, including an understanding of how changes in society and technology may influence management direction

Leadership Level (continued)

Ability to:

- develop and interpret Wild and Scenic Rivers management policy and implementation strategies
- analyze and assess proposed legislation that would affect long-term river management and benefits

Skilled in:

- applying understanding of law, regulation, and policy to make wild and scenic river management decisions
- conveying the significance of wild and scenic river designation

2. Other Relevant Laws, Policies and Tools for River Management – (River

Management Non-Specialists) – KSAs needed to implement agency river management regulations and policies, acquire and manage easements and acquisitions, create and manage cooperative agreements, and work with relevant federal, state and local laws and regulations on designated and non-designated rivers (e.g., laws addressing topics such as federal, state, tribal, and private water rights; navigability; bed and bank ownership; public access; property rights and zoning; riparian issues; and water quality).

Recognition Level

Knowledge and understanding of:

- rivers within the unit and the various resource values within the river corridor
- the special provisions associated with the unit, such as grazing allotments, dams, mining claims, inholdings, ditches, and access to state or private lands, etc.

Ability to:

- identify and report violation of approved uses
- explain river resource values and benefits to the public

Coordination Level

Knowledge and understanding of:

- same as *Recognition Level*
- management practices associated with special provisions
- types of easements and their potential impacts on associated resources
- federal, state and local laws that affect river corridor management (e.g., access, water rights, water quality, bed and bank ownership, and riparian issues)
- various agency and legal designations and their impact on river management decisions (e.g., research natural areas, areas of critical environmental concern, critical habitat designations, recreation management areas and zones)

Coordination **Ability to:** same as Recognition Level Level to work on interdisciplinary teams (continued) Skilled in: coordinating with other specialists to determine appropriate management of river corridors **Knowledge and understanding of:** Leadership same as Coordination Level Level programs and issues to recognize potential precedent-setting situations **Ability to:** same as Coordination Level formulate decisions based upon federal, state and local laws and best river management practices Skilled in: applying understanding of law, regulation, and policy to make river management decisions

address river n These include WSR values (f analyses of val	gement Planning – (River Management Non-Specialists) – KSAs needed to nanagement needs in land use, programmatic, and project level planning processes. knowledge of eligibility and suitability analyses, protection and enhancement of free flowing condition, outstandingly remarkable values) for designated rivers, and use for which non-designated rivers are being protected and managed (e.g., tural/historical, and social).
Recognition Level	 Knowledge and understanding of: the basic components of the applicable land management plans or comprehensive river management plans basic concepts of how WSR Act Section 7 evaluations and determinations fit into project level planning
Coordination Level	 Knowledge and understanding of: same as Recognition Level concepts of river planning processes including planning related steps to address user capacity requirements for WSRs the unit land management planning process the unit's river values and management issues relevant to their resource NEPA requirements ability to assist with WSR Act Section 7 evaluations and determinations Ability to: engage in collaborative planning at both the project and program level identify and communicate research and technology development needs for rivers Skilled in: interdisciplinary planning
Leadership Level	 Knowledge and understanding of: same as Coordination Level Ability to: identify and prioritize issues and provide direction and advice to staff respond to appeals and lawsuits on various river management issues
	Skilled in: • same as Coordination Level

making river management decisions following interdisciplinary planning processes

4. River Management Field Skills – (**River Management Non-Specialists**) – KSAs needed to accomplish specific field tasks in a variety of river settings including public and private lands and easements within river corridors. These include swiftwater rescue, water quality related data collection and monitoring, river use sampling and monitoring, riverine ecosystem assessment and restoration techniques.

Recognition Level

Knowledge and understanding of:

- "Leave No Trace" principles and ethics
- river search and rescue procedures, if appropriate to duties
- river management rules, regulations and policies specific to the unit
- monitoring plans

Ability to:

- effectively communicate with visitors
- collect and enter data into agency systems

Skilled in (if appropriate to duties):

- visitor information and education techniques
- safe river navigation, travel, and camping including "Leave No Trace" techniques

Coordination Level

Knowledge and understanding of:

• same as *Recognition Level*

Ability to:

- same as Recognition Level
- ensure staff safety and competency in river settings
- incorporate river management concerns in the management of fires and search and rescue emergencies

Skilled in:

• same as Recognition Level

Leadership Level

Knowledge and understanding of:

- same as Coordination Level
- river emergency procedures
- agency fire management policy
- skills necessary to ensure staff safety and competency in river settings

Ability to:

• travel safely in a river setting

Skilled in:

• using interdisciplinary processes

5. Visitor Use Management and Monitoring – River Management (Non-Specialists) – KSAs needed to manage and monitor visitor use and behavior on Wild and Scenic Rivers and other non-designated river corridors. These include special recreation/use permits, commercial use		
_	luding outfitting and guiding, facility design and maintenance, and project funding.	
Recognition Level	 Knowledge and understanding of: management area river policies and regulations Ability to: conduct inspections and report on permit/authorization compliance issues appropriate to their duties 	
	 Skilled in: effective communication of agency or unit river policies, procedures and regulations with staff and the public, if appropriate to their duties conducting education and interpretation programs, if appropriate to their duties 	
Coordination Level	 Knowledge and understanding of: same as Recognition Level the relationship between visitor use management and other components of resource management how ORVs on their river are protected and enhanced under Wild and Scenic River designation Ability to:	
	 identify impacts of visitor use on their specific resource identify effects of their resource projects on visitor use and experience 	
	Skilled in: same as Recognition Level identifying research and science needs related to visitor use management evaluating research and science project proposals	
Leadership Level	Knowledge and understanding of: • same as Coordination Level	
	Ability to: ■ same as Coordination Level ■ apply river management concepts to making decisions related to visitor use management	

Leadership Level (continued)

Skilled in:

 applying understanding of law, regulation, and policy to make decisions related to visitor use and user capacities

6. Natural, Cultural, Recreational Resources Management and Monitoring – (River Management Non-Specialists) – KSAs needed to manage and monitor natural, cultural, aesthetic/visual, and recreational resources within designated Wild and Scenic Rivers and other non-designated river corridors.

Recognition Level

Knowledge and understanding of:

- plant and animal species common to the area
- species of special concern including threatened and endangered or non-native invasive species
- the human history and prehistory of the area

Ability to:

- take appropriate action when violations are reported
- work with resource management specialists to determine inventory and monitoring needs for biophysical, social, and cultural resources, if appropriate to their duties

Skilled in:

• effective communication about the management of natural, cultural, and recreational resources on rivers in their unit, if appropriate to their duties

Coordination Level

Knowledge and understanding of:

- same as *Recognition Level*
- river management practices
- river education programs and tools, if appropriate to their duties

Ability to:

- coordinate with river management specialists on project planning and implementation to reach common goals and objectives
- coordinate monitoring needs and develop monitoring plans
- train personnel in data collection using appropriate methods

- inventory and monitoring natural, cultural, and recreational resources and impacts using appropriate methods
- developing and using river education programs and tools, if appropriate to their

Coordination Level (continued)	duties • identifying research and science needs which affect river management • evaluating research project proposals
Leadership Level	Knowledge and Understanding of: • same as Coordination Level
	Ability to: • apply river management concepts to making decisions related to natural, cultural, and recreational resources
	Skilled in: • applying understanding of law, regulation, and policy to make decisions related to natural, cultural, and recreational resource management

needed to colle management ac	tation Management Skills – (River Management Non-Specialists) – KSA's ct, manage and use spatial and non-spatial information in developing proposed ctions, developing strategies and making decisions concerning managed river tetermining if trigger points have been reached.
Recognition Level	 Knowledge and understanding of: agency adopted software and technology to assemble, store and process different kinds of information/data official standard units of measure (i.e. recreation visit, recreation visitor hour, recreation visitor day, animal unit months) used by the agency Ability to: enter data into agency systems Skilled in: communicating with the public
Coordination Level	 Knowledge and understanding of: same as Recognition Level the basics of probability and non-probability sampling knowledge of agency sources of information relevant to river management

Ability to:

Coordination Level (continued)

- incorporate relevant information and data into resource management processes
- evaluate the relevancy of resource management information to river corridor management

Skilled in:

- same as *Recognition Level*
- recognizing the need to include river management data and information when river management specialists are not available

Leadership Level

Knowledge and understanding of:

- same as Coordination
- interdisciplinary data needs
- information needs to address competing resource uses

Ability to:

- same as Coordination Level
- assemble interdisciplinary teams with expertise appropriate to address river corridor management

Skilled in:

- same as Coordination
- communicating with diverse resource specialists
- incorporating interdisciplinary findings into decision making processes

8. Collaboration and Engagement Techniques – (River Management Non-Specialists) –

KSA's needed to educate, inform and collaborate with constituency groups, contact and engage partners, and work with diverse stakeholders (e.g., construction project proponents & opponents, private landowners, state and local governments, education groups and non-profit organizations) to forge mutual understanding of each other's missions and perspectives.

Recognition Level

Knowledge and understanding of:

- conservation partnerships and collaborative models in use on unit
- interested publics, stakeholders and constituencies

Ability to:

• orally communicate with diverse audiences

Skilled in:

• working as a member of a team

Coordination Level

Knowledge and understanding of:

- same as *Recognition Level*
- group behavior theory and the dynamics of collaboration
- relevant agency manuals and literature

Ability to:

- same as *Recognition Level*
- identify relationships among stakeholder groups
- participate in conducting a process or event that involves one or more public involvement techniques

Skilled in:

- same as Recognition Level
- collaborating and coordinating outcomes of public engagement with other resource programs

Leadership Level

Knowledge and understanding of:

- same as Coordination Level
- agency public involvement requirements
- basic conflict resolution concepts

Ability to:

- same as Coordination Level
- incorporate public engagement outcomes into decision making processes

Skilled in:

analyze data from public engagement processes to be used to make informed decisions