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**January 22, 2018**  
**Water Re-Use Task Force**  
**Meridian, Idaho**

**Contact(s):**

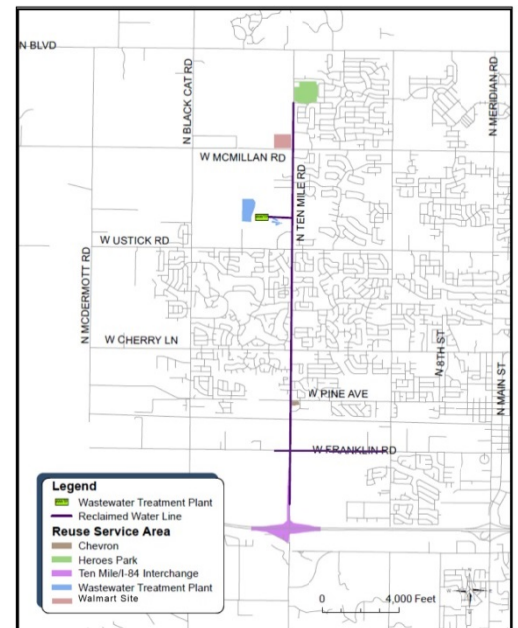
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**System Overview:**

The City of Meridian operates a Class A reclaimed water facility under IDEQ permit M-215-03.

The Class A system consists of a small sodium hypochlorite generation system, bulk sodium hypochlorite storage, and two, 0.5 MG tanks used for chlorine contact and recycled water storage. It is presently estimated that the Class A disinfection system has a maximum capacity of approximately 1 MGD. A pump station consisting of two 800 GPM pumps and one 65 GPM pump is used to discharge Class A water into the City's recycled water distribution system. The City's distribution system includes approximately 6 miles of mainline that runs north and south of the treatment facility on Ten Mile Road and east on Franklin road.

Class A recycled water use is allowed within the Reuse Project Area, a 17,027-acre area within the northwestern portion of the City's Area of Impact. The City currently provides reclaimed water to six locations (3 City owned locations and three private businesses).



**Current Uses:**

Location	Class A Uses Growing Season	Class A Uses Non Growing Season
Heroes Park (City Owned)	Landscape Irrigation, Decorative Fountain, Toilet Flushing	None
WWTP Property (City Owned)	Landscape Irrigation, Toilet Flushing	None
Ten Mile Interchange (City Owned)	Landscape Irrigation	None
Jacksons Gas Station	Landscape Irrigation, Car Wash	Car Wash
Walmart	Landscape Irrigation	None
Citadel Storage	Landscape Irrigation	None

**Meridian Reuse Statistics:**

Reuse Class	Year	Quantity Produced (Million Gallons)	Purpose (Type) of Use
A	2012	28.7	Landscaping, Toilet flushing, Car washing
A	2013	37.8	
A	2014	66.5	
A	2015	69.7	
A	2016	69.8	
A	2017	51.8	

**Method of Treatment:**

The City's municipal WWTP consists of preliminary screening and grit removal, primary clarification, activated sludge secondary treatment, tertiary filtration using ten micron cloth media filters, post aeration, and UV disinfection.

Following UV disinfection, effluent can be discharged to surface waters under the terms of the NPDES permit, or it can be routed to the City's Class A disinfection system for further chlorine treatment to meet CT requirements and discharge into the City's recycled water distribution system.

**Origination Date & System History:**

- Initial facilities constructed in 2008-2009
- Original permit (LA-000215-01) issued December 1<sup>st</sup>, 2008 that included Class A and Class D options
- The reclaimed water permit was modified to include City-wide distribution on April 19<sup>th</sup>, 2010 (LA-00215-02)
- The permit was modified in March, 2011 to include car washing as an allowable use
- Permit extension was issued on June 25<sup>th</sup>, 2014 that expired October 31, 2017
- New, ten year permit (M-215-03) was issued on November 21, 2017- Class A only, City-wide

**Key Regulatory Hurdles and/or Issues:**Seasonality & Consumptive Issues

- Ultra-low NPDES concentration based winter time limits for ammonia and phosphorus require significant process upgrades at the treatment facility, reducing the ROI of the Class A system and limiting expansion of the system.
- Lack of established consumptive, wintertime uses also limits the current expansion of the program.

Permit & Public Perception Issues

- Reclaimed water is required to be distributed in separate irrigation systems, adding significant program costs and reducing maximum use of supply.
- Permit driven signage requirements are more stringent than those required for other water supply sources creating potential public perception challenges.
- Historical challenges have existed surrounding rotational primary use and shared pressurized distribution systems utilizing Class A reclaimed water and irrigation waters.

**Acronyms:**

IDEQ – Idaho Department of Environmental Quality  
 MGD – Million gallons per day  
 WWTP – Wastewater treatment plant  
 CT – Contact time

MG – Million gallons  
 GPM – Gallons per minute  
 UV – Ultra violet  
 ROI – Return on investment