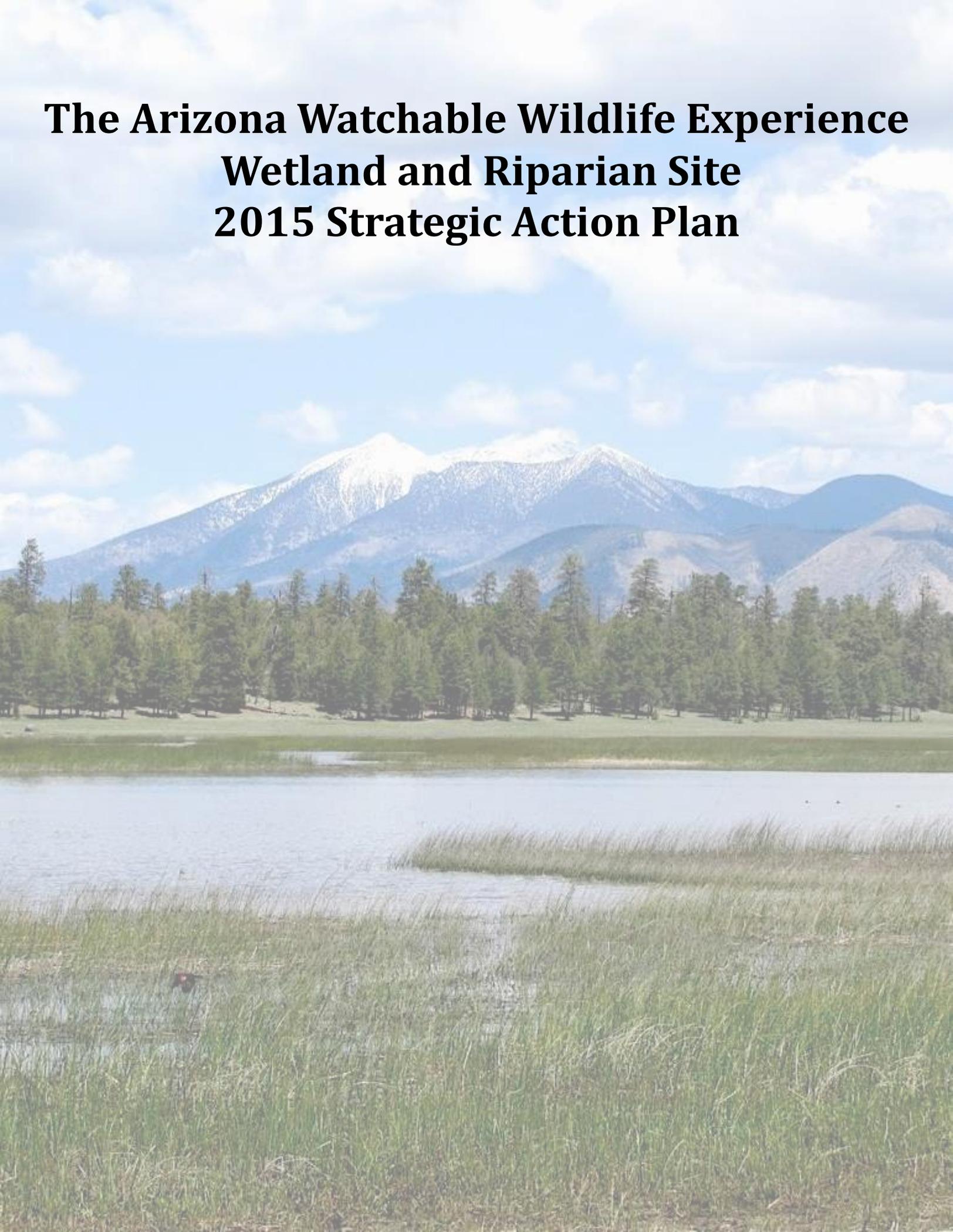


The Arizona Watchable Wildlife Experience Wetland and Riparian Site 2015 Strategic Action Plan



The AWWE Wetland and Riparian Site Strategic Action Plan

Developed by the Arizona Watchable Wildlife Experience Partnership - June 2015

Arizona Watchable Wildlife Experience Partnership

Arizona Game and Fish Department

Arizona Wildlife Federation

City of Flagstaff

Coconino County Parks and Recreation

U.S. Forest Service, Coconino National Forest

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Coconino County Parks and Recreation

Friends of the Rio de Flag

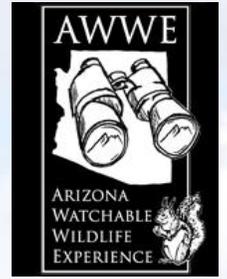
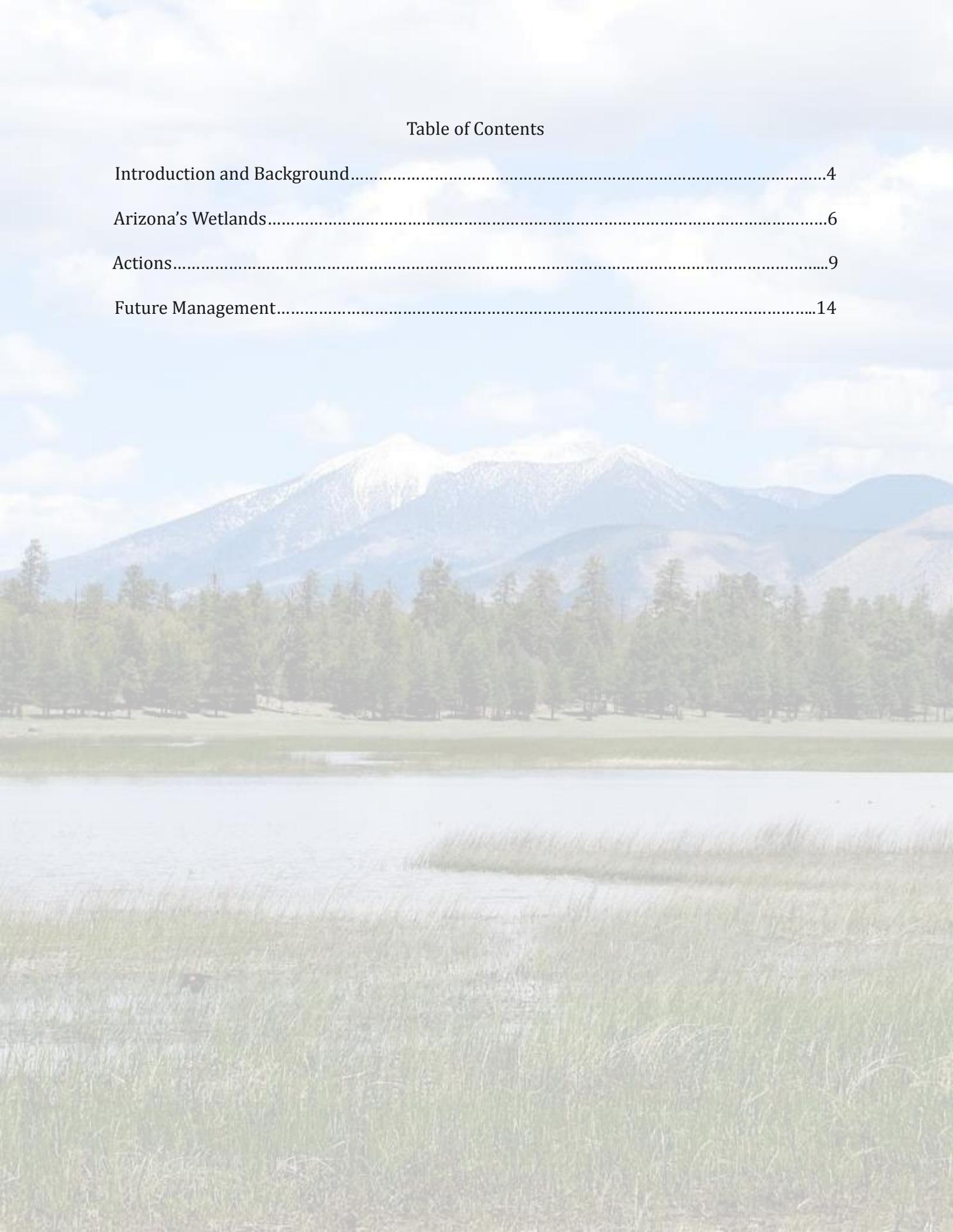


Table of Contents

| | |
|----------------------------------|----|
| Introduction and Background..... | 4 |
| Arizona's Wetlands..... | 6 |
| Actions..... | 9 |
| Future Management..... | 14 |



Introduction and Background

The AWE Wetland and Riparian Site Strategic Action Plan is meant to serve as a guiding document for the AWE partnership to prioritize wetland enhancement projects and promote wetland site management. The document characterizes AWE sites that include a wetland component and prioritizes goals and strategies to improve the quality of wetland habitat, and therefore, the quality of wildlife viewing for visitors.

This Action Plan is funded by a Capacity Grant from the Intermountain West Joint Venture, administered through Ducks Unlimited.

What is the Arizona Watchable Wildlife Experience?

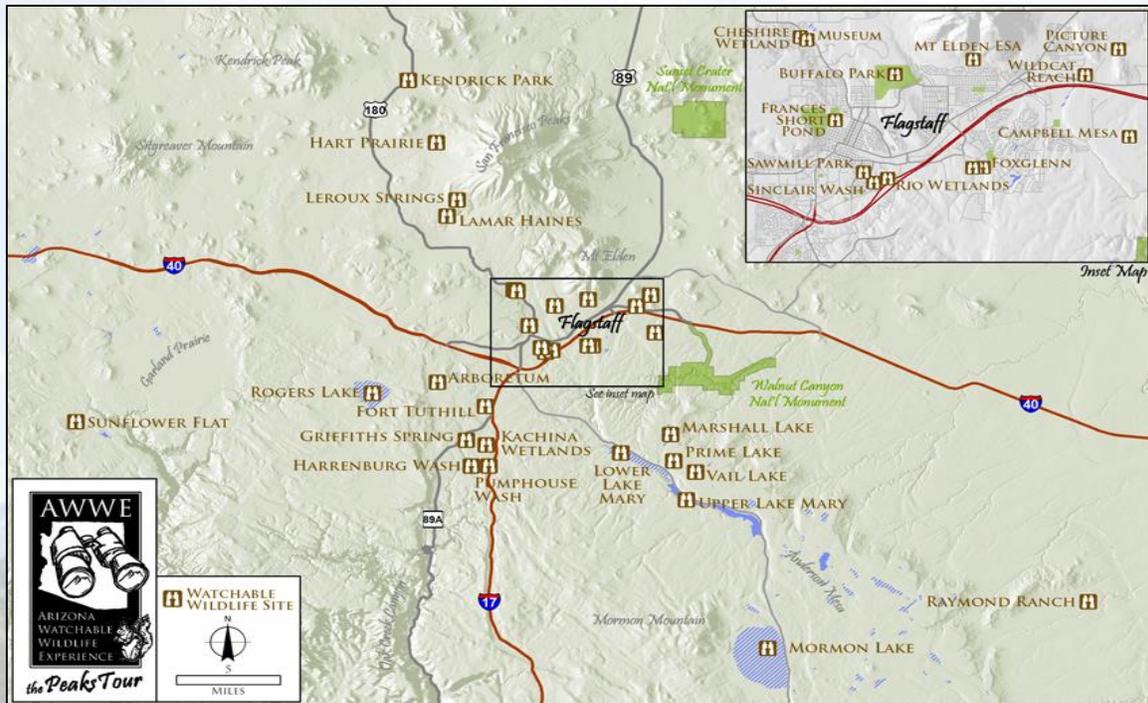
Arizona Watchable Wildlife Experience (AWE) is a partnership of five organizations that share a common vision to create and encourage public enjoyment of a designated network of watchable wildlife recreation sites in the greater Flagstaff area, through integrated educational materials and site improvements to highlight the unique physical, biological, and cultural site values.

Arizona Game and Fish Department
Arizona Wildlife Federation
City of Flagstaff
Coconino County Parks and Recreation
US Forest Service



Arizona Watchable Wildlife Experience (AWWE)

The AWWE Peak's Tour includes 30 recreational sites within 30 miles of Flagstaff, offering visitors and the local community opportunities to view wildlife in urban and rural settings, through a system of trails (Flagstaff Urban Trail System (FUTS), Flagstaff Loop Trail, Coconino County Regional Trails, and scenic Forest Service roads) and on public and private lands.



AWWE Site Map

What is Watchable Wildlife?

Watchable wildlife is non-consumptive recreation: enjoying wildlife from a distance with minimal disturbance to the wildlife or their habitat. Watchable wildlife recreation offers nature-related outdoor education opportunities to the public, while conserving native plants and animals in their natural habitats. Through direct habitat improvements and interpretation, watchable wildlife promotes conservation as well as enjoyment of the outdoors.



Arizona's Wetlands

Why Restore Wetlands?

Wetlands are rare in Arizona and extremely biologically diverse. Wetlands are used by many species of mammals, birds, amphibians, reptiles, and invertebrates. These areas provide food, shelter, and nesting for those species that are dependent upon wetlands for survival (obligate) and to other wildlife which is not fully dependent on wetlands (facultative). At least one-third of the nation's threatened or endangered species live in wetland areas (NRCS 2007). Ephemeral wetlands, such as most of those listed here, can be very important to wildlife living around the wetland in droughts, often providing the last areas of green feed and water in the surrounding landscape.

Wetlands also provide recreational and commercial values. Wildlife watching, boating, fishing, hunting, and hiking are popular activities provided by wetlands. These activities add billions of dollars to the national economy annually.

Wetlands are also crucial in maintaining water quality. Native vegetation in wetlands purifies water and plants absorb the chemicals and nutrients from the surface water, and then pass it to animals in the ecosystem. Controlling flooding is another unique function of wetlands. The presence of wetlands in only 15 percent of a watershed can reduce flooding by as much as 60 percent and one acre of wetland can store 1.5 million gallons of floodwater (NRCS 2007).

Natural Resource Conservation Service. 2007. Why Restore Wetlands?, available at http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_028121.pdf

Wildlife Spotlight

Northern Leopard Frog (Rana pipiens)

- These frogs are lime green or brownish in color.
- They can live from 2 to 4 years in the wild.
- The northern leopard frog lives in a variety of habitats and is sometimes called the "meadow frog".
- They rely on permanent waters with rooted aquatic vegetation for breeding, and inhabit ponds, canals, marshes, springs, and streams.
- They have oval or round dark spots on their backs, with a white stripe on the upper jaw.
- Northern leopard frogs produce a low-pitched snore often followed by a chuckling noise, or a deep *urr, urr, urr*.
- This frog has internal vocal sacs, so the males' throats do not appear to move when they call.
- A group of frogs is called an army.



Arizona Game and Fish Department. 2002. *Rana pipiens*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ.

Northern Pintail (Anas acuta)

- They usually begin arriving in Arizona in October and are found on most of the states larger wetlands and lakes.
- This duck is a shallow water feeder and prefers large open water as opposed to small potholes or stock tanks.
- Northern pintails are dabbling ducks and feed in shallow water by tipping tail-up to feed underwater.
- Male pintail have chocolate brown heads with a slender white strip along the neck and a powder blue strip on each side of the bill.
- The name pintail comes from the male's long black pointed tail feather.
- Wings of both sexes have bronze speculum with gray underside.
- The northern pintail does not require a running start, but can fly directly from floating in the water.

Arizona Game and Fish Department website



It Pays to Restore Wetlands!

Nationally, 71.8 million people spent \$54.9 billion on wildlife-watching activities. In Arizona, 1.5 million people spent \$936 million on wildlife-watching activities , most commonly at wetlands and along streams.



US Dept of Interior, US Fish & Wildlife Service and US Dept of Commerce, US Census Bureau. 2011. National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

Persistent drought and land use change is shrinking the extent of wetlands in Arizona, making them available to migrating birds for a shorter period of the year. These wetlands provide critical nesting and stopover habitat for waterfowl, shorebirds, songbirds, and raptors. At the same time, the Rio de Flag in Flagstaff has been significantly altered by development and diversions. As a result, the stream and associated riparian habitat is fragmented and in some places no longer functional. There is a need to pursue strategic conservation and restoration of the area's limited wetland and riparian habitats to benefit birds and other wildlife. Wetland birds are a particular focus for the AWWWE partnership, in part because birds are among the most “watchable” wildlife species, easily observed and enjoyed by the public.

Yuhas, Roberta H. LOSS OF WETLANDS IN THE SOUTHWESTERN UNITED STATES (U.S. Geological Survey 1996), *available at* <http://geochange.er.usgs.gov/sw/impacts/hydrology/wetlands/>.

The challenge of conserving Arizona’s wetlands requires creative solutions. Strategies that have proven successful for AWWWE wetland and riparian sites include:

- Acquisition of lands to be managed for open space
- Conservation easements to ensure protection of wetland values
- Securing water rights and instream flows for wildlife beneficial use
- Zoning parcels for open space

AWWE sites are currently managed for public use and enjoy some level of protection as open space or recreational areas, however the status of land and water rights vary. Decisions to pursue additional protections are at the landowners’ discretion. These approaches require funding and significant capacity over time. AWWWE supports willing landowners in securing financial and administrative capacity to pursue and maintain these conservation efforts.

The Goal

To collaboratively manage wetland and riparian sites to provide wildlife habitat and recreation opportunities for future generations.

The Strategy

To leverage partnerships and resources to make management decisions based on sound science.

5 Steps to Wetland Conservation

1. Build a constituency
2. Gain water rights
3. Make a plan
4. Obtain funding
5. Perform on-the-ground management



Actions

Planning

The 2012-2013 Arizona Watchable Wildlife Experience Strategic Plan provides a foundation for prioritizing wetland and riparian site improvements. To support this Action Plan, the AWWE Partnership reviewed and updated the Strategic Plan's site inventory with detailed information on the existing and desired features at each site. Through this update process and a qualitative assessment, the group defined Showcase Sites, Priority Sites, and Future Focus Sites.

We anticipate this set of documents, Action Plan, Site Inventory, and Needs Matrix will be utilized by various partner organizations and land owners to contribute to wetland and riparian conservation on the ground. Materials will be made available on our website www.azwatchwildlife.com.

AWWE Showcase Sites

These sites have been identified by the AWWE partners as showcase sites, demonstrating active and strong partnerships with defined management plans in place.

Picture Canyon Natural and Cultural Preserve

- Conservation Easement on Property
- Well-funded collaborative stream and pond restoration projects
- Preserve Management Plan
- Well-established, active stakeholder group

Rogers Lake County Natural Area

- Land acquisition under conservation easement
- Active stewardship and monitoring
- Natural Area Management Plan
- Well-established, active stakeholder group



Lake Mary Road Scenic Driving Tour - Lake Mary & Mormon Lake

- Improved user amenities
- Largest local wetlands functioning as habitat for numerous species
- Engaged stakeholder group

AWWE Priority Sites

Based upon opportunity, potential habitat value, and active partnerships, AWWE partners have determined the following four sites to have priority for management action:

Marshall Lake

Location:

Coconino National Forest, 12 miles southeast of Flagstaff

Accessibility:

Lake access is seasonal, approximately May through October depending upon weather. Road may be closed or impassible in wet or snowy conditions.

Wildlife Watching:

Marshall Lake offers visitors an excellent opportunity to view waterfowl, elk, migratory birds, osprey, bald eagles, butterflies, and much more.

Current Status:

The wetland is a perched clay basin with limited inflow from rain and snowmelt. As a result, Marshall Lake is sensitive to drought and is dry in many years. AGFD is conducting a water balance and feasibility assessment for habitat improvements in the Marshall Lake watershed. A restoration plan will be developed in coordination with the Coconino National Forest in 2015.



Pumphouse County Natural Area

Location:

Coconino County, 7 miles south of Flagstaff

Accessibility:

From the Raymond County Park parking area you can access both the Pumphouse Meadow and Pumphouse Wash. The access to Pumphouse Meadow is paved and wheelchair accessible.

Wildlife Watching:

At Pumphouse you can expect to see migratory birds year-round and elk in late summer and early fall. Permanently mounted binoculars and a viewing platform provide a focus for the site. Additional bird watching opportunities can be found at the Kachina Village Improvement District ponds north west of Pumphouse Meadow.

Current Status:

Coconino County has secured water rights for the springs and wash. A Management Plan was adopted in 2014.

Rio de Flag Wetlands

Location:

City of Flagstaff, along Flagstaff Urban Trail System at its intersection with Interstate 40

Accessibility:

Access only on foot or bicycle via the Flagstaff Urban Trail System.

Wildlife Watching:

Waterfowl are commonly found in the ponds, while riparian and wetland birds enjoy the stream habitat. Waterfowl, wetland- riparian- forest songbirds, raptors, marsh birds, elk, Abert's squirrels, and foxes all inhabit the area.

Current Status:

AGFD holds instream flow water rights at two discharge points along the Rio de Flag, in order to provide wildlife habitat. Interagency coordination is on-going to determine best discharge locations and management approaches for wildlife.

Wildcat Reach

Location:

City of Flagstaff, just west of Picture Canyon

Accessibility:

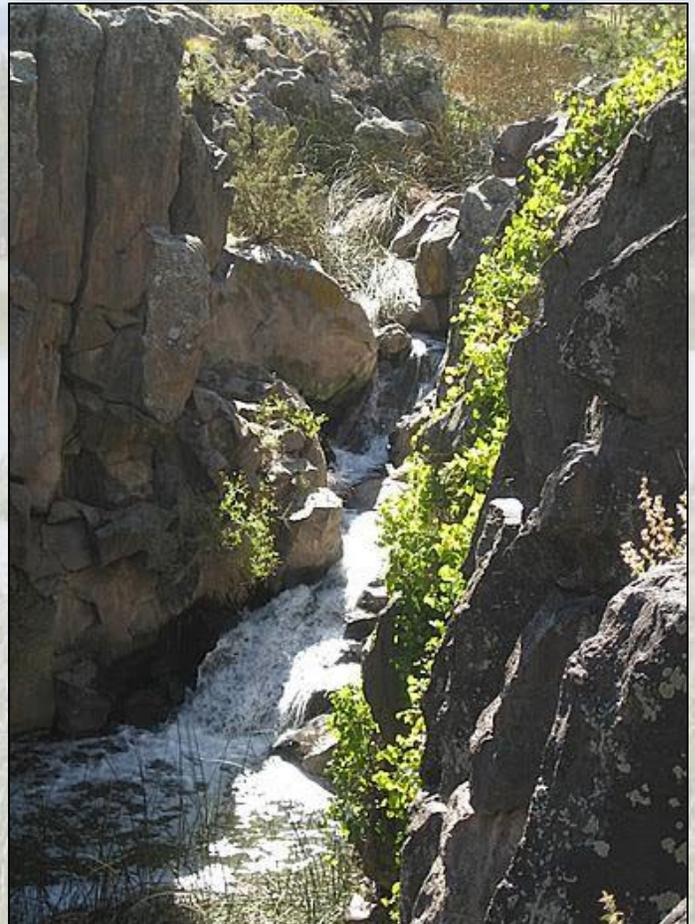
Currently there are no designated trails to the site. Future Flagstaff Urban Trail System alignment is under development.

Wildlife Watching:

Waterfowl are expected to become more common visitors at Wildcat Reach as the pond and stream channel are restored to wetland habitat.

Current Status:

A detailed restoration plan has been developed by the City of Flagstaff, who is leading several projects along this portion of the Rio de Flag.



Goals & Strategies

These goals and associated strategies will serve as a guide to actions at the AWWE Priority Sites.

Goal 1:

Assist responsible landowner/manager in supporting open space operations and management

Strategies:

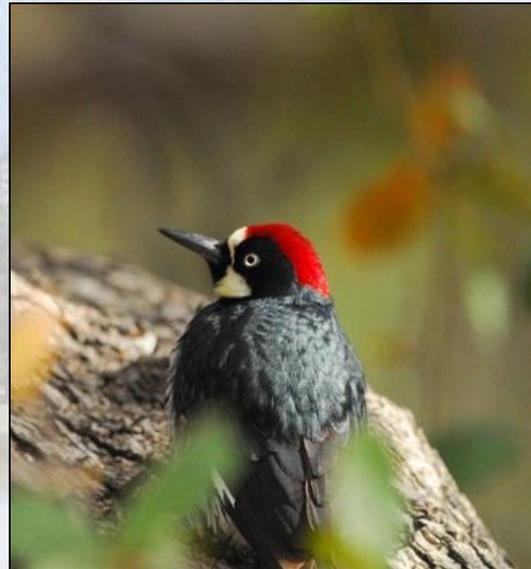
1. Pursue funding for long-term management
2. Create site-specific management plans
3. Support organizational capacity-building to staff operations and maintenance programs and coordinate volunteers
4. Develop a site stewards program to engage volunteers

Goal 2:

Build a partnership planning team for wetland enhancement at each site

Strategies:

1. Convene a meeting with landowner and AWWE team to discuss goals
2. Identify potential funding sources; assist in securing funds
3. Provide technical expertise and organizational support for stakeholder-driven habitat improvement projects
4. Participate in local and regional open space planning efforts



Goal 3:

Support responsible landowner/manager in protecting and maintaining the land and water rights for open space purposes

Strategies:

1. Support securing long-term water rights
2. Support zoning the parcel for open space
3. Include sites in area management plans
4. Support the restoration of hydrologic function

Goal 4:

Improve and maintain the vegetative diversity and structure of habitat for resident and migratory wildlife

Strategies:

1. Inventory plants and develop desired plant lists
2. Hold volunteer days to remove weeds and plant desired natives
3. Revisit projects every 1-3 years to determine success and plan future volunteer days
4. Realign/create trails to protect breeding birds

Goal 5:

Manage for greater recreational opportunities while maintaining wildlife values

Strategies:

1. Assist landowner/manager in developing and updating detailed site management plans
2. Identify potential funding sources to develop appropriate infrastructure (trails, signage, parking, gates etc.)
3. Host and support recreational events including wildlife viewing trips and educational programs



Goal 6:

Develop citizen science opportunities and site monitoring

Strategies:

1. Develop long-term monitoring program to support conservation goals
2. Allow for development of wetland science and research

Future Management

AWWE Future Focus Sites

AWWE partners recognize six additional wetland and riparian sites with high potential for habitat improvements that will benefit wildlife. The Partnership is committed to regular Strategic Planning to address these sites. We encourage engagement from interested stakeholders to accelerate and support these efforts.

- Flagstaff Arboretum
- Griffith Springs
- Big Leroux Springs
- Museum of Northern Arizona
- Prime Lake
- Vail Lake

To learn more about individual site needs and planned projects, please refer to the AWWE Strategic Plan's site inventory document.



For more information and to get involved, please visit www.azwatchwildlife.com
or contact Shelly Shepherd or Jessica Gist at the Arizona Game & Fish
Department, 3500 S. Lake Mary Rd, Flagstaff 86005; (928) 774-5045.



Arizona Game and Fish Department Mission:

*To conserve Arizona's diverse wildlife resources and manage for safe,
compatible outdoor recreation opportunities for current and future
generations.*

This plan was made possible by:



Intermountain West
Joint Venture

Conserving habitat through partnerships