



## PROJECT MEMORANDUM

**Project Name:** Effluent Injection Well Permitting **Date:** September 22, 2009  
**Client:** City of Sedona **Project Number:** 8256A.00  
**Prepared By:** Anh Quach  
**Reviewed By:** Dave Sobeck  
**Subject:** Potential Funding Sources for Constructed Wetlands Project  
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### 1.0 CONSTRUCTED WETLANDS BACKGROUND

The City of Sedona is conducting a study to evaluate potential options to update its current effluent management practices at the Sedona Wastewater Reclamation Plant (WWRP). The 2 million gallon per day (mgd) design capacity WWRP is currently operating at a capacity of approximately 1.2 mgd. Effluent generated by the facility is disposed of through spray irrigation on adjacent City property. A variety of factors, including growth, land values/alternative utility, effluent disposal limitations, and other social, political, economic, and environmental factors have prompted the City to develop a comprehensive effluent management strategy.

In an effort to identify the best overall strategy to meet the City's goals, the Wastewater Effluent Disposal and Land Use Task Force (WEDLU) is investigating various effluent management and disposal alternatives including constructed wetlands.

The team has developed various wetland configurations utilizing available land area on both City-owned property and surrounding United States Forest Services (USFS) property.

It is intended that the constructed wetlands be a multi-purpose facility including:

- Effluent disposal
- Wildlife habitat
- Recreational features such as hiking trails, and a fishing lake
- Public outreach and educational programs

Development of a new wetlands project will require significant coordination with a wide range of potential stakeholders. In addition, the facility will require a significant initial capital investment to fund construction of the required improvements. Consequently, as part of the wetlands evaluation, the City requested that the team identify potential project partners and available funding sources associated with a potential wetlands project for the City of Sedona.

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### 2.0 POTENTIAL FUNDING SOURCES

Due to the involvement of various government agencies, and the multi-faceted aspects of the proposed wetlands facility, the project may be eligible for a number of supplementary funding sources, grants, and loans. The following is a list of potential partners and funding sources for a constructed wetlands project in the City of Sedona. Note that the availability, total value, and applicability of the agencies/funding sources outlined below would need to be further evaluated/defined based on the final design criteria for the facility. The team would like to thank SWCA and Logan-Simpson Design for their assistance in developing this comprehensive list

#### 2.1 Environmental Protection Agency

##### 2.1.1 EPA Clean Water State Revolving Fund

In recent years, Clean Water State Revolving Fund (CWSRF) programs provided more than \$5 billion annually to fund water quality protection projects for wastewater treatment, non-point source pollution control, and watershed and estuary management. CWSRFs have funded over \$68 billion, providing over 22,700 low-interest loans to date.

[www.epa.gov/owm/cwfinance/cwsrf/index.htm](http://www.epa.gov/owm/cwfinance/cwsrf/index.htm)

##### EPA Environmental Education Grants Program

The EPA awards grants for environmental education through the Environmental Education Grants Program, which was established under Section 6 of the National Environmental Education Act of 1990. The goal of the program is to support environmental education projects that enhance the public's awareness, knowledge, and skills to make informed responsible decisions that affect environmental quality. Since 1992, Congress has appropriated \$13 million for this program and funded approximately 1,500 projects.

##### EPA Region 9 Wetland Program Development Grants

The Wetland Program Development Grants (WPDGs) provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. Eligible applicants include states, tribes, local government agencies, interstate agencies, and intertribal consortia.

[www.epa.gov/region9/funding/wetlands-09.html](http://www.epa.gov/region9/funding/wetlands-09.html)

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### **EPA Pollution Prevention Grants**

The EPA created the Pollution Prevention (P2) Grant Program under the authority of the Pollution Prevention Act of 1990. The grant program provides matching funds to State and Tribal programs to support P2 activities across all environmental media and to develop State-based programs. The purpose of the P2 Grant Program is to give States and Tribes the capability to assist businesses and industries in identifying better environmental strategies and solutions for complying with Federal and State environmental regulations. It also aims to improve business competitiveness without increasing environmental impacts. The majority of P2 Grants fund State-based projects for technical assistance, training, outreach, education, regulatory integration, data collection, research, demonstration projects, and recognition programs.

[www.epa.gov/oppt/p2home/pubs/grants/ppis/ppis.htm](http://www.epa.gov/oppt/p2home/pubs/grants/ppis/ppis.htm)

## **2.2 U.S. Fish and Wildlife**

### **North American Wetlands Conservation Act**

In 1989, Congress recognized the importance of wetland conservation for migratory birds, and passed the North American Wetlands Conservation Act to help support the Joint Ventures. In 1998, Congress authorized \$30 million to provide grants to private and public organizations and individuals for local wetland habitat conservation and restoration projects. Overall, 700 partners from public and private organizations, including environmental groups, corporations, farmers and ranchers, small businesses, and private citizens have implemented projects that focus on acquisition, restoration and enhancement activities.

[www.fws.gov/r9nawwo/nawcahp.html](http://www.fws.gov/r9nawwo/nawcahp.html)

<http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm>

### **North American Waterfowl Management Plan (NAWMP) Joint Venture Projects**

The U.S. Fish and Wildlife Service, in cooperation with state governments as well as non-governmental partners, administers this program. The program was authorized in 1986 between the United States and Canada with the purpose of protecting, restoring, and enhancing wetlands important to waterfowl. Mexico has since also joined the venture. The plan is implemented at the grassroots level by partnerships called Joint Ventures. Wetlands identified under the NAWMP as “areas of major concern” for waterfowl and other bird habitats (for example, migration, nesting and forage areas) are targets for these Joint Ventures. Each Joint Venture develops a plan with goals and objectives. Financial and technical assistance are available to landowners through the Plan. The Plan also supports research on wetlands restoration, wetlands status surveys, and wetlands inventories. This plan may provide funding for the proposed Wetlands Pilot program.

<http://www.fws.gov/birdhabitat/NAWMP/index.shtm>

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### **Partners for Wildlife (PFW) Program**

The US Fish and Wildlife Service (USFWS) administer this program, also known as the Private Lands Assistance and Restoration Program. The program offers technical and cost-share assistance to landowners who wish to restore wildlife habitat, including degraded or converted wetlands. The landowner works directly with USFWS to prepare a Habitat Restoration Proposal.

<http://www.fws.gov/endangered/bulletin/96/pfw.html>

### **Endangered Species Program**

Grants for states and territories, offered through the Cooperative Endangered Species Conservation Fund as authorized under the Endangered Species Act, fund participation in a wide array of voluntary conservation projects for candidate, proposed and listed species. These funds may, in turn, be awarded to private landowners and groups for conservation projects.

<http://www.fws.gov/endangered/grants/index.html>

## **2.3 U.S. Department of Agriculture**

Wildlife habitat has been integrated into several conservation programs authorized in the last three farm acts. Various incentives afford landowners many opportunities to improve habitat for wildlife. A summary of these programs is provided below

### **Conservation Reserve Program**

The Conservation Reserve Program (CRP) was authorized in 1985 to pay farmers rental payments for ten years to restore grass or trees on highly erodible croplands. In 1989 and 1997, wetlands restoration was also approved through the CRP. The average payment is approximately \$39 per acre per year. The maximum acreage allowed is 36.5 million acres.

<http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=crp>

### **Conservation Reserve Enhancement Program**

The Conservation Reserve Enhancement Program (CREP) allows any state to target a specific region of special environmental significance, combining CRP with state funds to maximize protection of the land. Each state must submit a plan to USDA's Farm Services Agency for approval.

<http://www.fsa.usda.gov/FSA/webapp?area=home&subject=lown&topic=cep>

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### **Environmental Quality Incentive Program**

The Environmental Quality Incentive Program (EQIP) was established in 1996 to pay for up to 75 percent of the costs of certain practices such as grassed waterways, filterstrips, manure management facilities, capping abandoned wells, and wildlife habitat enhancement. \$200 million is authorized for each year through 2001.

[www.nrcs.usda.gov/Programs/EQIP](http://www.nrcs.usda.gov/Programs/EQIP)

### **Wildlife Habitat Incentive Program**

The Wildlife Habitat Incentive Program (WHIP) was established in 1996 to help landowners develop upland and wetland habitat and threatened and endangered species habitat. Landowners agree to implement a wildlife habitat development plan, and the National Resources Conservation Service (NRCS) agrees to provide cost-share assistance for the practices. The agreements are for five to ten year periods.

[www.nrcs.usda.gov/Programs/WHIP](http://www.nrcs.usda.gov/Programs/WHIP)

## **2.4 National Fish and Wildlife Foundation**

### **North American Wetlands Conservation Act**

The National Fish and Wildlife Foundation also funds local wetland conservation and restoration projects. The Foundation is dedicated to the conservation of natural resources - fish, wildlife, and plants. Its goals include habitat protection, environmental education, habitat and ecosystem rehabilitation, and restoration. The Wetlands Campaign works with the Foundation to help secure funding for chapter wetland projects.

[www.nfwf.org/about.htm](http://www.nfwf.org/about.htm)

### **Keystone Initiative Grant**

The National Fish and Wildlife Foundation awards matching grants to achieve measurable outcomes in the conservation of fish, wildlife, plants and their habitats. Grants generally range from \$50,000 to \$300,000.

<http://www.nfwf.org/Content/NavigationMenu/Grants/GrantGuidelines/default.htm>

### **Five Star Restoration Matching Grants**

The Five Star Restoration Program provides modest financial assistance to support community-based wetland, riparian, and coastal habitat restoration projects that build diverse partnerships and foster local natural resource stewardship through education, outreach, and training activities.

[http://www.nfwf.org/AM/Template.cfm?Section=Charter\\_Programs\\_List&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=13172](http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=13172)

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### 2.5 Additional Sources

#### **Water Infrastructure Finance Authority**

Arizona's Water Infrastructure Finance Authority (WIFA) is an independent agency of the State and is authorized to finance the construction, rehabilitation, and/or improvement of drinking water, wastewater, wastewater reclamation, and other water quality facilities/projects. WIFA offers borrowers below market interest on loans for 100 percent of eligible project costs. WIFA receives assistance from the Clean Water Revolving Fund and the Drinking Water Revolving Fund, which are both funded by contributions from the State and the U.S. Congress.

In addition, the American Recovery and Reinvestment Act of 2009 (ARRA) is expected to contribute approximately \$26.5 million to WIFA's Clean Water program and approximately \$55 million to the Drinking Water program. ARRA authorizes WIFA to provide additional subsidization on loans.

[www.azwifa.gov](http://www.azwifa.gov)

#### **Arizona Game and Fish Department Heritage Fund**

The Heritage Fund was established in 1990 designating up to \$10 million per year of funding generated by lottery ticket sales to the conservation and protection of the state's wildlife and natural areas. The Arizona Game and Fish Department spends its Heritage Fund dollars to recover threatened and endangered species, to help urban residents appreciate and coexist with our unique wildlife, to educate children about the environment, and to create new opportunities for outdoor recreation.

[http://www.azgfd.gov/w\\_c/heritage\\_program.shtml](http://www.azgfd.gov/w_c/heritage_program.shtml)

#### **Arizona Water Protection Fund**

The Arizona Water Protection Fund was established by the state legislature in 1994 to provide grants to private, local, state, federal, and Indian agencies for the protection and restoration of rivers and streams. The fund is generated by mandated direct appropriations by the legislature of \$5 million per year and varying surcharges on sales of Central Arizona Project Water to out-of-state utilities.

<http://www.awpf.state.az.us/>

#### **Land and Water Conservation Fund**

In 1964, Congress established the Land and Water Conservation Fund (LWCF) to provide money for the acquisition of public lands to meet the needs of outdoor recreation and open space. Each year \$900 million is deposited in the fund, primarily from the Outer Continental Shelf oil and gas leasing. The LWCF Act directed Congress to allocate the money, through the annual appropriation process, for the purchase of land, waters and wetlands in our national parks, forests, wildlife refuges, and other resource lands and to provide matching grant

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assistance for state and community open space and recreation projects. Each year a list of priority projects is forwarded to Congress for funding. Priority lists originate in each state, and are consolidated by both the Audubon and the Wilderness Societies in Washington, D.C.

<http://www.nps.gov/lwcf/>

### **Ducks Unlimited**

Ducks Unlimited (DU) is a grassroots, volunteer-based organization established in 1937 focused on waterfowl and wetlands conservation. DU funds more wetlands restoration projects than any other entity in the United States. In 2008, DU spent \$231 million on habitat conservation. There have been a number of completed projects funded by DU throughout Arizona, particularly in Northern Arizona.

[www.ducks.org/media/Conservation/Habitat/\\_documents/AZ.pdf](http://www.ducks.org/media/Conservation/Habitat/_documents/AZ.pdf)

### **Arizona Land and Water Trust**

The Arizona Land and Water Trust (ALWT) works closely with local, state and federal agencies, as well as private landowners and land trusts, to protect Arizona's vanishing landscapes and wildlife habitat. The ALWT helps its public and private partners achieve their specific land protection goals by providing risk capital, effective negotiation, legal skills and leverage of limited funding.

[www.alwt.org/landownerresources/funding.shtml](http://www.alwt.org/landownerresources/funding.shtml)

While the ultimate availability, value, and applicability of each source outlined above would need to be further evaluated/defined, there are clearly a wide variety of potential partners and funding sources available to the City of Sedona for a wetlands related project. Recent constructed wetland projects, including the Yuma East and West Wetlands and Chandler Heights Recharge Project, have received significant funding from a combination of these sources – in some cases, representing a substantial portion of the overall project costs. Many of these potential funding sources can be challenging to work with and may require significant time to obtain approval. Consequently, the team recommends that the City initiate work to further develop potential funding sources/partners as soon as possible - including initiation of a preliminary design study which will be required by many funding agencies) - if wetlands are selected as part of the City's overall effluent management strategy.

**Prepared By:**

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City of Sedona, WEDLU and Carollo Engineers