

RECLAMATION

Managing Water in the West

Toquerville Secondary Water System Smart Meter Installation Project

Finding of No Significant Impact and Final Environmental Assessment
LC-17-08

Lower Colorado Region, Boulder City, Nevada



U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

February 2017

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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List of Acronyms and Abbreviations

Acronym or abbreviation	Term
Agreement	Cooperative Agreement R16AP00110
AMI	Advanced Metering Infrastructure
APE	Area of Potential Effect
CO ₂	Carbon Dioxide
DOI	Department of the Interior
EA	Environmental Assessment
EO	Executive Order
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
kWh	Kilowatt Hour
NEPA	National Environmental Policy Act of 1969, as amended
Project	TSWS Smart Meter installation
Reclamation	Bureau of Reclamation
TSWS	Toquerville Secondary Water System
WCWCD	Washington County Water Conservancy District

Finding of No Significant Impact

(FONSI)

LC-17-08

for

**Final Environmental Assessment (EA) for Toquerville Secondary Water System
Smart Meter Installation Project**

Boulder City, Nevada

Based on a thorough analysis of the potential environmental impacts presented in the EA, the Bureau of Reclamation (Reclamation) finds that implementation of the Proposed Action will not significantly affect the quality of the human environment within or adjacent to the project area, therefore an Environmental Impact Statement will not be prepared.

Accordingly, this FONSI is submitted to document environmental review and evaluation of the Proposed Action in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Prepared: Faye Steiner Date: February 3, 2017
Natural Resource Specialist

Recommended: [Signature] Date: 3 Feb 17
Manager, Environmental Compliance Group

Approved: [Signature] Date: 02/03/2017
Chief, Resources Management Office

Background

Reclamation proposes to authorize the Washington County, Utah, Water Conservancy District (WCWCD) to implement a WaterSMART Water and Energy Efficiency Grants Program grant: Cooperative Agreement R16AP00110 (Agreement) for the Toquerville Secondary Water System (TSWS) Smart Meter Installation Project (Project).

This FONSI tiers to and incorporates by reference the Final EA for Toquerville Smart Meter Installation.

Alternatives Considered

A No Action Alternative and the Proposed Action were considered. Under the No Action Alternative, Reclamation would not authorize the WCWCD to implement the Project.

The Proposed Action

Under the Proposed Action Alternative Reclamation would provide \$267,275.00 to WCWCD for the purchase and installation of Advanced Metering Infrastructure (AMI) meters and associated hardware and software for their secondary water system. The Proposed Action is described on pages 3 to 6 of the EA.

Environmental Commitments

The following measures will be implemented as part of the Proposed Action to reduce or eliminate impacts to resources:

General

The WCWCD would be responsible for obtaining all required Federal, State, County, and City permits for the Project.

Biological Resources

Prior to installation of the radio antenna system, the selected locations will be checked for nesting migratory birds. If nesting migratory birds are present at an antenna location the antenna system will not be installed at that location until all birds have left the nest and are no longer present at the antenna location.

If vegetation removal is required for the installation of the water meters it will occur outside of the migratory bird nesting season, which occurs from February 1 to August 15. If vegetation removal is proposed during the migratory bird nesting season, Reclamation's Biological Services Coordinator will be contacted at 702-293-8130 to determine what avoidance measures are needed.

Cultural Resources/Traditional Cultural Properties/Sacred Sites

If during the course of any activities associated with the execution of the Project, WCWCD becomes aware of or discovers an architectural and/or archaeological resource, the activity in the vicinity of the resource will cease. The WCWCD will secure and protect the resource, and notify Reclamation. Reclamation will ensure that the stipulations of 36 CFR Part 800.11 are satisfied before activities in the vicinity of the resource can resume.

Environmental Impacts and Findings

Implementation of the Proposed Action will not result in significant impacts to any of the resources evaluated in the EA. There would be no direct, indirect or cumulative impacts to Indian Trust Assets, visual resources, floodplains, wetlands, water quality, environmental justice, cultural resources including traditional cultural properties, Indian sacred sites, or biological resources including threatened and endangered species.

Minor, insignificant impacts were identified related to noise, air quality, and soils.

Beneficial impacts related to greenhouse gas emissions, water resources, energy use, and economics were identified. Environmental impacts are discussed on pages 8 and 9 of the EA.

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Toquerville Secondary Water System Smart Meter Installation Project

Environmental Assessment

LC-17-08

**Prepared by:
United States Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada**

1.0 Introduction

1.1 Proposed Federal Action

The Bureau of Reclamation (Reclamation) proposes to authorize the Washington County, Utah, Water Conservancy District (WCWCD) to implement a WaterSMART Water and Energy Efficiency Grants Program grant: Cooperative Agreement R16AP00110 (Agreement) for the Toquerville Secondary Water System (TSWS) Smart Meter Installation Project (Project). The Agreement was awarded in September, 2016, but implementation of the Project may not begin until all appropriate environmental compliance is completed.

This Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA. The purpose of this EA is to evaluate the potential impacts of the proposed action on the physical and human environment and determine if the impacts will be significant thus warranting the preparation of an Environmental Impact Statement.

1.2 Purpose and Need

In 2009, the U.S. Congress passed the SECURE Water Act of 2009 (Public Law 111-11, Title IX, Subtitle F), directing the U.S. Department of Interior to develop a sustainable water management policy. In 2010, the Secretary of the Interior established the WaterSMART program, combining existing programs with new initiatives to create a broad framework for managing the Nation's water supplies.

Water and Energy Efficiency Grants are one of the grant categories that Reclamation funds under the WaterSMART program. Through these grants, Reclamation provides 50/50 cost-shared funding, on a competitive basis, to non-Federal partners that wish to implement water conservation and efficiency projects. Grants are awarded for projects that: save water, increase energy efficiency and the use of renewable energy in water management, support environmental benefits such as making conserved water available instream or addressing endangered species issues, mitigate conflict risk in areas at a high risk of future water conflict, and accomplish other benefits that contribute to water supply sustainability in the western United States. Projects include lining or piping of canals, installation of advanced measuring devices, irrigation system automation, installation of residential water meters, and activities that reduce urban water use.

The purpose of the Proposed Action is to further the intent of the SECURE Water Act of 2009 and the goals of the WaterSMART program.

The TSWS is an untreated water system that provides water for agriculture and landscape irrigation. The meters would provide information on water use which will help to understand irrigation water needs and better manage the water supply. Better management of the secondary

water will make more source water, which is from a natural spring, available for drinking water supplies and flows to the Virgin River. It will also reduce pumping of water into a reservoir for the TSWS, saving money and energy. The Project is expected to reduce water use by 40%, resulting in annual water savings of 884 acre-feet.

Washington County has a growing population and is anticipated to need additional water sources by the year 2025. The Utah Governor's Road Map calls on Washington County to reduce 35 percent of its 2000 per capita water use. Based on the year 2000's per capita water use, WCWCD has already realized a 26 percent reduction. This Project will help WCWCD to meet its goal by reducing the county's per capita water use by another nine percent by 2025. In addition, the Project is aligned with the 2012 WaterSMART Colorado River Basin Water Supply and Demand Study in that it implements adaptation strategies identified in the Study.

1.3 Statutes, regulations, and Executive Orders relevant to the Project

- National Environmental Policy Act of 1969 (42 USC 4321)
- Endangered Species Act of 1973 (P.L. 93-205)
- National Historic Preservation Act of 1966 (P.L. 89-665), as Amended 1992 (P.L. 102-575)
- American Indian Religious Freedom Act of 1978 (P.L. 95-341)
- Native American Graves Protection and Repatriation Act (P.L. 101-601)
- Archaeological and Historic Preservation Act (P.L. 93-291)
- Archeological Resources Protection Act of 1979 (P.L. 96-95)
- Migratory Bird Treaty Act (16 U.S.C. 703-711)
- Bald and Golden Eagle Protection Acts (16 U.S.C. 668-668d)
- Clean Air Act (33 USC 7401) and Amendments
- Clean Water Act (33 USC 1251 et seq.), Sections 401, 402, and 404
- Safe Drinking Water Act (42 USC 300f)
- Farmland Protection Policy Act (P.L. 97-98)
- Executive Order (EO) 11514: Protection and Enhancement of Environmental Quality
- EO 13653 - Preparing the United States for the Impacts of Climate Change
- EO 11593 - Protection and Enhancement of the Cultural Environment
- EO 11988 - Floodplain Management
- EO 11990 - Protection of Wetlands
- EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 13007 - Indian Sacred Sites
- EO 13186- Protection of Migratory Birds
- Department of the Interior Secretarial Order 3226: Evaluating Climate Change Impacts in Management Planning
- Secretarial Order 3175: Departmental Responsibilities for Indian Trust Resources

2.0 Description of Alternatives

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not authorize the Washington County, Utah, Water Conservancy District (WCWCD) to implement the Project. WCWCD would not utilize the funds awarded under the Agreement, and would need to find other funds to implement the Project which may delay or prevent implementation. If implementation is delayed, WCWCD would continue to supply TSWS with 2,210 AF of water annually for their secondary water system without the water savings projected as a result of the Project.

2.2 Proposed Action Alternative

Under the Proposed Action Reclamation would provide \$267,275.00 to WCWCD for the purchase and installation of Advanced Metering Infrastructure (AMI) meters and associated hardware and software for their secondary water system. This secondary water system provides landscape and agricultural irrigation water (their primary drinking water system is already metered). WCWCD would share in the cost of the Project, contributing approximately \$400,000.00 towards the total Project cost of approximately \$700,000.00. WCWCD would retain ownership of all facilities and be responsible for all construction, operations, and maintenance of the Project.

AMI meters, commonly known as “Smart Meters”, are electronic devices that record water consumption and transfer the data via a two way communication system to a central database for analysis and billing purposes, allowing detailed water usage data to be collected continuously at regular intervals and read remotely. Figure 1 shows an example of an AMI meter.



Figure 1- Example of AMI meter

WCWCD would purchase and install 373 AMI meters within the TSWS service area. The AMI meters would be installed underground on residential water connections throughout the TSWS (Figure 2). The installation would include 281 $\frac{3}{4}$ -inch meters, 54 2-inch meters, and 38 4-inch meters.

The meters would be installed in existing valve boxes or if necessary, new valve boxes or meter barrels that will accommodate the AMI meters to be installed. All sites would be accessed with a pickup truck with a trailer. The ground would be excavated to reach the existing valves/valve boxes. Ground excavation would be done with hand tools or a mini-excavator, depending on the size of the meter. The existing water valves would be removed and replaced with an AMI meter. A jumping jack compactor would be used to compact soil when meter barrels are covered (Figures 3 and 4). All installation sites would be restored to their pre-Project condition when installation is complete.

Up to five radio antennas systems would be installed at locations within the Project area to allow for two-way communication with the meters (Figure 5). The radio antenna systems will include a

10 foot high antenna, a 12 inch by 6 inch by 4 inch antenna box, a 20 inch by 16 inch by 11 inch communication box, and a 30 inch by 60 inch by 4 inch solar panel to power the system (all dimensions are approximate). All antenna systems would be installed on existing structures such as water tanks and flag poles. Access to the antenna system sites would be via existing roads.

2.2.1 Mitigation Measures

The following measures would be implemented as part of the proposed action to reduce or eliminate impacts to resources:

General

The District would be responsible for obtaining all required Federal, State, County, and City permits for the Project.

Biological Resources

Prior to installation of the radio antenna system, the selected locations will be checked for nesting migratory birds. If nesting migratory birds are present at an antenna location the antenna system will not be installed at that location until all birds have left the nest and are no longer present at the antenna location.

If vegetation removal is required for the installation of the water meters it will occur outside of the migratory bird nesting season, which occurs from February 1 to August 15. If vegetation removal is proposed during the migratory bird nesting season, Reclamation's Biological Services Coordinator will be contacted at 702-293-8130 to determine what avoidance measures are needed.

Cultural Resources/Traditional Cultural Properties/Sacred Sites

If during the course of any activities associated with the execution of the Project, WCWCD becomes aware of or discovers an architectural and/or archaeological resource, the activity in the vicinity of the resource will cease. The WCWCD will secure and protect the resource, and notify Reclamation. Reclamation will ensure that the stipulations of 36 CFR Part 800.11 are satisfied before activities in the vicinity of the resource can resume.

2.2.2 Alternatives Considered but Not Evaluated in Detail

The Project was determined to be the most cost effective, efficient, and environmentally sound way to install the AMI System, so no other alternatives were considered.

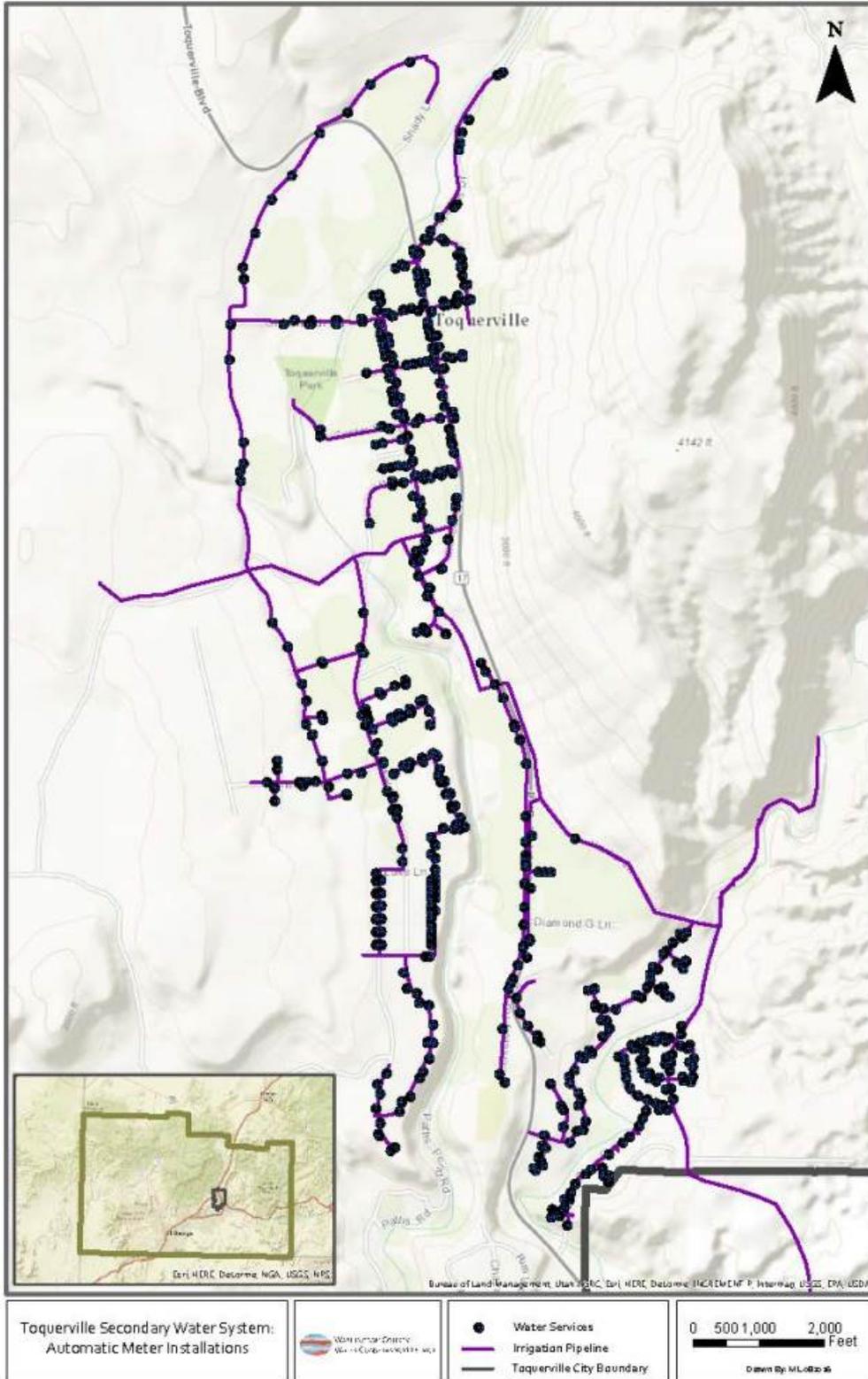


Figure 2- AMI meter installation sites in Toquerville (shown as black dots).



Typical residential
Meter Box

Figure 3 Typical residential meter box where $\frac{3}{4}$ AMI meters would be installed



Figure 4 Example photo of agricultural site in Toquerville. Existing underground water valve which supplies this field would be replaced with 2-4 inch AMI meter. Installation of AMI meter would be at edge of pavement



Figure 5 Radio antenna system locations

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

Toquerville, Utah, with a 2010 population of 1,370, is located in Washington County in southwestern Utah about 20 miles north of St. George, Utah. Most of the community is residential with small agriculture spaces interspersed among new developments. Washington County is in the Virgin River/Kanab Creek Basin. The Virgin River is a tributary to the Colorado River and enters the river at the northern end of Lake Mead.

The following information is excerpted from WCWCD's 2016 WaterSMART grant application unless otherwise cited. The City of Toquerville's primary and secondary water is supplied by the WCWCD, which is a local government entity that serves as a water wholesaler for eight municipalities in the county. The WCWCD obtains 49 percent of its water from surface sources, 44 percent from ground water, and 7 percent from springs. TSWS was created in 1998 through a cooperative agreement between Toquerville, WCWCD and Toquerville Irrigation Company to convert an open-ditch irrigation delivery system to a pressurized irrigation system. The conversion began in 1998 and was completed in 2000. TSWS is owned and operated by WCWCD who delivers up to 2,210 acre feet of water annually to TSWS.

The water delivered to TSWS, although used for irrigation, is high quality spring water. Water from Toquerville Spring is pumped into a reservoir by the TSWS pump station to supply pressure for TSWS. The pump station is currently powered by a natural gas generator. Over the past three years, the TSWS pump station has used on average approximately 1,787,000 kilowatt hours (kWh) annually.

All installation sites are in yards, driveways, roads, or roadsides at locations that are previously disturbed from installation of the underground water lines and valve boxes and other residential development activities.

3.2 Environmental Consequences

3.2.1 No Action Alternative

Under the No Action Alternative, installation of AMI meters may be delayed or not occur if WCWCD does not find another source of funding. The water savings projected as a result of the Project may not occur, and WCWCD may not meet its goals for water conservation.

3.2.2 Proposed Action

All AMI meter installations would be within existing, below ground level, water valve boxes or valve locations in a previously disturbed residential setting. All radio antenna systems would be

installed on existing structures, accessed by existing roads, and would be visually unobtrusive. No Toquerville Irrigation Company features would be impacted. Because of this, there would be no direct, indirect or cumulative impacts to Indian Trust Assets, visual resources, floodplains, wetlands, water quality, environmental justice, cultural resources including traditional cultural properties, Indian sacred sites, or biological resources including threatened and endangered species.

Equipment used for installation may generate some noise, but any noise would be from light equipment and would not exceed acceptable levels for a residential setting.

Trucks and other equipment used to access the valve boxes would generate some emissions but this would be a temporary, minor release that would not exceed air quality standards or contribute measurably to global emissions of greenhouse gases (GHG) such as carbon dioxide (CO₂), methane, nitrogen dioxide, and fluorinated gases. A reduction in pumping as a result of lower water use would save energy and have an overall beneficial impact relative to GHGs. A 40 percent reduction in TSWS water use and resulting reduction in pumping would result in nearly 715,000 fewer kWh being consumed each year which would also result in a reduction of carbon emissions.

A reduction in pumping would also have a beneficial economic impact, as costs for natural gas and maintenance of the pump system may be reduced.

Some soil disturbance of previously disturbed soils would occur when valve boxes are accessed, this would not impact soil productivity or lead to erosion. Due to the minor nature of these impacts, cumulative impacts related to noise, air quality, or soils are not anticipated. A beneficial cumulative impact to GHGs may occur as a result of a projected long-term reduction in carbon emissions.

There would be a beneficial impact to water resources if 884 acre feet of water are saved annually. This high quality spring water would be available for drinking water or other primary uses. The spring from which TSWS's water is obtained is a tributary to the Virgin River which ultimately drains into Lake Mead. Efficient use of TSWS system will minimize system loss and contribute to overall goals of water conservation within the Colorado River Basin.

4.0 Coordination and Consultation

4.1 Agencies Consulted

WCWCD

4.2 Scoping/Public Involvement

Reclamation conducted internal scoping for the EA and conducted a site visit to the Project area with WCWCD to discuss the Project and review site conditions.

The draft EA was reviewed by WCWCD. The FONSI and Final EA as well as a press release will be posted on Reclamation's web site. The press release will also be issued to local media to inform the public of the availability of the FONSI and Final EA.

5.0 List of Preparers

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