United States Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Phoenix Area Office

D R A F T

FINDING OF NO SIGNIFICANT IMPACT

PROPOSED APPROVAL OF USE OF RECLAMATION LAND FOR THE CENTRAL ARIZONA WATER CONSERVATION DISTRICT SUPERSTITION MOUNTAINS RECHARGE PROJECT PINAL COUNTY, ARIZONA

ENVIRONMENTAL ASSESSMENT
October 2009

Approved: _____ Date:
Carol Lynn Erwin, Area Manager
Phoenix Area Office
Bureau of Reclamation

FONSI No. PXAO-____

The Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA), to describe potential environmental impacts resulting from the Superstition Mountains Recharge Project (SMRP), proposed to be constructed and operated by the Central Arizona Water Conservation District (CAWCD). The proposed project is located in parts of sections 23, 24, 25, and 26 of Township 2 South, Range 8 East, of the Gila and Salt River Baseline and Meridian.

The SMRP will be located on Reclamation and Arizona state trust lands, bordering Queen Creek just east of the Fannin-McFarland Aqueduct, in Pinal County, Arizona. CAWCD intends to construct and operate a recharge facility that would ultimately recharge as much as 56,500 acre-feet of Central Arizona Project (CAP) water annually. The fully built-out project would affect approximately 386 acres, 132 acres of which are located on Reclamation land and 254 acres of which are located on State trust lands. The use and possession of the Reclamation-owned lands have been transferred to CAWCD for operation of the CAP. Because construction and operation of a groundwater recharge project is not a CAP operation and maintenance activity, Reclamation intends to separately approve CAWCD's use of the Reclamation land for this purpose.

Because the State trust lands currently are not available for lease or purchase for the project, CAWCD intends to implement only Phase I of the SMRP. Phase I consists of constructing two 20-acre recharge basins and associated features on 107 acres of Reclamation land south of Queen Creek. Under Phase I, 25,000 acre-feet of CAP water will be recharged annually for the foreseeable future. The EA describes the potential impacts from the fully built-out project, while acknowledging the uncertainty regarding when or if the entire project will ultimately be built and operated.

Reclamation has determined that approval of CAWCD's use of Reclamation land to construct, operate and maintain the SMRP, will not result in significant environmental impacts to the human environment, which would merit preparation of an environmental impact statement.

BACKGROUND

The SMRP is designed to provide long-term storage capacity for recharged CAP water. The East Salt River Valley (ESRV) sub-basin is an area of historic groundwater decline that has experienced land subsidence and the formation of earth fissures. Overdraft of the aquifer has resulted in the formation of three large cones of depression within the ESRV sub-basin—near Scottsdale, Mesa, and Queen Creek, Arizona. Numerous regional planning efforts indicate groundwater pumping will increase in the eastern portion of the Phoenix Active Management Area (AMA). The SMRP will assist the ESRV groundwater users in reaching the Arizona Department of Water Resources' mandated goal of safe yield (when the amount of groundwater pumped from a basin does not exceed the amount of water recharged to the aquifer). CAWCD initially investigated potentially suitable recharge sites within a 410-square mile area in the ESRV sub-basin, to determine areas where groundwater recharge is technically feasible. The proposed SMRP was found to provide optimum recharge rates based upon evaluation of technical data gathered in the field, as well as having the most cost-effective delivery location.

Reclamation prepared an EA to describe potential environmental consequences resulting from approval of the construction and operation of a groundwater recharge project at the proposed SMRP site. The EA was prepared in compliance with the National Environmental Policy Act, as amended (NEPA), and Department of the Interior regulations regarding implementation of NEPA (43 CFR Part 46).

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Based upon the EA, Reclamation has determined that use of Reclamation land for construction and operation of the SMRP will not result in significant environmental impacts to the CAP or the human environment in the vicinity of the project area. Preparation of an environmental impact statement is not required. This decision is based upon the following considerations.

(1) No significant adverse environmental impacts will occur as a result of the Proposed Action. In the foreseeable future, facilities for Phase I of the project will be constructed solely on Reclamation land. Up to 107 acres of native vegetation, much of which has been disturbed by cattle grazing and human activities, will be replaced with two 20-acre recharge basins and related facilities. If the remainder of the project is constructed, an additional 279 acres of similar habitat (25 acres of Reclamation land and 254 acres of State trust land) will be replaced by additional recharge basins and related facilities. The construction will also result in fragmentation of the existing habitat which could also negatively affect wildlife; however, this type and quality of habitat is relatively abundant on a regional scale. The entire 386 acres of habitat would not be lost in the short-term; only 107 acres would be lost in the foreseeable future. Impact to this habitat is not considered to be significant regionally due to the sparseness and lack of diversity of the existing habitat within the project area, and degradation by cattle and off highway vehicle use. In conjunction with this project, CAWCD will be installing wildlife compatible barbed wire fence along the boundary of Reclamation's property, east of the SMRP. This will protect 677 acres of similar habitat from continued cattle grazing and off highway vehicle use.

Under the Proposed Action, it is anticipated there will be localized hydrological benefit from the Proposed Action because CAGRD will replenish water within the area of hydrological impact caused by groundwater pumping in this portion of the Phoenix AMA.

To mitigate for loss of habitat, the following measures would be undertaken as part of the project:

- All existing cacti and trees determined by a professional arborist to be salvageable, that otherwise would be destroyed by clearing activities, will be salvaged and transplanted within the project area. Wherever practicable, mesquite, palo verde, and ironwood will be transplanted along washes to enhance existing xeroriparian habitats.

- All areas disturbed by construction activities that are not needed for permanent facilities will be reseeded with a native seed mix, consisting of the following:

Species of Seed	Lbs. pure live seed/acre
Plantago (*Plantago insularis*)	5.00
Desert mallow (*Sphaeralcea ambigua*)	1.50
Creosote bush (*Larrea tridentata*)	3.00
Brittle bush (*Encelia farinosa*)	1.00
Bursage (*Ambrosia deltoidea*)	4.00
Desert marigold (*Baileya multiradiata*)	1.50
Fluff grass (*Erioneuron pulchellus*)	1.00
Desert lupine (*Lupinus sparsiflorus*)	2.00
Wolfberry (*Lycium andersonii* or *L. exsertum*)	1.00
Total weight per acre	20.00

- Wildlife compatible barbed wire fencing will be installed at the easternmost boundary of Reclamation's property line to protect it from cattle grazing and unauthorized entry. This will result in protection of about 677 acres of habitat.

(2) The Proposed Action will not result in any adverse effects to public health or safety. CAP water has been recharged at facilities in Maricopa and Pima counties for over 13 years. No detrimental effect on water quality has been reported from these uses, with the exception of one well located downslope of the Hieroglyphic Mountains Recharge Project, which has experienced increased nitrate levels. While this could also occur with the SMRP, due to the history of farming in the area and the potential for nitrates to exist in the vadose zone, it is unlikely. This is because the recharge basins are located within the Queen Creek floodplain, where historic flow flows tend to flush out the vadose zone. Additionally, CAP water has been used for irrigation purposes within Pinal County since 1986. Water quality monitoring required by the USF permit, as well as ongoing monitoring conducted by local water providers, will alert CAWCD of any potential increases. CAWCD will provide potable water to anyone receiving groundwater with nitrate levels that have been determined to have risen above the maximum contaminant level (MCL) as a result of operation of the SMRP.

The project area is located within an area that is in attainment with the National Ambient Air Quality Standards for all six criteria pollutants, although the area is under consideration as non-attainment for particulate matter less than 10 microns in diameter. Construction-related activities will generate minor amounts of air pollutants over the 18-month construction period; periodic maintenance of the recharge basins to improve infiltration will occur about four to eight days per year and generate a negligible amount of pollution. Potential air emissions resulting from the proposed construction and operation of the SMRP were estimated. Mobile sources are not subject to the prevention of significant deterioration standards that apply to attainment areas; however, the estimated air emissions were compared to the *de minimis* thresholds for general conformity determinations (which apply to nonattainment areas). The amounts of pollutants that will be generated by the SMRP are well below the *de minimis* thresholds. These temporary air pollutant emissions will contribute insignificantly to the county-wide emissions for the 18-month construction period; this contribution of project-related emissions is not anticipated to result in exceedances of the air quality standards. The relatively minute quantities of pollutants released

during construction and operation of the SMRP will have a negligible cumulative effect on local air quality or global processes that lead to climate change.

(3) No direct adverse impacts will occur from the proposed project to unique characteristics of the geographic area such as historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. There is no agriculture on any of the proposed project lands; however, there is evidence the area has been used for cattle grazing. There are no wild and scenic rivers, or rivers proposed for designation as wild and scenic in the vicinity of, or that could be impacted by, the project.

(4) Effects on the quality of the human environment will be essentially the same under either the Proposed Action or the No Action alternative, as development within the service area will occur similarly with or without the project.

(5) Highly uncertain, unique or unknown risks affecting the human environment are not anticipated to occur as a result of this Proposed Action. CAWCD has extensive experience in operating recharge projects; it has been recharging CAP water for 13 years, and now operates six similar recharge projects—three in Maricopa County and three in Pima County. This extensive experience has provided CAWCD with a great deal of planning and operation expertise that enables it to plan, construct, and operate these types of facility with a minimal amount of risk and uncertainty.

(6) The proposed action will not establish a precedent for future actions, and will not represent a decision in principle about a future consideration. Reclamation's approval for use of its land for the SMRP in no way affects any decision regarding use of Reclamation land for similar or different purposes at any other location in the future.

(7) Cumulatively significant impacts are not anticipated to occur as a result of the proposed action. Other than continuation of conversion of agricultural land for urban uses, there are no particular reasonably foreseeable projects that are proposed or permitted within the impact area of the proposed project. Construction of the proposed project will contribute temporary minor emissions of air pollutants in the immediate vicinity of the proposed project. Timing of construction of the proposed project in relation to other construction activities related to urban development is not known; if they do not occur at the same time, there will not be an additive, or cumulative, impact.

(8) Cultural resource surveys were conducted prior to construction of the CAP. Professional archaeological monitors also were present during geo-technical excavations undertaken for this project, on both Reclamation and Arizona state trust lands. No cultural resources were found. The Proposed Action will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. It will also not cause loss or destruction of significant scientific, cultural, or historical resources.

(9) No federally protected species or areas designated as critical habitat will be affected by the proposed action. The Fish and Wildlife Service website identifies 13 federally listed endangered

or threatened species that potentially exist within Pinal County. None of these species will be affected because their known geographic ranges are distant from the project area and/or the project area does not contain conditions similar to those known to be needed to support these species.

(10) The proposed action does not threaten to violate Federal, State, or local law or requirements imposed for the protection of the environment. CAWCD is required to follow all requirements and conditions of both the USF and Water Storage permits issued by ADWR. In addition, CAWCD will need to comply with any and all State environmentally–related clearances prior to lease or acquisition of Arizona State trust lands for any subsequent expansion of the basins onto State trust lands.

Documents related to this action are identified below.

Reclamation. 2003. Categorical Exclusion Checklist PXAO-03-10. Central Arizona Water Conservation District Proposed Groundwater Recharge Project along Reach 3 of the Fannin-McFarland Aqueduct, Central Arizona Project, Pinal County, Arizona. April.

_____. 2009. Environmental Assessment – Superstition Mountains Recharge Project, Central Arizona Water Conservation District, Pinal County, Arizona. October.