

## Biological Sciences Education Requirements

Series	OPM Series Title	Basic Requirements
0401	General Natural Resources Management and Biological Sciences	<p><b>A. Degree:</b> Biological sciences, agriculture, natural resource management, chemistry, or related disciplines appropriate to the position.</p> <p><b>--or--</b></p> <p><b>B. Combination of education and experience:</b> Courses equivalent to a major, as shown in A above, plus appropriate experience or additional education.</p>
0482	Fish Biology	<p><b>A. Degree:</b> Major in biological science that included:</p> <ol style="list-style-type: none"> <li>1. At least <b>6 semester hours</b> in <b>aquatic subjects</b> such as <b>limnology, ichthyology, fishery biology, aquatic botany, aquatic fauna, oceanography, fish culture, or related courses in the field of fishery biology; and</b></li> <li>2. At least <b>12 semester hours</b> in the <b>animal sciences</b> in such subjects as <b>general zoology, vertebrate zoology, comparative anatomy, physiology, entomology, parasitology, ecology, cellular biology, genetics, or research in these fields.</b> (Excess course work in aquatic subjects may be used to meet this requirement when appropriate.)</li> </ol> <p><b>--or--</b></p> <p><b>B. Combination of education and experience:</b> courses equivalent to a major in biological science (i.e., at least 30 semester hours), of which a minimum of <b>6 semester hours</b> were in <b>aquatic subjects</b> and <b>12 semester hours</b> were in the <b>animal sciences</b>, as shown in A above, plus appropriate experience or additional education.</p>
0485	Wildlife Refuge Management	<p><b>A. Degree:</b> zoology, wildlife management, or an appropriate field of biology that included at least <b>9 semester hours</b> in <b>zoology</b>; 6 semester hours in such <b>wildlife courses</b> as <b>mammalogy, ornithology, animal ecology, or wildlife management</b>; and 3 semester hours in <b>botany</b>, and 3 semester hours in <b>conservation biology</b>.</p> <p><b>--or--</b></p> <p><b>B. Combination of education and experience:</b> courses equivalent to a major in one of the fields described in A above that included at least 9 semester hours in <b>zoology</b>; <b>6 semester hours</b> in such <b>wildlife courses</b> as <b>mammalogy, ornithology, animal ecology, or wildlife management</b>; and 3 semester hours in <b>botany</b>, and <b>3 semester hours</b> in <b>conservation biology</b>, plus appropriate experience, or additional education.</p>
0486	Wildlife Biology	<p><b>A. Degree:</b> biological science that included:</p> <ol style="list-style-type: none"> <li>1. At least <b>9 semester hours</b> in such <b>wildlife</b> subjects as <b>mammalogy, ornithology, animal ecology, wildlife management, or research courses in the field of wildlife biology</b>; and</li> <li>2. At least <b>12 semester hours</b> in <b>zoology</b> in such subjects as <b>general zoology, invertebrate zoology, vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, entomology, or research courses in such subjects</b> (Excess courses in wildlife biology may be used to meet the zoology requirements where appropriate.); and</li> <li>3. At least 9 semester hours in <b>botany or the related plant sciences</b>.</li> </ol> <p><b>--or--</b></p> <p><b>B. Combination of education and experience:</b> equivalent to a major in biological science (i.e., at least 30 semester hours), with at least <b>9 semester hours</b> in <b>wildlife subjects</b>, 12 semester hours in <b>zoology</b>, and <b>9 semester hours</b> in <b>botany or related plant science</b>, as shown in A above, plus appropriate experience or additional education.</p>



## U.S. Fish & Wildlife Service

# Basic Qualification Requirements

## Mission Critical and Law Enforcement Careers

### FISH & WILDLIFE BIOLOGIST/GENERAL BIOLOGIST (0401)

Positions that involve professional work in biology, agriculture, or related natural resource management.

- **DEGREE REQUIREMENTS:** Successful completion of a full 4-year course of study in an accredited college or university leading to a bachelor's or higher degree, which includes a major field of study in biological sciences, agriculture, natural resource management, chemistry, or related disciplines appropriate to this position. OR,
- **COMBINATIONS OF EDUCATION AND EXPERIENCE** that includes courses equivalent to major in the fields described above.

### FISHERY BIOLOGIST (0482)

Positions that require professional knowledge and competence in the science of fishery biology to perform work including: developing, conserving, managing, and administering fishery resources; and evaluating the impact of construction projects and other socioeconomic activities that present potential or actual adverse effects on fishery resources and their habitat.

- **DEGREE REQUIREMENTS:** Successful completion of a full 4-year course of study in an accredited college or university leading to a bachelor's or higher degree with a major in biological science which includes at least **6 semester hours** in aquatic subjects such as limnology, ichthyology, fishery biology, aquatic botany, aquatic fauna, oceanography, fish culture, or related courses in the field of fishery biology; and, **12 semester hours** in animal science in such subjects as general zoology, vertebrate zoology, comparative anatomy, physiology, entomology, parasitology, ecology, cellular biology, and genetics, or research in these fields. Excess coursework in aquatic subjects may be used to meet this requirement.
- **COMBINATION OF EDUCATION AND EXPERIENCE:** Courses equivalent to a major in biological science (i.e., at least 30 semester hours), of which a minimum of **6 semester hours** were in aquatic subjects and **12 semester hours** were in the animal sciences, as shown above, plus appropriate experience or additional education.

### WILDLIFE REFUGE MGT (0485)

Positions that require professional knowledge and competence in the management, administration, and scientific operation of public lands and waters designated as national wildlife refuges. The work involves a variety of land and water-based activities including: water and habitat management; land planning; resources 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.

**DEGREE REQUIREMENTS:** Successful completion of a full 4-year

course of study in an accredited college or university leading to a bachelor's degree or higher in zoology, wildlife management or an appropriate field of biology which includes at least **9 semester hours** in zoology; **9 semester hours** in such wildlife courses as mammalogy, ornithology, animal ecology, or wildlife management; and **3 semester hours** in botany, and three semester hours of conservation biology; OR

- **COMBINATIONS OF EDUCATION AND EXPERIENCE:** Courses equivalent to a major in one of the fields described above that included at least **9 semester hours** in zoology; **6 semester hours** in such wildlife courses as mammalogy, ornithology, animal ecology, or wildlife management; and **3 semester hours** in botany, and **3 semester hours** in conservation biology, plus appropriate experience or additional education.

### WILDLIFE BIOLOGIST (0486)

Positions that require professional knowledge and competence in the science of wildlife biology to perform work involving: the conservation, propagation, management, protection, and administration of wildlife species; or the determination, establishment, and application of biological facts, principles, methods, techniques, and procedures necessary for the conservation and management of wildlife resources and habitats. **DEGREE REQUIREMENTS:** Successful completion of a full 4-year course of study in an accredited college or university leading to a bachelor's or higher degree in biological science which includes at least **12 semester hours** in subjects such as general zoology, invertebrate or vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, entomology, or research courses in such subjects. Where appropriate, excess coursework in wildlife biology may be used to meet the zoology requirements. Additionally, the position requires **9 semester hours** in wildlife courses such as mammalogy, ornithology, animal ecology, and wildlife management or research courses in the field of wildlife biology; and **9 semester hours** in botany or the related plant disciplines. OR,

- **COMBINATION OF EDUCATION AND EXPERIENCE:** Courses equivalent to a major in biological science (i.e., at least 30 semester hours), with at least **9 semester hours** in wildlife subjects, **12 semester hours** in zoology, and **9 semester hours** in botany or related plant science, as shown above, plus appropriate experience or additional education.

### BIOLOGICAL SCIENCE TECH (0404)

Positions that primarily require a practical knowledge of the methods and techniques of one or more of the biological or agricultural sciences. 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.

QUALIFICATION REQUIREMENTS may be based on experience and/or education and training.

- EDUCATION used to qualify must be related to the position in the required amount. For example, qualifications at the trainee level GS-3 and GS-4 are:
  - (GS-3) - Successful completion of 1-year of study which includes at least **6 semester hours** in any combination of scientific or technical courses such as biology, chemistry, statistics, entomology, animal husbandry, botany, physics, agriculture, or mathematics; OR,
  - GS-4) - Successful completion of 2 years of study that included **12 semester hours** in any combination of courses listed above of which at least **6 semester hours** of courses are directly related to the position to be filled.
- SPECIALIZED EXPERIENCE used to qualify must be related to the work of the position for which application is made. Specialized experience required for some positions in this series is normally work performed in a controlled environment.

### **PARK RANGER (0025)**

Positions that require knowledge of the principles and techniques of biology, forestry, conservation, environment, and natural resource management, in order to effectively convey biological subject matter to the public. Positions with law enforcement duties also require knowledge of applicable Federal, State, and local laws and regulation governing the use of refuge lands, facilities, and resources to determine violations.

QUALIFICATION REQUIREMENTS may be based on experience and/or education.

- EDUCATION: Course work must be related to the position and in the required amounts. For example qualifications for an entry level position can be either successful completion of a full four-year course of study with related course work in the field of natural resource management, natural sciences, earth sciences, history, archeology, anthropology, park and recreation management, law enforcement/police science, social sciences, museum science, business administration, public administration, behavioral sciences, sociology or other closely related subjects pertinent to the management and protection of natural and cultural resources. OR
- EXPERIENCE: 1-year of specialized experience that demonstrates the knowledge, skills, and abilities to perform the duties. Experience may have been gained as a park guide or tour leader, in law enforcement or investigative work, in archeological or historical preservation work, in forestry or fire management work, or in work involving developing and implementing policy related to protection conservation, or management of park areas or similar operations.

### **WILDLIFE INSPECTOR (1801)**

Positions are located in the Office of Senior Resident Agent at Ports of Entry. Positions perform the full range of inspection and compliance duties involving the enforcement and administration of laws and regulations governing the importation, exportation, and interstate commerce of wildlife and wildlife products.

QUALIFICATION REQUIREMENTS may be based on experience

and/or education. For example, qualifications for an entry-level position can be either successful completion of a full 4-year course of study leading to a bachelor's degree: OR, 3 years general experience, one of which demonstrates an ability to analyze problems, plan and organize work, and communicate effectively orally and in writing

### **CRIMINAL INVESTIGATOR (1811)**

Positions focus on potentially devastating threats to wildlife resources including illegal trade, unlawful commercial exploitation, habitat destruction, and environmental hazards. Incumbents investigate wildlife crimes, regulate wildlife trade, help Americans understand and comply with wildlife protection laws, and team with international, Federal, State, and tribal counterparts to conserve wildlife resources. Specific examples of work include: Breaking up international and domestic smuggling rings that target imperiled species; preventing the unlawful commercial exploitation of U.S. resources ; protecting wildlife from environmental hazards and safeguarding wildlife habitat; enforcing Federal migratory game bird hunting regulations and working with States to protect other game species; and preserving legitimate hunting opportunities. Incumbents also work with international counterparts to combat illegal trafficking in protected species; train other Federal, State, Tribal, and foreign law enforcement officers; use forensic science to analyze evidence and solve wildlife crimes; and conduct outreach to increase compliance with wildlife protection laws.

QUALIFICATION REQUIREMENTS may be based on experience and/or education. For example, the qualifications for an entry-level position are:

- EDUCATION: Successful completion of a full 4-year course of study leading to a bachelor's degree: OR
- EXPERIENCE: 3 years general experience, one of which demonstrates an ability to analyze problems to identify significant factors, gather pertinent data, and recognize solutions; plan and organize work; and, communicate effectively orally and in writing. Specific work examples for this position at the entry and developmental level include conducting routine investigations for developmental purposes, or as part of a team or task force; serving subpoenas; participating in the execution of search warrants; seizing evidence; conducting interviews and/or interrogations; taking affidavits from suspects and witnesses; conducting routine surveillance; testifying in court as a witness to events or to explain basic procedures; preparing reports of routine investigations; and assisting in arrests.

*Please visit the Office of Personnel Management Qualifications Requirements website for additional info on the positions listed in this Flyer*  
<https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/>

U.S. Fish & Wildlife Service [www.fws.gov](http://www.fws.gov) August 2018; updated July 2020