

COMPETENCIES - NATURAL RESOURCES STEWARDSHIP - DISCIPLINE SPECIALIST

Scientific Knowledge

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	SCIENTIFIC KNOWLEDGE: Knowledge of basic ecological and scientific principles, with advanced knowledge in a natural resource discipline (biological or physical science) and the ability to apply this information to NPS natural resource issues under supervision or guidance.	SCIENTIFIC KNOWLEDGE: Knowledge of ecological and scientific principles, with advanced knowledge and experience in a natural resource discipline (biological or physical science) and the ability to apply this information to NPS natural resource issues.	SCIENTIFIC KNOWLEDGE: In-depth knowledge of ecological and scientific principles, with mastery and experience in a natural resource discipline (biological or physical science) and a demonstrated ability to skillfully apply this information to highly complex and potentially controversial NPS natural resource issues.
DS-1a	Working knowledge of a natural resource discipline and currency in the field	Ability to serve as a technical expert based on advanced, current knowledge of a natural resource discipline	Mastery level knowledge of a natural resource discipline such as that evidenced by an earned Ph.D., an MS/MA degree and 6 years of professional work, or the experience gained from 11 years of professional work in the field of expertise
DS-1b	Knowledge of basic scientific principles		Working knowledge of and experience in the application of general scientific principles and the ability to develop innovative new methods and applications
DS-1c	Basic knowledge of ecological principles	Working knowledge of ecological principles	In-depth knowledge of ecological principles and how they apply to park resources issues and management
DS-1d	Ability to apply standard or existing sampling and research design and quality assurance/control techniques		
DS-1e	Ability to review and understand results of research done elsewhere for possible relevancy to park natural resource issues	Ability to evaluate the results of research, including published and unpublished results of research done elsewhere, for applicability to diverse park resource issues	Ability to evaluate the results of research, both published and unpublished, conducted in different ecosystems and to use and adapt those results to resolve diverse and complex park resource issues
DS-1f		Ability to synthesize information from a wide variety of sources, within area of expertise	

Scientific Method

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	Scientific Method: Knowledge of scientific approaches and methods relevant to the management of natural resources and the ability to apply them to answer questions about NPS natural resource issues.	Scientific Method: Knowledge and ability to apply sound scientific approaches and appropriate methods to resolve natural resource management issues, including the design and conduct of inventory, monitoring, and research projects.	Scientific Method: Knowledge and ability to apply sound scientific approaches and appropriate methods to resolve natural resource management issues, including the design and conduct of complex inventory, monitoring, and research projects.
DS-2a	Ability to propose relevant scientific approaches to natural resource management activities and problem-solving	Ability to apply appropriate scientific approaches to natural resource management activities and problem-solving	Ability to apply state-of-the-knowledge scientific approaches to natural resource management activities and problem-solving
DS-2b	Ability to follow basic scientific methods in conducting inventory, monitoring, and applied research projects	Ability to develop, to coordinate, and to conduct research, inventory, monitoring, and resource management projects based on scientific knowledge and using accepted protocols and current methods	Ability to develop, to coordinate, and to conduct complex research, inventory, monitoring, and resource management projects based on advanced scientific knowledge and using innovative protocols and new methodologies
DS-2c	Ability to design studies, gather data, and present results of studies in the field of expertise	Knowledge of and working experience in the application of established scientific methods and the ability to modify and adapt methodologies	
DS-2d	With assistance, ability to design sampling protocols outside field of expertise	Ability to evaluate adaptations of basic research designs and sampling methods and to implement quality assurance/control protocols	Ability to develop and evaluate innovative research designs and sampling strategies and to apply quality assurance/control protocols
DS-2e	Basic knowledge and proficiency in field skills and measurements	Working knowledge of and proficiency in field skills and measurements, including quality assurance/ control protocols	Advanced knowledge and proficiency in field skills and measurements, including the ability and experience to design quality assurance protocols
DS-2f	Ability to assist in analyzing data from on-going studies or studies designed by someone else	Working knowledge of data management, analytical methods, and statistics	In-depth knowledge of data management, analytical methods, and statistics
DS-2g		Knowledge of standard computer systems, uses, and applications, including database and statistical software packages	Knowledge of computer systems, uses, and applications, including database and statistical software packages
DS-2h	Ability to reliably collect, computer input, and summarize natural resource data	Ability and experience in collecting, storing (in electronic format), summarizing, and analyzing resource management data	Ability and experience in collecting, computer inputting, summarizing, and analyzing resource management data

Resource Stewardship

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	NPS RESOURCE STEWARDSHIP: Ability to effectively apply basic interpretations of laws, policies, regulations, and guidelines, in concert with scientific knowledge to protect park resources and natural systems.	NPS RESOURCE STEWARDSHIP: Ability to effectively apply a working knowledge of laws, policies, regulations, and guidelines, as well as knowledge of NPS programs, in concert with scientific knowledge to protect park resources and natural systems.	NPS RESOURCE STEWARDSHIP: Ability to effectively apply laws, policies, regulations, and guidelines, as well as a knowledge of NPS and other agency/institution's programs, including instances where limited precedent or specific guidance exists, in concert with scientific knowledge to protect park resources and natural systems.
DS-3a	Basic knowledge of NPS history, mission, goals, guidelines, and policies	Working knowledge of NPS history, mission, goals, guidelines, and policies	Thorough knowledge of NPS history, mission, goals, guidelines, and policies
DS-3b	Basic knowledge of the resource missions of the Department of Interior, other DOI bureaus, and other Federal and State resource agencies	Basic knowledge of the missions, mandates, and programs of other Federal agencies such as OMB and GAO, as well as other laws which impact resource management such as the Federal Advisory Committee Act and the Freedom of Information Act	Thorough knowledge of other Federal agencies such as OMB and GAO and related other laws which impact resource management
DS-3c	Basic knowledge of general environmental laws	Thorough knowledge of general environmental laws and ability to apply them to the normal range of natural resource issues, including preparation of environmental planning documents	Advanced knowledge of environmental law and demonstrated ability to apply environmental laws to a broad range of natural resource issues
DS-3d		Thorough knowledge of law and policies, etc., related to subject matter expertise	Advanced knowledge of law, regulations, and policies, etc., related to the integration of subject matter expertise into multidisciplinary approaches to natural resource issues
DS-3e	Basic knowledge of resource restoration and mitigation in area of expertise	Thorough knowledge of restoration and mitigation in area of expertise	Advanced knowledge of restoration and mitigation in area of expertise
DS-3f		Ability to incorporate scientific information into management actions, policies, etc., including application in the area of expertise where little or no clear precedent exists	Ability to synthesize and incorporate diverse scientific information into management actions, policies, etc., including application in the area of expertise where little or no clear precedent or guidance exists
DS-3g	Ability to incorporate scientific information in management actions, policy development, interaction with other resource managers	Ability to develop innovative approaches to problem-solving in areas where limited established policy or guidance exists	Proficiency in developing innovative approaches to problem-solving in areas where little or no established policy or guidance exists
DS-3h	Ability to apply standard approaches to problem-solving in areas where established policy or guidance exists	Ability to use scientific knowledge to anticipate threats to natural resources and take proactive action to protect natural systems employing standardized approaches and approaches tailored to the situation	Demonstrated ability to use scientific knowledge to anticipate threats to natural resources and take proactive action to protect natural systems up to the ecosystem level employing standardized approaches and approaches tailored to the situation

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	NPS RESOURCE STEWARDSHIP: Ability to effectively apply basic interpretations of laws, policies, regulations, and guidelines, in concert with scientific knowledge to protect park resources and natural systems.	NPS RESOURCE STEWARDSHIP: Ability to effectively apply a working knowledge of laws, policies, regulations, and guidelines, as well as knowledge of NPS programs, in concert with scientific knowledge to protect park resources and natural systems.	NPS RESOURCE STEWARDSHIP: Ability to effectively apply laws, policies, regulations, and guidelines, as well as a knowledge of NPS and other agency/institution's programs, including instances where limited precedent or specific guidance exists, in concert with scientific knowledge to protect park resources and natural systems.
DS-3i			Ability to use advanced scientific knowledge to anticipate threats to natural resources and take proactive action to protect natural systems employing innovative approaches and approaches tailored to the situation
DS-3j	Ability to integrate scientific knowledge and knowledge of environmental law to identify threats to natural resources and be proactive to protect natural systems using standardized approaches	Ability to assess the effects of proposed natural resource management projects on other park programs and to incorporate all division disciplines into resource management planning documents and programs	Demonstrated ability to understand the likely effects of proposed natural resource management projects and programs on other park programs and to incorporate all divisions and disciplines into resource management planning documents and programs
DS-3k			Ability to lead crews working on resources management projects and to work effectively with adjacent land managers or owners, when appropriate, and other resource scientists

Planning and Compliance

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	PLANNING AND COMPLIANCE: Ability to apply scientific knowledge in defining resource issues, in proposing alternative management strategies, and in evaluating them in terms of their effects on natural resources and compliance with environmental laws and regulations.	PLANNING AND COMPLIANCE: Ability to apply scientific knowledge to the identification and definition of natural resource issues; to develop and evaluate alternative resource management strategies in terms both of the effect on natural resources and their consistency with resource-related laws, regulations, policies, and guidelines; and to ensure that compliance requirements are met.	PLANNING AND COMPLIANCE: Ability to apply scientific knowledge to the identification and definition of complex natural resource issues; to develop and evaluate comprehensive alternative management strategies both in terms of the effect on natural resources and their consistency with resource-related laws, regulations, policies, and guidelines; and to ensure that compliance requirements are met.
DS-4a	Basic knowledge of how to use scientific information to recognize, appraise, and describe natural resource issues and management conflicts	Demonstrated knowledge and ability to use scientific knowledge to define and assess complex NPS resource preservation/use issues in scientific terms	Advanced knowledge and demonstrated ability to use scientific knowledge to define and assess highly complex NPS resource preservation/use issues in scientific terms
DS-4b	Awareness of risk assessment methodologies and basic ability to evaluate, in scientific terms, potential resource impacts from identified management needs/proposed management actions	Working knowledge of risk assessment and demonstrated ability to recognize and evaluate conflicts between resource preservation and management needs in scientific terms	Advanced knowledge and demonstrated skills in risk assessment, including the ability to recognize, evaluate, and characterize subtle (including cumulative) resource issues and conflicts with management needs and to define conflicts and risks in scientific terms
DS-4c		Demonstrated ability to define information needs, including research, inventories, baseline studies, and follow-up monitoring	Recognized ability to define in-depth, complex information needs, including research, inventories, baseline studies, and long-term monitoring
DS-4d		Comprehension of broad range of environmental laws, regulations, policies and other requirements related to natural resource planning and compliance	Sound working knowledge of the broad range of environmental laws, regulations, executive orders, policies, and guidelines related to natural resources planning and compliance
DS-4e	Basic awareness of environmental laws, compliance requirements, regulations, executive orders, and policies related to respective resource discipline	Good working knowledge of laws and compliance regulations, executive orders, policies and guidelines related to discipline of technical expertise	Advanced knowledge of the laws, regulations, executive orders, policies, and guidelines related to discipline of technical expertise
DS-4f	Basic ability to help formulate possible alternative management strategies	Ability to formulate and evaluate alternative management strategies related to area of expertise	Ability to formulate, apply, and continuously evaluate and refine alternative management strategies
DS-4g	Ability to assist in the development of various management strategies and formal plans to address resource issues	Working ability to develop management plans to address natural resource issues	Demonstrated ability to develop and implement management plans to address complex resource issues
DS-4h		Ability to work as a member of a multi-disciplinary team and to provide input related to area of expertise in the development of management plans and compliance documents	Ability to assemble and lead a team working on a complex resource issue and to provide expert input related to discipline of expertise in the development of management plans and related compliance documents

Professional Credibility

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	PROFESSIONAL CREDIBILITY: Not only scientific knowledge and abilities, but also contributions to science and scientific endeavors which are recognized by peers in government agencies and the academic community as providing a solid foundation and leadership in the level and type of natural resources work performed.	PROFESSIONAL CREDIBILITY: Not only scientific knowledge and abilities but also routine contributions to science and scientific endeavors which are recognized by peers in government agencies and the academic community as providing a strong foundation and vigorous leadership in the level and type of natural resources work performed.	PROFESSIONAL CREDIBILITY: Not only scientific knowledge and abilities but also routine, on-going contributions to science and scientific endeavors which are recognized by peers in government agencies and the academic community as providing a strong foundation and vigorous leadership in the advanced level of natural resources work performed.
DS-5a	Ability to develop an active network of professional interaction with peers in the scientific community	Demonstrated ability and skill in developing and maintaining a network of peers in the scientific community for routine professional interaction	Demonstrated ability and skill in developing and maintaining a wide and diverse network of peers in the scientific community for routine professional interaction
DS-5b	Ability to publish articles in peer-reviewed publications and/or make presentations at scientific meetings	Demonstrated ability to routinely publish articles in peer-reviewed publications and to present scientific information at scientific meetings	Demonstrated ability to publish articles in peer-reviewed publications and to serve as an editor for publications and reports
DS-5c			Demonstrated ability to present scientific information at scientific meetings and to organize and chair workshops and seminars at meetings
DS-5d	Ability to maintain a level of scientific knowledge and skill in application that is recognized by peers in government agencies and the academic community as credible and providing a basic foundation for work performed	Demonstrated ability to maintain levels of scientific knowledge and skills in application that are recognized by peers in government agencies and the academic community as credible and providing a strong foundation for work performed	Demonstrated ability to maintain levels of scientific knowledge and skills in application that are recognized by peers in government agencies and the academic community as credible and providing a strong foundation for work performed
DS-5e	Ability to carry out peer review of scientific reports, and to participate in developmental assignments as a member of teams reviewing natural resource programs	Recognized ability to carry out peer review of scientific reports, publications, projects, and natural resource programs	Recognized ability to carry out peer review of scientific reports, publications, projects, and natural resource programs
DS-5f	Demonstrated ability to maintain currency of technical/scientific knowledge	Demonstrated ability to maintain currency of technical/scientific knowledge	Demonstrated ability to maintain currency of advanced technical/ scientific knowledge

Communication

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	COMMUNICATION: Ability to effectively communicate natural resource information to diverse audiences through a variety of media.	COMMUNICATION: Ability to effectively communicate complex or technical natural resource information to diverse audiences, including NPS decision-makers, through a wide variety of media.	COMMUNICATION: Well-developed ability to effectively communicate highly complex, technical, or controversial natural resource information to diverse and sometimes hostile audiences through all available media. Consequential management decisions are made based on this communication
DS-6a	Ability to write natural resource action plans, sections of agency documents and technical reports, in accordance with existing guidelines and subject to review by others	Ability to write complex scientific and technical reports suitable for publication in peer-reviewed journals, as well as internal resource management documents	Ability to write complex scientific and technical documents dealing with advanced and highly technical natural resource information and issues
DS-6b		Ability to give complex scientific and technical presentations at professional conferences and meetings	
DS-6c	Ability to organize and orally present technical and scientific information	Ability to organize and synthesize complex information from a variety of sources	Ability to evaluate and synthesize information from conflicting sources
DS-6d	Ability to write and orally present management summaries of research information		Ability to organize complex technical and scientific information and prepare briefings from which decisions are made by high-level agency personnel and Congress
DS-6e	Ability to present briefings to agency personnel and the visiting public	Ability to effectively communicate complex scientific information to NPS managers and other non- specialists, using a variety of media	Ability to effectively convey complex information concerning politicized or controversial issues to potentially hostile audiences
DS-6f	Ability to give off-site, public presentations on non- controversial issues	Ability to interpret complex issues for lay audiences, using a variety of media	Ability to effectively negotiate, persuade, and resolve conflict
DS-6g	Ability to use computers to communicate electronically	Proficiency in using electronic communications	
DS-6h	Ability to organize, store, and analyze data with computers	Proficiency in using computers to organize, store, and analyze data	
DS-6i		Ability to use computer graphics programs to facilitate the written and oral presentation of scientific material	

Program/Project Management

	DISCIPLINE SPECIALIST Entry/Development Level	DISCIPLINE SPECIALIST Journey Level	DISCIPLINE SPECIALIST Advanced Level
	PROGRAM/PROJECT MANAGEMENT: Ability to apply scientific knowledge to plan, implement, and/or administer projects of limited scope in the area of expertise.	PROGRAM/PROJECT MANAGEMENT: Ability to apply knowledge of scientific concepts and NPS programs to plan, implement, and/or administer projects in the area of expertise.	PROGRAM/PROJECT MANAGEMENT: Ability to apply knowledge of scientific concepts and NPS programs to plan, implement, and/or administer complex natural resource projects.
DS-7a		Ability to identify needs and set priorities within area of expertise, including facilitation of group efforts to define and prioritize broader resource management and research needs	Ability to lead and coordinate groups to define resource management and research needs to address issues that are complex or with little precedent
DS-7b	Ability to conceive and define project objectives in area of expertise and to develop basic work plans	Ability to set short- and long-term goals, and to develop work plans	Ability to develop innovative work plans for complex projects that involve multiple components and a need for careful coordination and sequencing
DS-7c	Ability to draft proposals, funding requests, and requests for proposals	Ability to prepare proposals, funding requests, and requests for proposals	Ability to prepare complex proposals, innovative funding requests, and requests for proposals
DS-7d	Basic knowledge of types of agreements and ability to draft simple agreements or contract outlines	Working knowledge of cooperative agreements, MOUs, contracting, and other agreement instruments	Ability to prepare complex or innovative cooperative agreements, MOUs, and other agreement instruments
DS-7e		Ability to seek and obtain partners and funding from a variety of sources	Demonstrated ability to successfully seek and arrange partnerships
DS-7f	Ability to draft and monitor project budgets, including the status of staff and fiscal resources	Ability to develop and manage project budgets, including fiscal as well as staff resources	Ability to develop and manage complex project budgets, including fiscal as well as staff resources
DS-7g	Ability to coordinate and facilitate groups or teams to accomplish resource management and research project objectives	Knowledge of project administration	
DS-7h	Ability to monitor basic project implementation	Ability to monitor project implementation	Ability to oversee and monitor implementation of complex projects
DS-7i		Knowledge and skill in interpersonal relationships	Demonstrated skill in interpersonal relationships