

# Job Series Descriptions for Natural Resource Management Career Field

## 0100 – SOCIAL SCIENCE, PSYCHOLOGY, AND WELFARE GROUP

Social Science Series	0101
Social Science Aid and Technician Series	0102
Economist Series	0110
Geography Series	0150
Recreation Specialist Series	0188
Recreation Aid and Assistant Series	0189
Social Science Student Trainee Series	0199

This group includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work, subordinate technical work, or related clerical work in one or more of the social sciences; in psychology; in social work; in recreational activities; or in the administration of public welfare and insurance programs. Series in this group are:

### 0101 – Social Science Series

This series covers positions the duties of which are to advise on, administer, supervise or perform research or other professional and scientific work in one or any combination of the social sciences when such work is not classifiable in other series of this occupational group. Handbook of Occupational Groups and Families May 2009.

### 0102 – Social Science Aid and Technician Series

This series covers positions involving nonprofessional work of a technical, specialized, or support nature in one or more of the social science or other occupational fields covered by this group when there is no more appropriate series. The positions require a practical understanding of the objectives, policies, procedures, or regulatory requirements pertaining to the work and the ability to apply skills or knowledge of the occupation involved. The work does not require full professional competence (or equivalent professional-level preparation) in the theories, principles, and concepts of the field.

### 0110 – Economist Series

This series covers positions which require application of a professional knowledge of economics in the performance of duties that include: research into economic phenomena, analysis of economic data, and the preparation of interpretive reports; advice and consultation on economic matters to governmental officials and private organizations or citizens; and the performance of other professional work in economics including supervision and the direction of economists engaged in the various economics programs of the Federal Government.

### 0150 – Geography Series

This series covers positions the duties of which involve professional work in the field of geography, including the compilation, synthesis, analysis, interpretation and presentation of information regarding the location, distribution, and interrelationships of and processes of change affecting such

natural and human phenomena as the physical features of the earth, climate, plant and animal life, and human settlements and institutions.

**0188 – Recreation Specialist Series**

This series covers positions where the paramount requirement is for a general knowledge of the goals, principles, methods and techniques of the broad field of recreation in evaluating recreation needs and in planning, organizing, advising on, and administering recreation activities and programs that promote the physical, creative, and social development of participants.

**0189 – Recreation Aid and Assistant Series**

This series covers positions requiring a practical knowledge of one or more recreational activities, such as military or urban community center activities, child care and youth center activities, senior citizens recreation activities, outdoor recreation activities, recreation craft centers and hobby shops, sports centers, music and theater centers, and general recreation activities for special populations such as students in the Bureau of Indian Affairs boarding schools and inmates of Federal correctional institutions. This practical knowledge, combined with skill in the maintenance and use of recreation materials and equipment, is used in providing support and assistance to recreation specialists or recreation program managers by performing limited aspects of recreation work, and by working with participants in well-organized and carefully monitored recreation activities.

**0199 – Social Science Student Trainee Series**

See the series definition for the General Student Trainee Series, 0099.

**0099 – General Student Trainee Series**

The student trainee series in each Occupational Group includes all trainee positions that involve periods of pertinent formal education and periods of employment in a Federal agency. The education and employment must be part of a formal student employment program. The level of education and experience completed by the student is a major consideration in establishing the level of on-the-job training and work assignments during periods of employment. This series definition applies to the XX99 student trainee series for each Occupational Group. Student trainee positions should be classified to the XX99 series for the appropriate Occupational Group (0099, 0199, 1599, etc.). All positions classified to a student trainee series should be titled Student Trainee followed by a parenthetical title consistent with the occupational field involved; for example: Student Trainee (Human Resources Management), Student Trainee (Psychology), Student Trainee (Civil Engineering).

## **0400 – NATURAL RESOURCES MANAGEMENT AND BIOLOGICAL SCIENCES GROUP**

Sciences Series	0401
Biological Science Technician Series	0404
Ecology Series	0408
Entomology Series	0414
Botany Series	0430
Horticulture Series	0437
Range Technician Series	0455
Forestry Series	0460
Forestry Technician Series	0462
Soil Science Series	0470
Fish Biology Series	0482
Wildlife Refuge Management Series	0485
Wildlife Biology Series	0486
Biological Science Student Trainee Series	0499

This group includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work or subordinate technical work in any of the fields of science concerned with living organisms, their distribution, characteristics, life processes, and adaptations and relations to the environment; the soil, its properties and distribution, and the living organisms growing in or on the soil; and the management, conservation, or utilization thereof for particular purposes or uses.

Series in this group are:

### **0401 – General Natural Resources Management and Biological Sciences Series**

This series covers positions that involve professional work in biology, agriculture, or related natural resource management when there is no other more appropriate series. Thus included in this series are positions that involve: (1) a combination of several professional fields with none predominant; or (2) a specialized professional field not readily identified with other existing series.

### **0404 – Biological Science Technician Series**

This series covers all positions that primarily require a practical knowledge of the methods and techniques of one or more of the biological or agricultural sciences when the work is not more appropriately included in another technician series of the Biological Sciences Group, 0400. Biological science technicians provide practical technical support to production, research, operations, or program administration efforts in laboratories, field, or other settings including greenhouses, barns, caves, or wildlife refuges.

### **0408 – Ecology Series**

This series covers positions that involve primarily advisory, research, analytical, or other professional work in the science of ecology. Ecology utilizes a systems approach to study the interrelationships of organisms with each other, with their physical and chemical environment, and with society. Such relationships are considered primarily at the levels of individuals, populations, communities, and ecosystems. Ecologists analyze biological components and processes in the context of ecosystems including environmental factors, physical-chemical relationships, and social relationships. They use quantitative and systems analysis techniques to predict effects of planned or natural changes in ecosystems and to develop understanding of and solutions to ecological problems.

### **0414 – Entomology Series**

This series covers positions the duties of which are to advise on, administer, supervise, or perform professional and scientific work in the field of entomology that requires a fundamental knowledge of the principles of the biological and physical sciences that underlie the field and a specific knowledge of the application of these principles to the solution of entomological problems.

#### **0430 – Botany Series**

This series covers positions that involve research or other professional scientific work in the field of botany, including plant taxonomy, morphology, ecology, and ethnobotany. This work requires full professional education and training in the plant sciences and a fundamental knowledge of the principles, methods, techniques, procedures, and relationships of the science of botany and of the application of this knowledge in the investigation, analysis, and solution of botanical problems.

#### **0437 – Horticulture Series**

This series covers all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the behavior, breeding, or culture (or any combination thereof) of fruits, vegetables, flowers, or ornamental trees and shrubs, and in allied problems of their production, storage, and handling.

#### **0455 – Range Technician Series**

This series covers all positions that primarily require a practical knowledge of the methods and techniques of range conservation and related resource management fields. Range technicians provide practical technical support in range research efforts; in the marketing of the range resource; and in the scientific management, protection, and development of grasslands and other range resources.

#### **0460 – Forestry Series**

This series covers positions that require primarily professional knowledge and competence in forestry science. The work includes development, production, conservation, and utilization of the natural resources of forests and associated lands; the inventory, planning, evaluation, and management of each forest resource including timber, soil, land, water, wildlife and fish habitat, minerals, forage, and outdoor recreation including wilderness, in relationship with each other to meet both present and future public and local private needs and demands; the protection of resources against fire, insects, disease, floods, erosion, and other depredations; the valuation, management and protection of forest lands and properties; the interpretation and communication of principles, facts and legislation upon which the management of forest land rests; and the development of new, improved, or more economic scientific methods, practices, or techniques necessary to perform such work.

#### **0462 – Forestry Technician Series**

This series covers all positions that primarily require a practical knowledge of the methods and techniques of forestry and other biologically based resource management fields. Forestry technicians provide practical technical support in forestry research efforts; in the marketing of forest resources; or in the scientific management, protection, and development of forest resources.

#### **0470 – Soil Science Series**

This series covers positions that involve professional and scientific work in the investigation of soils, their management, and their adaptation for alternative uses. Such work requires knowledge of chemical, physical, mineralogical and biological properties and processes of the soils and their relationships to climatic, physiographic, and biologic influences.

#### **0482 – Fish Biology Series**

This series covers positions that require professional knowledge and competence in the science of fishery biology to perform work: (1) developing, conserving, managing, and administering fishery resources; and (2) 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.

#### **0485 – Wildlife Refuge Management Series**

This series covers positions that require primarily professional knowledge and competence in the management, administration, and scientific operation of public lands and waters designated as national wildlife refuges. The work requires biological analyses, planning, and evaluation, and has as its principal purpose the conservation, protection, and propagation of wildlife species and the manipulation and utilization of their required habitat. The work involves a variety of activities in land, water, and habitat management, land planning, resource identification and allocation, administration, public relations, supervision, and other activities involving wildlife resource utilization, protection, inventory and evaluation, and maintenance of grasslands, marshes, and soils. The work also involves management considerations of land exploration and public, commercial, industrial, and agrarian land use.

#### **0486 – Wildlife Biology Series**

This series covers positions that require professional knowledge and competence in the science of wildlife biology to perform work involving: (1) the conservation, propagation, management, protection, and administration of wildlife species; or (2) 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.

#### **0499 – Biological Science Student Trainee Series**

The student trainee series in each Occupational Group includes all trainee positions that involve periods of pertinent formal education and periods of employment in a Federal agency. The education and employment must be part of a formal student employment program. The level of education and experience completed by the student is a major consideration in establishing the level of on-the-job training and work assignments during periods of employment. This series definition applies to the XX99 student trainee series for each Occupational Group. Student trainee positions should be classified to the XX99 series for the appropriate Occupational Group (0099, 0199, 1599, etc.). All positions classified to a student trainee series should be titled Student Trainee followed by a parenthetical title consistent with the occupational field involved; for example: Student Trainee (Human Resources Management), Student Trainee (Psychology), Student Trainee (Civil Engineering).

## **0701 – VETERINARY MEDICAL SCIENCES SERIES**

Veterinary Medical Science Series

0701

### **0701 – Veterinary Medical Science Series**

This series covers positions that involve professional veterinary work to investigate, inspect, and deal with animal diseases, animal pollution, contamination of food of animal origin, health and safety of imported animals and animal products, safety and efficacy of many animals, as well as human, drugs and biological products, and cooperative enforcement activities involving both the public and private sectors. Such positions require the degree of Doctor of Veterinary Medicine or an equivalent degree; a knowledge of current, advanced, or specialized veterinary medical arts and science principles and practices of the profession; and the ability to apply that knowledge in programs established to protect and improve the health, products, and environment of or for the Nation's livestock, poultry, or other species for the benefit of human, as well as animal, well-being.

## 1300 – PHYSICAL SCIENCES GROUP

General Physical Science Series	1301
Physical Science Technician Series	1311
Hydrology Series	1315
Hydrologic Technician Series	1316
Chemistry Series	1320
Meteorology Series	1340
Geology Series	1350
Oceanography Series	1360
Cartography Series	1370
Cartographic Technician Series	1371
Land Surveying Series	1373
Physical Science Student Trainee Series	1399

This group includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work, or subordinate technical work, in any of the fields of science concerned with matter, energy, physical space, time, nature of physical measurement, and fundamental structural particles; and the nature of the physical environment.

Series in this group are:

### 1301 – General Physical Science Series

This series includes positions that involve professional work in the physical sciences when there is no other more appropriate series, that is, the positions are not classifiable elsewhere. This series also includes work in a combination of physical science fields, with no one predominant.

### 1311 – Physical Science Technician Series

This series covers one-grade interval technical positions that supervise, lead, or perform nonprofessional work in the physical sciences that is not specifically included in other technical series in the Physical Sciences Group. Physical science technicians perform technical work in such fields as astronomy, chemistry, geology, physics, geophysics, health physics, metallurgy, and oceanography for which a specific technician series has not been established. Work in this series does not require full professional knowledge equivalent to that represented by completion of a bachelor's degree in a physical science field.

### 1315 – Hydrology Series

This series includes positions that involve professional work in hydrology, the science concerned with the study of water in the hydrologic cycle. The work includes basic and applied research on water and water resources; the collection, measurement, analysis, and interpretation of information on water resources; the forecast of water supply and water flows; and the development of new, improved or more economical methods, techniques, and instruments.

### 1316 – Hydrologic Technician Series

This series covers one-grade interval technical positions that supervise, lead, or perform nonprofessional work that requires practical knowledge of the methods, procedures, and instrumentation used in hydrologic studies. Hydrologic technicians gather information on the quantity, quality, availability, movement, and distribution of ground water and surface water. They also evaluate water samples and data, prepare reports, and carry out related duties that support professional work in hydrology. Work in this series does not require full professional knowledge equivalent to that represented by completion of a bachelor's degree in hydrology.

### **1320 – Chemistry Series**

This series includes all positions involving work that requires full professional education and training in the field of chemistry. This work includes the investigation, analysis, and interpretation of the composition, molecular structure, and properties of substances, the transformations which they undergo, and the amounts of matter and energy included in these transformations. This work includes the investigation, analysis, and interpretation of the composition, physical and chemical properties, molecular structure and chemical reactions of substances; the prediction of transformation they undergo; and the amount of matter and energy included in these transformations.

### **1340 – Meteorology Series**

This series includes positions that involve professional work in meteorology, the science concerned with the earth's atmospheric envelope and its processes. The work includes basic and applied research into the conditions and phenomena of the atmosphere; the collection, analysis, evaluation, and interpretation of meteorological data to predict weather and determine climatological conditions for specific geographical areas; the development of new or the improvement of existing meteorological theory; and the development or improvement of meteorological methods, techniques, and instruments. Positions in this occupation require full professional knowledge and application of meteorological methods, techniques, and theory.

### **1350 – Geology Series**

This series includes professional scientific positions applying a knowledge of the principles and theories of geology and related sciences in the collection, measurement, analysis, evaluation, and interpretation of geologic information concerning the structure, composition, and history of the earth. This includes the performance of basic research to establish fundamental principles and hypotheses to develop a fuller knowledge and understanding of geology, and the application of these principles and knowledge to a variety of scientific, engineering, and economic problems.

### **1360 – Oceanography Series**

This series includes professional scientific positions engaged in the collection, measurement, analysis, evaluation and interpretation of natural and physical ocean phenomena, such as currents, circulations, waves, beach and near-shore processes, chemical structure and processes, physical and submarine features, depth, floor configuration, organic and inorganic sediments, sound and light transmission, color manifestations, heat exchange, and similar phenomena (e.g., biota, weather, geological structure, etc.). Oceanographers plan, organize, conduct, and administer seagoing and land-based study and research of ocean phenomena for the purpose of interpreting, predicting, utilizing and controlling ocean forces and events. This work requires a fundamental background in chemistry, physics, and mathematics and appropriate knowledge in the field of oceanography.

### **1370 – Cartography Series**

This series includes positions requiring the application of professional knowledge and skills in mapping and related sciences, and relevant mathematics and statistics to plan, design, research, develop, construct, evaluate and modify mapping and charting systems, products, and technology.

### **1371 – Cartographic Technician Series**

This series covers one-grade interval technical positions that supervise, lead, or perform nonprofessional work that requires a practical knowledge of the processes, practices, methods, and techniques involved in constructing new or revised maps, charts, and related cartographic products. Cartographic technicians supervise or perform precompilation tasks such as reviewing source materials, extending basic geodetic control networks, and providing input for plotting map

projections and collars. In addition, they perform drafting, digitizing, integrating, and editing/reviewing in connection with cartographic products, and may carry out stereoscopic photogrammetric and/or monoscopic compilation. Work within this series does not require full professional knowledge equivalent to that represented by completion of a bachelor's degree in cartography or a related science.

### **1373 – Land Surveying Series**

This series includes positions that involve professional work in land surveying, which is concerned with establishing, investigating, and reestablishing land and property boundaries, and with preparing plats and legal descriptions for tracts of land. The work requires application of professional knowledge of the concepts, principles and techniques of surveying, including underlying mathematics and physical science, in combination with a practical knowledge of land ownership laws.

### **1399 – Physical Science Student Trainee Series**

The student trainee series in each Occupational Group includes all trainee positions that involve periods of pertinent formal education and periods of employment in a Federal agency. The education and employment must be part of a formal student employment program. The level of education and experience completed by the student is a major consideration in establishing the level of on-the-job training and work assignments during periods of employment. This series definition applies to the XX99 student trainee series for each Occupational Group. Student trainee positions should be classified to the XX99 series for the appropriate Occupational Group (0099, 0199, 1599, etc.). All positions classified to a student trainee series should be titled Student Trainee followed by a parenthetical title consistent with the occupational field involved; for example: Student Trainee (Human Resources Management), Student Trainee (Psychology), Student Trainee (Civil Engineering).