

City of Meridian Reclaimed Water Program

Treasure Valley CAMP October 20, 2010

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What is reclaimed water (recycled water)?

- Highly treated wastewater effluent put to beneficial use
- Regulated by Idaho DEQ
- Treatment requirements depend on class of reclaimed water
- Increased uses with increased treatment

Less Treat	ment	More Treatment		
Class E	Class D	Class C	Class B	Class A
Fewer Uses				More Uses

Current Rules – Class E

- Primary effluent quality
- Buffer distances required
- Agronomic application rate
- No grazing
- No animal feed within four weeks

Current Rules - Class D

- Treatment: Oxidation and disinfection
 - 230 total coliform per 100 mL (TC/100mL)
- Buffer distances required
- Agronomic application rate
- No grazing
- Irrigate fodder, seed, or processed food crops

Current Rules – Class C

- Treatment: Oxidation and disinfection
 - 5-Day Median: 23 TC/100 mL
 - Max: 230 TC/100 mL
 - Weekly sampling
- Agronomic application rate
- Buffer distances required
- Contact non-edible portion of food crops

Current Rules – Class B

- Treatment: oxidation, coagulation, clarification, filtration, and disinfection
 - 7-Day median: 2.2 TC/100 mL
 - Max: 23 TC/100mL
 - Daily sampling
 - Required chlorine residual after disinfection contact time
- Buffer distances required
- Distribution system operator certification
- Increased number of irrigation sites possible

Changes – Class B

- Turbidity requirements
 - Granular or cloth media
 - 24 hr mean 5 NTU
 - Max 10 NTU

Current Rules – Class A

- Treatment: oxidation, coagulation, clarification, filtration, and disinfection
 - 7-Day median: 2.2 TC/100 mL
 - Max: 23 TC/100mL
 - Daily sampling
 - Required chlorine residual
- No buffer distances for landscape irrigation
- No distribution system operator certification
- Treatment redundancy required

Changes – Class A

- Turbidity requirements
 - Granular or cloth media
 - 24 hr mean 5 NTU
 - Max 10 NTU
 - Membrane filtration
 - 24 hr mean 0.2 NTU
 - Max 0.5 NTU
- Redundancy per wastewater rules
- Comply with groundwater quality rule for recharge

Reclaimed Water Uses by Class

	Use Description		
Class A	 Irrigation – golf courses, schools, parks, residences Fire suppression Dust suppression Toilet flushing at industrial/commercial sites Industrial water source Ground water recharge 		
Class B	 Irrigation – non-residential Toilet flushing at industrial/commercial sites 		
Class C	 Irrigation – crops (no contact with edible food crops), cemeteries, roadside vegetation Toilet flushing at industrial/commercial sites 		
Class D	Irrigation – fodder, seed, or processed food crops		
Class E	Irrigation – forested sites		

Reclaimed water can be used as a resource for groundwater recharge

Irrigation Withdrawal Well

Surface Percolation Pond (Seepage Bed)

> Seasonal High Groundwater (Summer)

Seasonal Groundwater Mounding from Recharge Project (Winter)

Shallow Aquifer

Summary of Meridian's Reclaimed Water Program

- Heroes Park
- Treatment upgrades
- City-wide permit
- Backbone infrastructure
- Master planning effort







"Citywide" Permit

- 5-year Permit Cycle
- Allowable Uses
 - Irrigation
 - Dust Suppression
 - Toilet Flushing
 - Sewer Flushing
 - Fire Suppression

- Compliance Activities
 - Plans of Operation
 - Runoff Management



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DEPARTMENT OF ENVIRONMENTAL QUALITY 1445 North Orchard Make 1706-1399

First "Citywide" permit issued in Idaho (April 19, 2010)

Heroes Park

- Restroom facilities complete
- Interpretive monuments in place







Booster Pump Station and Reservoir



Timeline

Ten Mile corridor piping projects

2012

2011

Final class A "citywide" permit issued by IDEQ Booster station/reservoir design-build operational

2010

2009

Final "citywide" permit application submitted to IDEQ First use of reclaimed water at Heroes Park

2008

Final class A permit for Heroes Park issued by IDEQ

2007

Phase 1 cloth media filters installed Pressure/leak test of BRO pipeline Final Heroes Park permit application submitted to IDEQ

2006

Design of NaOCI booster and connection of BRO pipeline to Heroes Park pond

2005

City recognizes upcoming challenges with TP TMDL and water rights



TAL



Questions





