

## 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.