

Environmental Planning

**Qualification Requirements for Working on Biological Resource Components
of ADOT Projects in Development, Maintenance or Construction****GENERAL FISH, WILDLIFE and/or PLANT BIOLOGIST –**

Authorized duties include: field reviews; writing short form biological evaluation documents, general Endangered Species Act (ESA) species habitat evaluations, general ESA, State and Tribal Sensitive species habitat evaluations; ESA and sensitive species surveys*; surveying for native plants, invasive species, migratory birds, migratory bird nests; evaluating status of migratory bird nests; completing waters of the US jurisdictional delineations/riparian/wetland delineations (with Section 404 expert oversight, when appropriate); and other duties as approved by ADOT.

Authorized duties that can be performed under the supervision of a senior wildlife, fishery and/or plant biologist include: preparation of monitoring reports, preparation of long form biological evaluations, preparation of “may affect” habitat and species impact evaluations, all of which require review and approval by a Senior-level biologist (qualifications below). Duties completed under the supervision of a Senior-level biologist must be completed efficiently without duplication of effort.

GENERAL BIOLOGIST QUALIFICATION REQUIREMENTS: Successful completion of a full four-year course of study in an accredited college or university leading to a bachelor's or higher degree, which included a major field (24 semester hours) of study in biological sciences, agriculture, natural resource management, or related disciplines appropriate to the services provided or a combination of education and equivalent experience relevant to transportation/construction biology totaling a minimum of four years.

SENIOR WILDLIFE, FISHERY and/or PLANT BIOLOGIST -

Authorized duties include: oversight of General-level biologists, completion of activities as outlined above for General-level biologists, monitoring, training, preparation of monitoring reports, completion of “may affect” habitat and species impact evaluations and biological evaluations, completion of complex “no effect” biological evaluations, species surveys*, policy or listing analysis, and other duties as approved by ADOT.

SENIOR BIOLOGIST QUALIFICATION REQUIREMENTS (A Senior Biologist shall meet all qualifications listed below):

1. Professional knowledge and competence in the science of wildlife and fishery biology and/or plant biology to perform work in evaluating the impact of construction projects or maintenance activities that present potential or actual adverse effects on wildlife, fish or plant resources and their habitats.
2. Professional knowledge and competence in the application of biological facts, principles, methods, techniques and procedures necessary for the conservation and management of wildlife, fish and plant species and their habitats.
3. Successful completion of a full four-year course of study in an accredited college or university leading to a bachelor's or higher degree in biological science which included at least 12 semester hours in wildlife biology and/or botany, in such subjects as general zoology, invertebrate or vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, entomology, or research courses in such subjects. Nine of the 12 semester hours must be completed in either: a) such wildlife and/or fisheries courses as mammalogy, ornithology, animal ecology, limnology, ichthyology, fishery biology, aquatic botany, aquatic fauna, oceanography, fish culture or wildlife/fisheries management or research courses in the field of wildlife/fishery biology; or b) botany, plant systematics, plant identification, plant biology/physiology, or related plant disciplines. This requirement may also be met through a combination of education and equivalent relevant experience totaling four years.
4. Successful completion of either a master's degree in a biological related field with one year of relevant experience, or three additional years of relevant experience beyond meeting the requirements in number 3.

- * Individuals completing survey work must be permitted by the US Fish and Wildlife Service (USFWS) and appropriate Tribal or State Game and Fish management authorities. If an ESA-listed species is likely to be detected, a Senior-level biologist holding a USFWS Section 10 Recovery Permit for that species must be present during surveys.

Environmental Planning

Qualification Requirements for Working on Clean Water Act 404/401 Components of ADOT Projects in Development, Maintenance or Construction

General Clean Water Act (CWA) 404/401 Specialist –

Authorized duties include: field reviews; survey for wetland and riparian vegetation, documenting potential jurisdictional Waters of the U.S. (WOTUS) including but not limited to jurisdictional delineations and wetland delineations; preparation of jurisdictional determination requests; preparation of permit assessment memorandum, preparation of permit pre-construction applications for 404 Individual permits, Regional General Permits, and Nationwide permits; preparation of 401 water quality certification applications for project occurring throughout the State, including tribal lands.

GENERAL CWA 404/401 SPECIALIST QUALIFICATION REQUIREMENTS: Successful completion of a full four-year course of study in an accredited college or university leading to a bachelor's or higher degree which included a major field of study in biological sciences, aquatic resources, botany, ecology, or related disciplines appropriate to the services provided or a combination of education and equivalent experience relevant to transportation/construction aquatic resources totaling a minimum of four years.

1. A minimum of one (1) year of experience* including previous work completing jurisdictional delineation and permit application(s) in Arizona or the Arid Southwest
2. A minimum of one (1) year of experience conducting wetland delineations, stream and wetland classifications, habitat assessments, soil assessment, and vegetation identification and management
3. Knowledge of and experience with federal and state rules, laws, and policies that apply to the 401/404 permitting process
4. Knowledge of the US Army Corps of Engineers guidance on Jurisdictional Delineations and Ordinary High Water Mark
5. Knowledge of hydrology and regional riparian and wetland botany
6. Proficiency with GIS software and GPS equipment for delineating water resource features

Senior CWA 404/401 Specialist –

Authorized duties Include: oversight of Clean Water Act Permit Specialists; completion of all activities outlined above for Clean Water Act Permit Specialists plus review and QA/QC on all jurisdictional determination requests and CWA permit applications.

SENIOR CWA 404/401 SPECIALIST QUALIFICATION REQUIREMENTS: Bachelor's degree or higher in biological sciences, aquatic resources, botany, ecology, or closely related field.

1. Minimum of three (3) years of experience* including previous work completing jurisdictional delineation and permit application(s) in Arizona or the Arid Southwest
2. Minimum of three (3) years of experience conducting wetland delineations, stream and wetland classifications, habitat assessments, soil assessment, and vegetation identification and management
3. Completed the Wetland Training Institutes Basic Wetland Delineation training course (or equivalent, minimum 38 hours of class time including in-field training)
4. Proficient understanding and experience with federal and state rules, laws, and policies that apply to the 401/404 permitting process
5. Proficient understanding of US Army Corps of Engineers guidance on Jurisdictional Delineations and Ordinary High Water Mark
6. Proficient with the US Army Corps of Engineers guidance on Wetland Delineations including Arizona and Arid Southwest
7. Proficient understanding of hydrology and regional and wetland botany
8. Experience with preparing CWA Section 404 Permit packages and Section 401 Water Quality Certification Applications
9. Proficiency with GIS software and GPS equipment for delineating water resource features

*Project experience documented on resume or CV sheet