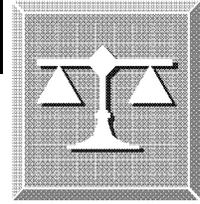


TS-101 January 1991

**General Schedule
Position Classification Standards**



WCPS-2 August 2002

**POSITION CLASSIFICATION
STANDARD
FOR
FISHERY BIOLOGY SERIES/
WILDLIFE BIOLOGY SERIES
GS-0482/0486**



**Workforce Compensation
and Performance Service**



TABLE OF CONTENTS

SERIES DEFINITIONS

FISHERY BIOLOGY SERIES, GS-0482 3

WILDLIFE BIOLOGY SERIES 3

EXCLUSIONS 3

SERIES COVERAGE 4

OCCUPATIONAL INFORMATION 6

SPECIALIZATIONS AND TITLES 8

GRADING OF POSITIONS 8

FACTOR 1, KNOWLEDGE REQUIRED BY THE POSITION 10

FACTOR 2, SUPERVISORY CONTROLS 16

FACTOR 3, GUIDELINES 17

FACTOR 4, COMPLEXITY 18

FACTOR 5, SCOPE AND EFFECT 20

FACTOR 6, PERSONAL CONTACTS AND
FACTOR 7, PURPOSE OF CONTACTS 22

FACTOR 8, PHYSICAL DEMANDS 23

FACTOR 9, WORK ENVIRONMENT 24

SERIES DEFINITIONS

FISHERY BIOLOGY SERIES, GS-0482

This series includes positions which require professional knowledge and competence in the science of fishery biology to perform work: (a) developing, conserving, managing, and administering fishery resources; and (b) evaluating the impact of construction projects and other socioeconomic activities that present potential or actual adverse effects on fishery resources and their habitat. The work also requires an ability to determine, establish, and apply biological facts, principles, methods, techniques, and procedures that are necessary for the production and/or management of aquatic resources in their natural habitat and/or within facilities and systems that have been constructed for their benefit and public use.

This guide supersedes the standard for the Fishery Biology Series, GS-0482, issued in April 1962.

WILDLIFE BIOLOGY SERIES

This series includes positions which require professional knowledge and competence in the science of wildlife biology to perform work involving: (a) the conservation, propagation, management, protection, and administration of wildlife species; or (b) the determination, establishment, and application of biological facts, principles, methods, techniques, and procedures necessary for the conservation and management of wildlife resources and habitats. The work requires professional knowledge of the distribution, habits, life histories, and classification of birds, mammals, and other forms of wildlife.

EXCLUSIONS

The following occupations are excluded from these series:

1. Positions which involve some application of the principles and practices of fishery or wildlife biology, but for which the paramount professional knowledge requirement is characteristic of another specialized field:
 - a. Classify positions involving the executive phases of administering, directing, or exercising control over programs, regulatory activities, or operations associated with fish and/or wildlife resources when such work influences agency operations on a regional, national, or international basis in the [General Fish and Wildlife Administration Series, GS-0480](#).
 - b. Classify positions involving the management, administration, and scientific operation of wildlife refuges in the [Wildlife Refuge Management Series, GS-0485](#).

- c. Classify positions involving primarily advisory, research, and analytical or other professional work in the science of ecology where emphasis is on ecosystems including environmental factors, physical- chemical relationships, and social relationships in the [Ecology Series, GS-0408](#).
2. Classify positions involving work associated with fishery biology and wildlife biology when neither discipline is predominant in the [General Biology Series, GS-0401](#). (NOTE: Such positions may be evaluated on cross-series comparison with the criteria of this guide for grade level determinations.)
3. Classify positions which involve nonprofessional, but similar work in the protection, conservation, preservation, and propagation of fishery and wildlife resources in the [Biological Technician Series, GS-0404](#), or an appropriate series of the [Job Grading System for Trades and Labor Occupations](#).
4. Classify positions concerned primarily with water phases of fish and wildlife management such as sedimentation, climatology, ground and surface water, or major drainage and flood control undertakings in other appropriate professional series such as the [Civil Engineering Series, GS-0810](#), [Hydrology Series, GS-1315](#), or [Geology Series, GS-1350](#).

SERIES COVERAGE

Positions classified in the Fishery Biology Series, GS-0482, are concerned with the following:

- a. Operating a fish production or culture and development facility, and fish passage facilities.
- b. Managing or developing fishery resources on Federally owned or managed lands such as national parks, national forests, wildlife refuges, Indian reservations, military installations, and other lands in the public domain.
- c. Providing services in fish health and growth, disease control, and water diagnoses for the benefit of Federal and State hatcheries, private fish farmers, and Native Americans.
- d. Evaluating ecosystems for the protection and preservation of aquatic resources and their habitat.
- e. Reviewing state proposals for funding fishery resource projects to determine if planned objectives warrant Federal funding and meet fishery resource needs in accordance with applicable laws and regulations.

- f. Preparing, reviewing, evaluating, and conducting biological analyses of land and water resource projects and Federal permit and license applications to ensure: (1) compliance with appropriate statutes; and (2) adverse impacts of projects on fishery resources are avoided or mitigated (i.e., adverse impact on fish or wildlife habitat is offset by establishing or providing for comparable habitat).
- g. Developing and negotiating memoranda of understanding, cooperative agreements, interagency agreements, and international agreements for the conservation and management of fishery resources, including threatened or endangered species, and resolving issues related to the management of Federal fishery programs.
- h. Developing and implementing cooperative programs with and providing technical assistance to Federal, State, and local governments, Alaskan/American native tribal governing bodies, special interest groups, and the public concerning the protection and proper management of fishery resources and their habitat.
- i. Proposing, designing, conducting, and negotiating contracts to conduct studies and investigations to determine species population and aquatic habitat status, trends, and problems to meet: (1) fishery management plan objectives; (2) resource impact analysis or mitigation requirements; (3) endangered or threatened species protection and consultation requirements; (4) habitat evaluation requirements; (5) the needs of species population and/or habitat restoration and enhancement programs; and (6) requirements of related management initiatives.
- j. Interacting with fishery biologists from state and other Federal agencies to avoid conflicting fishery management programs and duplication of efforts, considering the ecological consequences of the introduction of exotic or non-native fish species, and preparing reports on the results of studies and management efforts.

Positions classified in the Wildlife Biology Series, GS-0486, are concerned with the following:

- a. Developing, and managing wildlife programs on Federally owned or managed lands such as national parks, national forests, wildlife refuges, Indian reservations, military installations, wetlands, big game and desert ranges, and other lands in the public domain. (The work does not involve primarily the management of wildlife refuges, forests, or parks.)
- b. Developing and implementing cooperative programs with and providing technical assistance to states, private landowners (including participants in animal damage control and farming/grazing programs), Alaskan native and Indian tribal governing bodies, and special interest groups concerned with protection and proper management of wildlife and wildlife habitats.

- c. Assessing and conducting wildlife management transactions involving lands, easements, and other resources for acquisition, sale, lease or exchange.
- d. Preparing, evaluating, and conducting biological analyses of land and water resources projects and Federal permit applications to ensure: (1) compliance with appropriate law, and (2) adverse impacts on wildlife resources are avoided or mitigated.
- e. Reviewing State and Federal proposals for funding of a wide variety of wildlife resource projects to determine if planned objectives warrant Federal funding and meet wildlife resource needs in accordance with applicable laws and regulations.
- f. Proposing, designing, and conducting studies to determine population status, trends, and problems of wildlife species to meet: (1) flyway objectives, (2) disease control specifications, (3) endangered or threatened species protection and consultation requirements, (4) habitat evaluation procedures, (5) population enhancement programs, (6) integrated land management planning, (7) environmental contaminant specifications, and (8) other related management efforts.
- g. Developing and negotiating cooperative agreements with public and private landholders or conservation organizations to provide funds and services in animal damage control, and biology technology and data.
- h. Developing, negotiating, and implementing memoranda of understanding and state, national, and international agreements for conservation and management of wildlife, including threatened or endangered species.
- i. Proposing and designing studies to determine the extent of habitat changes and the effects of those changes on wildlife populations due to natural biological processes and/or planned habitat management actions.

OCCUPATIONAL INFORMATION

Positions in the Fishery Biology Series, GS-0482, and the Wildlife Biology Series, GS-0486, apply professional biological knowledge in the preservation, conservation, propagation, and management of fishery or wildlife resources and habitat for many different fish and wildlife species. Employees in these positions serve in a variety of functions and work situations at all levels of agency organizations. Occupational assignments range from direct management of fishery and/or wildlife resources to the study and analysis of life history, behavior, habitat requirements, classification, and economic implications. Management activities include the need to assess and mitigate environmental and human impacts on the survival and growth of fish and wildlife species and their habitat. They also include analysis and program planning for physical facilities and methods required to regulate use of resources for the purpose of securing sustained, maximum yield or sustained populations of the various species.

Some of the work includes investigative activities which may involve studying various ecological systems in relation to the health, growth, and well-being of fishery or wildlife resources. In both occupations, biologists conduct surveys or censuses, design recovery plans, and prepare reports of results and findings. They also identify and protect wetland habitats, and study habitat requirements and the effects of environmental contaminants, parasites, and diseases on fishery or wildlife species. Fishery and wildlife biologists are generally concerned about the introduction of contaminants into the environment, their effects on fish and wildlife, and the means to remove or compensate for contaminants. Contaminants include any materials such as pest control chemicals, pollutants, fertilizers, or any element or compound present in the environment above those concentrations tolerated by fish and/or wildlife in the area.

Employees in these occupations respond to legal mandates and public needs for fish/wildlife production, or conservation, propagation, outdoor recreation, protection, and environmental enhancement. In addition to Federal laws, many States and local governments have imposed numerous restrictions, requirements, and programs on fishery and wildlife resource practices that are directly related to resident state species, e.g., the taking of a given species may be allowed in one state and prohibited in another. Biologists of both occupations are significantly involved in the planning and decision-making processes relative to endangered or threatened species, critical habitat, environmental contaminants, the impact of land and water development projects on resources, and positions held by special interest groups on Federal management of these resources. Therefore, operational practices, techniques, and methodologies require employees to conduct comprehensive factfinding, data analysis, information development, and extensive literature reviews to respond to new programs, resource activities, and public demands. These may involve a substantial amount of public contact and negotiation of difficult and controversial conditions when Federal and State agencies have different missions, or members of Congress and various conservation and public interest groups express concerns which conflict with agency missions and objectives.

Positions in both occupations require, in addition to specialized knowledges of the objectives and principles of fishery or wildlife biology, some basic knowledge and ability to apply associated sciences. While the application of such knowledge varies, many positions require some basic course work or understanding in other biological, earth or physical sciences, particularly chemistry, physics, mathematics, and hydrology. In addition, many positions require knowledge and skill in computer operations and statistics which are applied in support of their work activities. These basic knowledges and skills must be complemented by communication skills and an ability to deal effectively with people under diverse conditions.

SPECIALIZATIONS AND TITLES

The specializations established in this standard represent the major divisions of work within these series; they require significantly different applications of biological knowledge and skills which are applicable to the work on a continuing basis.

Fishery Biologist (Management)
Wildlife Biologist (Management)

These titles apply to all nonsupervisory positions involved primarily in program planning, administration, evaluation, organization, and use of resources (personnel, funds, and materials) required to meet management plans and objectives for fish and wildlife programs.

Research Fishery Biologist
Research Wildlife Biologist

These titles apply to all positions engaged primarily in on-going biological research efforts through basic or applied methods and practices to enhance the propagation, growth, conservation, protection, management, and utilization of fish and wildlife resources and their habitats, and for discovering and interpreting principles and facts related to conservation or increased productive use of such resources.

Fishery Biologist
Wildlife Biologist

All other positions in these series have the basic title Fishery Biologist or Wildlife Biologist.

The term "Supervisory" must be prefixed for all positions that meet or exceed the criteria in the appropriate [guide for evaluating supervisory positions](#).

GRADING OF POSITIONS

Full performance level positions should be evaluated on a factor-by-factor basis, using the Office of Personnel Management Factor Level Descriptions in this guide. Only the designated point values may be used. Trainee and developmental positions may be evaluated by using the [Primary Standard](#) for the Factor Evaluation System for factor levels lower than those described in this guide. Use the primary standard and related FES standards to evaluate factors of positions that significantly exceed the highest factor levels described in this standard. Additional instructions for evaluating positions are contained in [Introduction to the Position Classification Standards](#).

This standard does not include grade-level criteria for all types of fishery and wildlife biology positions. The criteria do, however, include representative assignments that characterize work of the occupations at various organizational levels. For position classification purposes, the following grade-evaluation guides may be more appropriately applied for grade-level determinations.

1. Use the appropriate [supervisory evaluation guide](#) to evaluate positions that meet the definition for evaluation as supervisors. Many positions covered by this standard include both supervisory and program management responsibilities. In such cases, it may be necessary to evaluate positions using both the criteria provided in this standard and the appropriate supervisory guide to determine the appropriate grade level. When this approach produces two different results, the proper grade is the higher of the two.
2. The [Research Grade Evaluation Guide](#) is used to evaluate professional positions in a scientific field when employees are required to conduct, as a primary assignment, basic or applied research.

NOTE: Many biologists perform short term, scientific research with highly specific objectives which resemble basic or applied research. Although the skills required are similar, differences occur in terms of scope and purpose of the assignment. Positions that primarily involve basic or applied research are concerned predominantly with the systematic investigation of theory, experimentation, or simulation of experiments. Such work is performed for a substantial portion of the employee's time in a position established for the purpose of conducting such research.

By contrast, positions that are limited to conducting field surveys to collect scientific data, on natural phenomena (e.g., biological or hydrological) are not within the definition of "research" for position classification purposes. It is recognized, however, that some scientists engaged in such work may be conducting "theoretical and experimental investigations" and developing "principles, criteria, methods, and a body of data of general applicability." In such cases, judgment must be exercised in determining whether the criteria in this standard or the guide should apply.

3. Use the [Research Grants Grade-Evaluation Guide](#) to evaluate positions involving professional work which requires application of scientific knowledge in administering, analyzing, coordinating, and approving scientific grants programs and projects that are carried out in educational, research, and other institutions.
4. Use the [Policy Analysis Grade-Evaluation Guide](#) to evaluate positions involving professional work which requires the application of scientific knowledge in the analysis of public policy issues and their impact on social, economic, scientific, environmental, and other issues of national and international significance.

GRADE CONVERSION TABLE

Total points on all evaluation factors are converted to GS grade as follows:

GS Grade	Point Range
9	1855-2100
10	2105-2350
11	2355-2750
12	2755-3150
13	3155-3600
14	3605-4050
15	4055- up

FACTOR 1, KNOWLEDGE REQUIRED BY THE POSITION

Level 1-6 -- 950 Points

Professional knowledge of established scientific methods and techniques of fishery or wildlife biology to perform recurring assignments of moderate difficulty (i.e., the methods and techniques are well established, apply to most situations encountered, and do not require significant deviation from the established methods). Assignments are limited by such characteristics as:

- Unusual or difficult problems are screened out or discussed with the supervisor before carrying out the assignment.
- The fish or wildlife resource affected is amenable to a variety of standard treatments and proven techniques.
- Assignments are relatively noncontroversial in terms of methodologies that are used, are associated with past and planned use, do not influence resource depletion, and they support existing protection, avoidance, or mitigation efforts.

A general knowledge and understanding of agency, state, or tribal policies, procedures, statutes, and regulations affecting the conservation, preservation, propagation, and utilization of the resource and its environment sufficient to execute established fishery or wildlife resource programs is required.

Basic knowledge or understanding of the applications of related disciplines such as chemistry, grassland and timber management, hydrology, entomology, immunology, parasitology, plant pathology, and ecology is applied in activities such as aquatic survey, pond fertilization, immunological assessment, stream improvement, fish eradication, fish propagation, or field investigations.

Knowledge of contracting procedures and skill in oversight requirements are sufficient to assist in the administration of contracts, cooperative agreements, and/or special leases or permits related to fishery or wildlife resources activities. This includes conducting on-site inspections and identifying problems such as impact on fish/wildlife or their habitat and recommending actions to be taken by other employees.

Assignments consist of a variety of professional activities such as: (a) preparing resource planning reports involving conventional or straight-forward biological concerns; (b) drafting conventional short-range management plans or assigned portions of annual work plans and operating guides, followed by preparation of written reports for management use.

Other assignments involve: (a) carrying out all aspects of a fish or wildlife survey including tasks such as: performing water chemistry, measuring physical characteristics, collecting representative flora and fauna, recording data, and preserving specimens; (b) preparing hatchery ponds for natural reproduction of fish; (c) monitoring and maintaining operations of a migratory bird route or fish passage system; (d) preparing facilities for taking, fertilizing, and hatching fish; and/or (e) participating in interdisciplinary teams providing specialized review and recommendations on plans, policies, and/or procedures affecting fish/wildlife management.

Illustrations:

- Follow established procedures and recognize the need for variations in such procedures to oversee the production, care, and feeding of hatchery fish. Identify and determine the sex, select ripe fish for spawning, care for incubating fish eggs, identify common bacterial and parasitic fish diseases and determine appropriate standard treatments, calculate feeding rates and prophylactic treatments, prepare eggs and fish for shipment, and maintain sanitary conditions.
- Collect qualitative and quantitative data on the ecology of lakes and streams to determine characteristics and value of an ecosystem. This includes the selection and application of an appropriate capture method (e.g., seining, electrofishing, etc.); collecting bottom samples; and sampling aquatic flora and food chain species.
- Carry out short-term studies using established factfinding and evaluation procedures, such as in: (a) preparing base line information for riparian (i.e., stream, river, and lake banks) stabilization projects considering the impact of erosion, dredging, and filling on the ecosystem; or developing baseline information on migratory birds, including their habitat, growth limitations, and feeding requirements.

- Monitor animal damage control operations for compliance with management policies and plans, cooperative agreements, and objectives; provide technical assistance and/or information to other Federal, State, and local agencies, livestock associations, and the news media based on standardized control techniques, practices, and objectives.
- Participate in planning and executing various resource programs. These may include interpretive, educational, or informational programs to enhance public enjoyment of wildlife areas; pesticide programs to identify suspected problems and recommend solutions; programs to assess Federal permit applications; and programs to sample activities of a variety of fish or wildlife populations and their vegetative food sources. May also work with and make suggestions and recommendations to an interdisciplinary team involved with protection or improvement of fish and wildlife habitat.
- Plan, schedule, and direct activities associated with fish passage/collection/transport systems at hydroelectric dams or field locations and monitor the effects of these operations on fishery resources.

Level 1-7 - 1250 Points

Professional knowledge of fishery or wildlife biology applicable to an intensive fishery or wildlife resource program, or a subject matter program, such as applied in the management and operation of a fish hatchery or fish passage facility, a habitat evaluation program, or a pervasive animal damage control program.

Professional knowledge and skill to modify or adapt standard techniques, processes, and procedures, and to assess, select, apply precedents, and devise strategies and plans to overcome significant resource problems related to species production, protection, habitat restoration, construction, or program management and evaluation. This includes intensive knowledge and competence in advanced techniques of a highly complex area of fish and/or wildlife biology sufficient to serve as a troubleshooter, specialist, or coordinator.

Knowledge of the biological characteristics, conditions, and interrelationships of aquatic and terrestrial biota, or of wildlife resources and ecological systems to establish production procedures independently, or to evaluate resource or water management projects.

Knowledge and skill to analyze data or to prepare studies and reports on the impact of various management or public practices on a resource, or on the complementary or competitive impact of the development, modification, or change in the use of one resource on another. This level is also used in assessing the environmental impact and making recommendations on such programs as hydropower and pipeline projects, and military activities.

Knowledge of contracting procedures and legal requirements to develop detailed contract specifications, task statements, quality of work criteria, and related specifications for use in obtaining specific kinds of work and services through competitive contract and acquisition channels.

Knowledge and skill in administrative and staff level work to: (1) provide advisory, review, and training services to others engaged in the planning and management of Federal, State, local, tribal, and/or privately-owned fish and wildlife facilities or areas, and (2) develop a variety of short (1-3 years) and medium range (3-5 years) integrated plans for fish and wildlife projects including estimates of personnel, equipment, materials, and schedules required to carry out the plans.

Illustrations:

- Prepare a fish habitat measurement or a fishery or wildlife management plan for a watershed or large geographic area; e.g., Indian reservation, military installation, wildlife refuge, forest, or national park.
- Diagnose various fish diseases, isolate and eradicate the source of contamination, and select appropriate treatments. Diagnose and select treatments for nutritional disorders, develop and test new diets and treatments, analyze transportation systems, and report the results of findings to be used by other biologists.
- Prepare or review biological implications of environmental assessment/impact statements or comprehensive resource planning reports to evaluate environmental consequences of proposed actions or Federal projects. Such assignments relate to activities such as logging operations, damming, road building, mining, farming and grazing agreements, building construction, military activities, or other activities that impact on fish or wildlife resources or their habitat.
- Provide staff services and analysis on fishery or wildlife resource conditions and formulate and recommend policy, practices, and procedures; or review and make recommendations on policy issues, plans, methodologies, and practices affecting fishery/wildlife management or habitat restoration efforts.
- Analyze data and coordinate studies of fish or wildlife populations; make recommendations related to their continued existence; report on their status as suitable candidates for listing as endangered or threatened species; develop appropriate recovery plans; and/or conduct consultations that result in proposed regulations.
- Perform, as a technical specialist, a variety of biological evaluation activities related to land acquisition and exchange projects. This involves the ability to develop and analyze various land concept plans, to identify lands suitable for purchase, sale, or exchange, assure compliance with applicable laws and regulations, and prepare environmental assessment or impact statements, contract specifications, or comprehensive resource planning reports.

- Develop comprehensive wildlife management plans to insure preservation, protection, and enhancement of wildlife and wildlife habitat for a major geographic area having a variety of habitat conditions such as a region or multi-state district. This requires the ability to develop, coordinate, or review plans that may encompass any and all programs that affect wildlife and its habitat conditions including, but not limited to, fire management, moist soil management, cooperative farming, water quantity/quality, timber/forestry, or grassland management.
- Provide technical assistance for Federal, State, local, commercial, and international programs in the development of a variety of agreements and activities related to commercial fish ponds, wildlife habitat and wetland development. This involves the ability to resolve problems related to soils, soil-plant relations, securing a proper balance of wildlife native to the area, and providing sufficient food sources and plant cover.
- Serve as a technical expert on contaminants and pesticides as they relate to effects on fish, wildlife, and their environments. Provide technical guidance and assistance to State and Federal agencies in a region or multi-state area; coordinate environmental monitoring, field investigations, and contaminant remediation efforts designed to evaluate and minimize hazards to fish and wildlife and their environments from use of pest control chemicals and releases of pollutants and contaminants into the environment.

Level 1-8 - 1550 Points

Mastery of fishery biology or wildlife biology to apply new scientific findings, developments, and advances to the solution of critical problems of a particularly unique, novel, or highly controversial nature. Included are problems for which current information is inconclusive, or is in the form of suppositions or theories about the effectiveness of certain treatments on the specific fishery or wildlife resource problems.

Biologists apply comprehensive knowledge of principles, theories, and methodologies to develop or refine solutions and recommendations to complex problems; to develop long-range (5-15 year) management plans for large, geographic areas; and to project trends and future needs related to fishery or wildlife resources. Biologists also apply such knowledge to extend existing techniques and methodologies or to develop new approaches for use by other biologists, representatives of commercial or industrial firms, farmers, private landowners, State agencies, or interest groups, and to take actions which have significant impact on existing agency policies and programs.

Biologists, at this level, are generally recognized as technical experts in a particular resource program, one or more program areas, or a subject matter field. Therefore, they apply extensive knowledge of the latest technological advances in particular areas of fishery or wildlife resource management sufficient to evaluate their potential impact on current and future programs, including the development of plans and procedures required to implement such advances.

Comprehensive knowledge of agency, State, county, or tribal policies, as well as other Federal agency policies, procedures, regulations and applicable statutes pertaining to biological issues

and concerns, and extensive knowledge of the latest developments in concepts or strategies is required to evaluate agency programs, development plans, and current practices and procedures associated with fishery or wildlife resource management activities.

Knowledge such as that described above is applied in the execution of controversial programs, resource planning, recovery efforts, fishery or wildlife objectives, decision documents, or formal consultations that significantly impact agency priorities on a national or regional basis.

Illustrations:

- Provide technical leadership, staff level coordination, and consultation for a major fishery/wildlife resource program (e.g., endangered species restoration, aquatic and riparian programs, or fish passage systems). Resolve problems related to fish/wildlife conservation, preservation, and propagation problems which have been resistant to established or previously accepted practices and methods. This work requires knowledge of administrative procedures and the ability to secure administrative support through contracts, funding, and available personnel resources. The biologist applies a broad and diversified knowledge of fishery or wildlife resources to influence planning and administration of program activities.
- Serve as an expert agency representative working in consultation with international, national, and State officials to negotiate project scope, administer project activities, prepare reports of results, and consider the impact of construction, contaminants, environmental, and recreational projects on fish and wildlife resources. Review reports describing such projects; determine compliance with applicable laws and recommend approval based on compliance with law and agency policy. Administer and monitor conditions of international agreements and funds available under an international treaty. This also involves employee participation in developing agency policies, technical guidance, draft manual sections, and instructional guidance for application by a wide range of experts and other users.
- Conduct field investigations based upon newly identified principles in fish/wildlife program areas where little or no information is available (e.g., establishing programs or developing plans to provide new food sources, establishing new methods to improve habitat, or determining the impact of new programs on targeted species). The results of such work lead to long-range resource plans and are integrated in overall management plans and national program priorities.

FACTOR 2, SUPERVISORY CONTROLS

Level 2-3 - 275 Points

The objectives of the assignment, priority, and required deadlines are specified by the supervisor.

The biologist is expected to plan and carry out the assignment independently in accordance with proven techniques, methods, practices, and previous experience. On assignments that involve, or may potentially involve, controversial use of approaches or modification of standard procedures, the biologist typically will discuss the issues and possible approaches with the supervisor before carrying out the assignment.

Completed work is reviewed for adequacy, technical soundness, and accomplishment of specified objectives.

Level 2-4 - 450 Points

The supervisor establishes overall goals and resources available. The biologist and supervisor confer on the development of general objectives, projects, work to be done, and deadlines.

The biologist is responsible for planning and executing assignments, selecting appropriate techniques and methodology, and determining the approach to be taken. The biologist is expected to resolve most problems that arise and coordinate the work with others in the same or other resource areas or disciplines as necessary. The biologist interprets and applies program policy in terms of established objectives; keeps the supervisor informed of progress, potentially controversial problems, concerns, issues, or other matters having far-reaching implications.

Completed work is reviewed for general adequacy in meeting program or project objectives, expected results, and compatibility with other work.

Level 2-5 - 650 Points

The supervisory guidance or control at this level is exercised through broad, general objectives which have been approved for the assigned program. The biologist operates within the context and constraints of national legislation, agency policy, and overall agency objectives as they pertain to fishery or wildlife resources.

Within these broad areas of direction, the biologist is responsible for independently determining the validity, soundness of programs and plans, and independently carrying out programs, projects, studies, surveys, and investigations.

The results of work, including recommendations and decisions, are considered as technically authoritative and are normally accepted without significant change. When work is reviewed, it is primarily in relation to broad policy requirements and administrative controls.

Recommendations for new projects and alterations of objectives are usually evaluated for such considerations as availability of funds and other resources, broad program goals, or national priorities.

FACTOR 3, GUIDELINES

Level 3-3 - 275 Points

A number of general guidelines are available, and broad objectives have been established.

Although the guidelines that are available may not be completely applicable to the work situation, the biologist uses judgment in determining which appropriate alternatives should be used. The biologist uses judgment interpreting and adapting guidelines for application to specific situations or problems. In cases where guidelines lack specificity, the biologist makes generalizations from several guidelines in carrying out work efforts, analyzes results, and recommends changes. The biologist determines when problems require additional guidance.

Level 3-4 - 450 Points

Guidelines at this level are often inadequate to deal with the more complex or unusual problems, or with novel, undeveloped, or controversial aspects of fishery/wildlife resources and management. The precedents or guides may point toward conflicting decisions; recent court decisions may appear to require a technical decision at variance with existing guides; or there may be relatively few precedents or guides which are pertinent to specific problems, or proven methods are incomplete.

The biologist is required to deviate from, or extend traditional methods and practices, or to develop essentially new or vastly modified techniques or methods for obtaining effective results, or propose new guidelines.

Level 3-5 - 650 Points

Fishery or wildlife biologists at this level are largely occupied with major problems which are highly unusual or of national significance. There may be little information available, or the guidelines that do exist are broadly stated and nonspecific, requiring extensive interpretation (e.g., departmental directives, Federal laws, and recent scientific reports or findings).

The biologist must exert a high degree of judgment, originality, and creativity in such areas as:

- Interpreting and converting general legislative or agency objectives and policies into specific plans, programs, projects, or activities.
- Evaluating problems in judging direction, extent, and significance of trends and developments.

- Adjusting broad programs to the latest advances in fishery or wildlife biology, and to changing needs.
- Interpreting and applying other Federal and State statutes and regulations for the purpose of satisfying cooperative efforts in the protection and management of natural resources.

The biologist at this level is frequently recognized as an authority in a resource or subject matter area with responsibility for influencing or developing policies, plans, standards, methods, procedures, and instructions that guide other personnel in executing fishery or wildlife resource programs.

FACTOR 4, COMPLEXITY

Level 4-3 - 150 Points

Work at this level is characterized by the application of different and unrelated processes and methods. The work requires analyses and evaluations of environmental conditions, proposed management practices, ecological systems, critical habitat, impact of construction projects on the resources, and the value of fishery or wildlife resources.

The biologist must make decisions which include considerations about the interrelationships of fishery or wildlife resources. Information which may affect the decision making process include: (a) competing resource values, practices, or techniques; (b) conflicting public and industrial demands; (c) controversial biological practices or techniques; (d) changing habitat conditions; and (e) limited alternatives, solutions, and coordination problems caused by interference or conflicts with other resource uses or functions.

Actions taken require the biologist to select and apply conventional approaches and precedent solutions according to specific conditions which exist in each assignment.

Level 4-4 - 225 Points

At this level, biologists typically are involved in a full range of professional activities and in the application of many different and unrelated biological concepts. Biologists regularly encounter interdependent resource and socioeconomic problems. They apply flexibility and judgment in approaching problems and applying biological methodologies and practices to obtain an optimum balance between program requirements and policies, differences in the mission of agencies, and the demands of the various interest groups. Some assignments involve conflicting special interest groups or tribal demands that influence the redirection of management priorities, objectives, and agency policy. The demands may result in appeals to higher level authorities within the agency or other agencies that have a mutual interest.

Assignments typically involve administrative and resource problems which require indepth analysis and evaluation of alternatives; environmental problems with conflicting requirements accompanied by resolutions which may have serious implications for industry, commercial concerns, or the general public. The work requires biologists to identify independently the

boundaries of the problem involved, the kinds of information needed to solve the problem, and the criteria and techniques to be applied in accomplishing the assignment.

Typically, the assignment may require biologists to relate new work situations to precedent situations, extend or modify existing techniques, or develop compromises which require substantial effort to overcome resistance to change when it is necessary to modify an accepted method or approach.

Level 4-5 - 325 Points

The work includes varied duties requiring many different and unrelated processes applied to a broad range of activities that cover a wide geographic area, or substantial depth of analysis.

Biologists are responsible for integrated resource analysis, information development, and factfinding in a particular program area. They may also be responsible for coordinating and planning activities which cover a broad multiple-resource program. Assignments involve sensitive and complex migratory bird and endangered species issues, evaluation of habitat classification and ecological production functions, major water resource development projects, or various land based fish or wildlife production facilities and activities that include problems associated with sophisticated water systems which require complex pumping and filtering systems to deliver water, and the need to control parasites and viruses that impact water quality. Fish production activities also include those associated with maintaining national broodstock, maintaining balance of species, long-term survival rates, and information development/exchange pertaining to fish restoration and disease.

The work involves solving problems concerned with novel, undeveloped, or controversial aspects of fishery or wildlife biology and related disciplines. The problems are complex or difficult due to such characteristics as the abstract nature of the concepts, or the existence of serious conflicts among scientific requirements, program direction, and administrative requirements.

Assignments require biologists to be especially versatile and innovative in order to recognize possible new approaches, devise new or improved techniques or methods, or to anticipate future trends and requirements in fishery or wildlife resources uses and demands.

Level 4-6 - 450 Points

Work is characterized by broad and intensive efforts involving several kinds of problems concerning various species or habitats, where the controlling theory and practices are largely undefined, or where the biological methods and practices are in a state of development or are extensively affected by advances in technology. At this level, such efforts require the support of others within and outside the organization, frequently involving several phases concurrently or sequentially pursued. Projects involve highly complex technical problems that are under close scrutiny by major special interest groups which typically have differing aims.

The problems encountered are usually undefined or in dispute, and they require extensive analysis for definition of the problem prior to making decisions about approaches to take in searching for solutions. Projects involve the full range of situations pertinent to various species or habitats, requiring the development of new or refined methods and application of advanced technology in fish/wildlife biology. They may be of such scope and complexity that they require supportive projects, some of which are nonscientific in nature. The biologist's actions may alter or establish standard concepts, theories, objectives, or previously established practices or policies of national scope in the fishery or wildlife biology fields or may resolve previously unyielding problems.

FACTOR 5, SCOPE AND EFFECT

Level 5-3 - 150 Points

At this level, the purpose of the work is to investigate and analyze (or, through contracts, monitor and evaluate) conventional fishery and wildlife resources problems and/or environmental conditions to recommend or implement solutions that satisfy resources management objectives. Typically, the work requires the biologists to identify common problems (e.g., fish disease, habitat conditions, or impact of construction projects).

The work affects the adequacy of production, development, protection, management, and use of fish/wildlife resources by assessing conditions and notifying others about the need to study apparent problems.

Level 5-4 - 225 Points

The purpose of the work at this level includes developing new or improved techniques or criteria for the conduct of projects. The work may involve advisory, planning, or review services on specific problems, programs or functions. It may involve unusual problems, development of new approaches or techniques, and validation of programs and plans such as those associated with studies that are prepared for management or administrative use. Other work involves projects or assignments related to culturing or recovering endangered or threatened species; managing a habitat to assure the perpetuation of an endangered species; and evaluating the results of research contracts on major fishery or wildlife problems. Work situations may be complicated by administrative problems, including the availability of funds and personnel resources, the accuracy of data bases, and information/exchange methodologies. Work with endangered and threatened species at fish hatcheries or fish production facilities may include intensive investigation efforts, culturing, rearing fish species for restoration efforts, or producing broodstock to supply other field stations with fish eggs.

The results of the work, or work products, affect the work of state and county officials, tribal organizations, and program managers or technical specialists in outside agencies. The work also influences the effectiveness or acceptability of agency goals, projects, programs, and objectives. Activities typically involve problems which impact or affect the continued existence of a resource or resource area.

Level 5-5 - 325 Points

The purpose of the work is to isolate and define unknown conditions, resolve critical problems, and develop new approaches and guides for operating personnel. At this level, biologists determine the validity and soundness of theories, standards, and guides for the improvement of resource uses, developments, and protection. Biologists write and/or revise a major section of a management plan, operating manual, or directive. They draw conclusions regarding a fishery or wildlife resource from a wide array of sometimes conflicting research efforts, design simulation or optimization models to contribute effectively to interdisciplinary development of multi-resource evaluation procedures, and provide expert advice and assistance to scientists and management officials on a wide range of fishery or wildlife matters.

The work has considerable influence on the production and management of threatened or endangered species and/or species of national/ international significance, development and/or effectiveness of fish/ wildlife policies, programs, and actions of the agency in a number of program areas in one or more states.

Level 5-6 - 450 Points

The purpose of the work is to plan, develop, and execute major fishery or wildlife programs, projects, or activities for the agency which are usually of national scope and significance. Biologists often serve as experts or consultants to top-level managers within the organization or to a broad national consortium of experts and special interest groups who are seeking critical evaluations on problems that require long-range solutions.

The biologists' actions and recommendations affect broad agency policies, programs and legislative proposals, or have equivalent effect on other biology oriented agencies and organizations on a continuing basis.

FACTOR 6, PERSONAL CONTACTS AND FACTOR 7, PURPOSE OF CONTACTS

Match the level of the employee's personal contacts with the directly related purpose for those contacts and credit the appropriate point value from the chart below.

Persons Contacted

1. Employees within the immediate organization, office, project, or work unit, and in related or support units, and/or contacts with the general public in highly structured settings.
2. Employees in the same agency, but outside the immediate organization, such as biologists from higher level organizational units. People contacted generally are engaged in different functions, missions and kinds of work.
3. Individuals or groups from outside the employing agency such as biologists and managers from other agencies, contractors, or representatives of professional organizations, the news media, foreign representatives at a peer level, or public action groups. This level may also include contacts with the head of the employing agency or program officials several managerial levels removed from the employee when such contacts occur on an ad hoc or other irregular basis. In many cases the contacts may be on an ad hoc basis and the role of each party is established and developed during the course of the contact.
4. High-ranking officials from outside the employing agency at national or international levels in highly unstructured settings. This includes high-ranking officials of Federal, State, major municipal, or foreign governments or of comparable private sector organizations.

Purpose of Contacts

- a. To exchange factual information.
- b. To plan, coordinate, or advise on work efforts and solve operating problems by influencing or motivating individuals or groups who are working toward mutual goals and who have basically cooperative attitudes.
- c. To influence, motivate, interrogate, or control persons or groups who hold different opinions or interests, or may be skeptical, fearful, or uncooperative. The employee uses care in approaching the contacts, gains compliance with established policies and regulations by persuasion or negotiation.

- d. To negotiate, justify, or resolve highly important or controversial matters involving significant or controversial issues. This usually involves active participation in conferences, meetings, hearings, or presentations involving problems or issues of considerable consequence or importance. The persons contacted typically have diverse viewpoints, goals, or objectives, requiring the employee to achieve a common understanding of the problem and a satisfactory solution by convincing them, arriving at a compromise, or developing suitable alternatives.

P U R P O S E

C O N T A C T S		a	b	c	d
	1	30	60	130*	230*
	2	45	75	145	245
	3	80	110	180	280
	4	130*	160	230	330

*These combinations are probably unrealistic.

FACTOR 8, PHYSICAL DEMANDS

Level 8-1 - 5 Points

The work requires no special physical demands. It is sedentary, performed in a comfortable posture. It may involve some walking, standing, bending, or carrying of light items.

Level 8-2 - 20 Points

The work requires some physical exertion such as long periods of standing, walking over rough, muddy, uneven, swampy, or mountainous terrain, recurring periods of bending, crouching, stooping, stretching, reaching, or similar activities, and recurring lifting of moderately heavy items weighing up to 50 pounds.

Level 8-3 - 50 Points

The work requires considerable strenuous physical exertion such as frequent crouching or crawling over rough, uneven, swampy, or rocky terrain. It may be performed in areas of hostile wildlife requiring the biologist to be defensive or protective of self or others.

FACTOR 9, WORK ENVIRONMENT

Level 9-1 - 5 Points

Work is performed in an office or similar setting involving everyday risks or discomforts which require normal safety precautions to avoid trips and falls, observance of fire regulations, traffic signals, collisions with office furniture and others that are common in such settings. The work area is adequately lighted, heated, and ventilated.

Level 9-2 - 20 Points

The work involves regular and recurring exposure to moderate risks such as travel in safety approved small air and water craft, moderate discomforts such as exposure to wind, low or high temperatures, and moderate unpleasantness such as insects, noxious odors, and irritating chemicals, or working in areas known to be frequented by hostile wildlife. Special safety precautions are necessary and protective clothing and equipment are required.

Level 9-3 - 50 Points

The work is performed under conditions of high risk and exposure to potentially dangerous situations or unusual environmental stress such as working outdoors at remote sites in extreme weather conditions, at great heights, working with hands and feet exposed to extremely cold weather for prolonged periods, working in areas where irritating and explosive chemicals exist, or working with potentially hazardous tools or chemicals (e.g., pyrotechnics, explosives, or toxic chemicals).