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GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



KEITH CREAGH  
DIRECTOR

February 8, 2016

TO: All Interested Citizens, Organizations, and Government Agencies

SUBJECT: **DRINKING WATER REVOLVING FUND (DWRF)  
CATEGORICAL EXCLUSION**

Project Owner: County of Genesee  
DWRF Project Number: 7405-01

The purpose of this notice is to advise interested parties of a proposed decision by the Michigan Department of Environmental Quality (DEQ) that the criteria for qualifying for a Categorical Exclusion are met and this project will not have a significant adverse impact on the environment or public health, and thus, qualifies for a Categorical Exclusion under Section 5408 of 1994 PA 451. Consequently, an Environmental Assessment or an Environmental Impact Statement is not required to implement the water supply project discussed in the attached document.

#### CRITERIA USED IN MAKING THE DETERMINATION

Part 54 of the Safe Drinking Water Assistance Act specifies six exclusionary criteria that must be met before the DEQ can conclude that a proposed project qualifies for a Categorical Exclusion. The criteria are as follows:

- (1) The project must not result in an increase in residuals and sludge generated by drinking water processes which would negatively impact the performance of the waterworks system or the disposal methods, or would threaten an aquifer recharge zone.*
- (2) The proposed facilities must not be designed to provide service to a population greater than 30 percent of the existing population, unless population projections required in section 5405(3)(e) support projected needs.*
- (3) The proposed public water supply project must not be expected to directly or indirectly affect cultural areas, fauna or flora habitats, endangered or threatened species, or environmentally important natural resource areas.*
- (4) The proposed public water supply project must not directly or indirectly involve the extension of transmission systems to new service areas.*
- (5) The proposed public water supply project has been shown to be the cost-effective alternative.*
- (6) The proposed public water supply project will not cause significant public controversy.*

#### PROJECT DETAIL

An attachment describing the proposed project is provided. This information is also available on our website at [www.michigan.gov/drinkingwaterrevolvingfund](http://www.michigan.gov/drinkingwaterrevolvingfund) under "Related Links." It presents information related to the proposed project, including the alternative selected, rationale for our decision to grant a Categorical Exclusion, and other pertinent information. Map(s) showing the location of the proposed project are also included.

The attachment provides information and allows appropriate federal cross-cutter agencies and state agencies an opportunity to submit information that may impact the DEQ decision prior to its effective date. Significant issues raised by these agencies could result in DEQ staff preparing a full Environmental Assessment.

**WHERE DO I SUBMIT COMMENTS?**

Any comments regarding this decision should be submitted to:

Sonya T. Butler, Chief  
Revolving Loan Section  
Office of Drinking Water and Municipal Assistance  
Michigan Department of Environmental Quality  
PO Box 30241  
Lansing, Michigan 48909-7741

**EFFECTIVE DATE OF THE DEQ DECISION ON THE CATEGORICAL EXCLUSION**

Absent comments that introduce significant information contrary to the DEQ's final determination, the Categorical Exclusion will become effective upon conclusion of the 30-day comment period.

Questions regarding this project can be directed to Mr. Jonathan Berman, project manager, Revolving Loan Section, Office of Drinking Water and Municipal Assistance, by phone at 517-284-6664 or by mail at DEQ, P.O. Box 30241, Lansing, Michigan, 48909-7741; or you may contact me at the aforementioned address. Your interest in this process is greatly appreciated.

Sincerely,



Sonya T. Butler, Chief  
Revolving Loan Section  
Office of Drinking Water and Municipal Assistance  
517-284-5433

Attachments

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
 County of Genesee  
 Drinking Water Revolving Fund (DWRF)  
 Categorical Exclusion  
 February 2016**

**PROJECT IDENTIFICATION**

**Applicant:** County of Genesee

**Authorized Representative:** Mr. Jeffrey Wright, Drain Commissioner

**Address:** County of Genesee Drain Commission  
 G-4610 Beecher Road, Flint, Michigan 48532

**DWRF Project No.:** 7405-01

**PROJECT-IN-BRIEF**

Genesee County is proposing a project to replace existing water meters and reading devices, along with the construction of an Automatic Meter Read and Advanced Meter Infrastructure (AMR/AMI) system with five AMI base stations (see Figure A). The total estimated project cost is \$5.4 million. Project financing will be accomplished through a 20-year loan from the state of Michigan’s DWRF at a 2.5-percent interest rate. There will be no cost increase to user charge rates as a result of this project since existing rates are sufficient to repay the DWRF loan debt. The county is eligible to receive \$750,000 in principal loan forgiveness since the water meter replacement work qualifies for green project reserve funding due to estimated improvements in both water and energy efficiency. The project construction is expected to begin by July 2016 and be complete by July 2018.

<b>Table I – Locations of Water Meter Replacement and AMI Base Station Facilities</b>		
Township (in Genesee County)	Water Meter Replacement	AMI Base Station Facility
Clayton Township	X	---
Davison Township	X	---
Flint Township	X	2 facilities
Flushing Township	X	---
Gaines Township	X	---
Montrose Township	X	1 facility
Mt. Morris Township	X	1 facility
Richfield Township	X	---
Thetford Township	X	---
Vienna Township	X	1 facility

Table I above lists the Genesee County townships proposed for water meter and reading device replacement, and the installation of five AMI base station facilities for the new radio-read metering system (see Figure A), which will be financed through a DWRF loan.

## **EXISTING SYSTEM**

Genesee County is located roughly 30 miles northwest of the outskirts of the greater Detroit metropolitan area. The drinking water system service area consists of approximately 145,000 county residents. The county drain commission is responsible for system operation and maintenance. Potable water from the Detroit Water and Sewerage Department (DWSD) is purchased by the county. The actual DWSD water supply source is Lake Huron, near the city of Port Huron. Potable water exiting DWSD's treatment plant is routed for Flint and then Genesee County, traveling through a single 72-inch-diameter water supply main courtesy of the Imlay Pump Station. The county is a member of the Karegnondi Water Authority (KWA), which is currently constructing a new source water supply system from Lake Huron to Genesee County. At this time, the county anticipates switching to KWA in 2017-2018. The county's water system has around 543 miles of transmission and distribution water main ranging in pipe diameter size from 6-inch to 72-inch with approximately 98-percent ductile iron, less than 2-percent cast-iron, and less than 1-percent concrete pipe. Genesee's other water system components include 6 major pump stations, 21 storage facilities, and 1 standpipe.

## **NEED FOR PROJECT**

The need for the project, replacing water meters and meter endpoints, along with upgrading the metering system to radio-read technology from the current manual read system, was cited in the 2011 Michigan Department of Environmental Quality (DEQ) Drinking Water Infrastructure Needs Survey and Assessment. The county currently reads approximately 18,500 meters throughout its water system, and it is estimated that 69 percent (or 12,800) have already exceeded their useful design lives. The replacement of these existing meters will also include one new meter endpoint. In addition, the county needs to replace an estimated 5,700 meter endpoints for those meters that have not reached their useful design lives in order for them to be capable of communicating with the new AMR/AMI system. The proposed five AMI base station facilities include antenna assemblies placed on top of existing water towers and cellular phone towers. The necessary associated computers, radios, and related equipment for the new AMR/AMI system will be located at AMI base station sites and at the county drain commission office.

Installing a radio-read metering system to replace the current manual read system will reduce vehicle costs and labor costs as well as improve both energy efficiency and water efficiency. The county estimates that from 2009 to 2014 water lost or unaccounted for in the system has averaged 307,520,985 gallons per year, amounting to approximately 6.71 percent of water produced per year. Based on the county's analysis, 2 to 3 percent of this total 6.71-percent figure is likely due to inaccurate meters. The expected reduction in water loss through the proposed water meter replacement is 149,600,000 gallons per year. This translates to an estimated annual electrical cost savings of \$14,400.

## **ALTERNATIVES**

The DWRP requires the consideration of two alternatives: 'No Action' and 'Regional Option'. 'No Action' is not feasible as problems associated with aging meters and the current inefficient manual read system will be compounded over time, and so they still will need to be addressed. The 'Regional Option' is technically not a separate alternative available for evaluation since the townships are served by the county's drinking water system and the metering of the customers is conducted by the county with county-owned equipment and personnel.

There are no viable alternatives for replacing the manually-read water meters. Radio-read water meters are becoming the technological standard and will replace the current metering system. Even so, the county did a cost-effectiveness/present worth analysis for water meter replacement comparing the new radio-read system alternative with an option to implement the necessary capital improvements to maintain the current manual-read system. The total present worth to keep the current manual-read system is \$14,347,564, while the total present worth for a new radio-read system is \$8,490,922 (Note that an estimated \$3-million portion of the total water meter replacement is being financed outside the DWRP loan program). Thus, the new radio-read system is the most cost-effective, and in turn, is the selected alternative.

**SELECTED ALTERNATIVE**

The \$5.4-million estimated project cost for replacing water meters and endpoints plus installing radio transmitters to collect meter readings remotely covers the cost of design, engineering, and construction. Table II below outlines in detail the cost estimate of the selected alternative to address the previously mentioned metering needs of Genesee County’s drinking water system.

<b>Table II – Breakdown of Total Project Cost Estimate</b>		
1	Commercial Meters/Radio Transceivers	\$1,441,050
2	Residential Meters/Radio Transceivers	\$3,150,450
3	AMR Computer Equipment	\$27,000
4	AMI Base Station Facilities (the five base stations)	\$290,000
5	<b>Construction Subtotal (sum of item Nos. 1-4)</b>	<b>\$4,908,500</b>
6	Total Non-Construction Costs (design, engineering, etc.)	\$491,500
7	<b>Total Capital Costs (sum of item Nos. 5-6)</b>	<b>\$5,400,000</b>

**IMPACTS**

The project has no anticipated impacts to the state regulated resources of floodplains, inland lakes and streams, or wetlands. The State Historic Preservation Office determined no historic properties will be impacted (File No. ER 09-255). Federally identified tribes for the county were contacted, but none provided comments that revealed any potential impacts to tribal historic, religious, or cultural resources. In terms of federally listed species identified by the U.S. Fish and Wildlife Service and state listed species identified by the Michigan State University, Michigan Natural Features Inventory, the project will have no effect, either directly or to their habitat, since the project is in an urban area where no suitable wildlife habitat is present and the construction work is limited to existing structures.

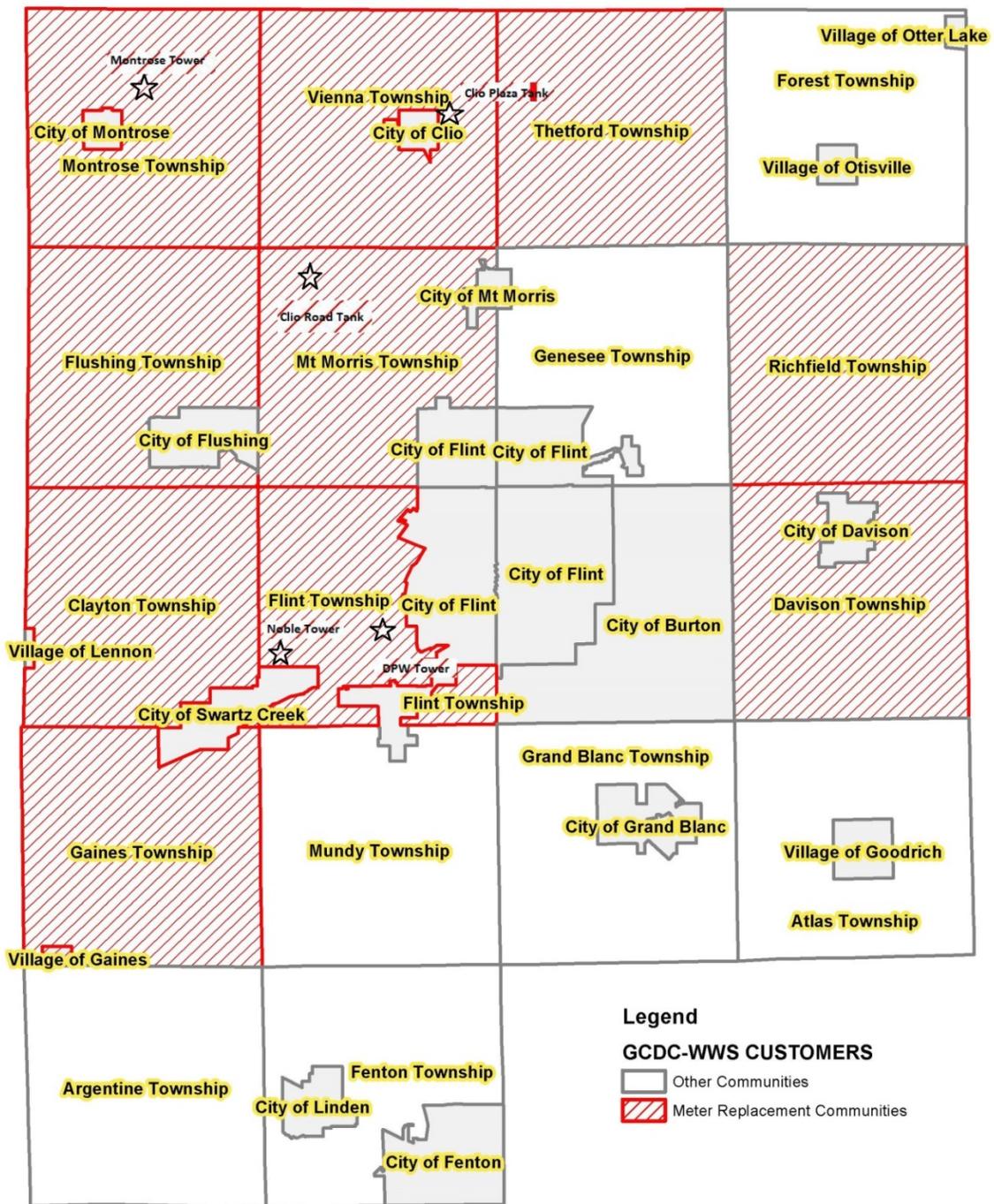
The short-term construction impacts will be minimal, including noise and fumes. Work will typically take place Monday through Saturday during daylight hours. The county will contact affected customers to schedule their meter replacement at a time that is convenient. In most cases, the county will need to enter the buildings to replace the meter and install endpoints. The water will be shut off for a brief period of time while technicians replace the meter. When a meter change-out is not required, the endpoint transmitter can be installed without entering the building. All meters being upgraded will be done so at no charge to the owner. If alterations were made to the plumbing or the meter, the owner may be charged for additional plumbing.

## **RATIONALE FOR CATEGORICAL EXCLUSION**

In accordance with Part 54, Safe Drinking Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Section 5408(5) specifies criteria that must be met to grant a Categorical Exclusion from further environmental review activity to a proposed DWRf assisted project. The DEQ staff has carefully reviewed the Genesee County water meters project plan and related documents, and has determined that no significant adverse impacts are anticipated as a result of project implementation. All work will occur within the existing rights-of way as well as on the commercial and residential properties slated for new water meter installation. Short-term construction impacts are expected to be minimal.

Genesee County held a public hearing discussing the project plan on April 17, 2014. The public hearing was advertised in *The Flint Journal* on March 11, 2014. Copies of the final DWRf project plan were made available for public inspection by March 17, 2014, at the Genesee County Drain Commissioner's Office. No comments were received during the 30-day public review period or at the public hearing.

# Genesee County Drinking Water System Meter Replacement and AMI Base Station Facilities Project Map



**FIGURE A**