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

Classes of Reclaimed Water

- 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

Classes of Reclaimed Water

- 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

Classes of Reclaimed Water

- 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

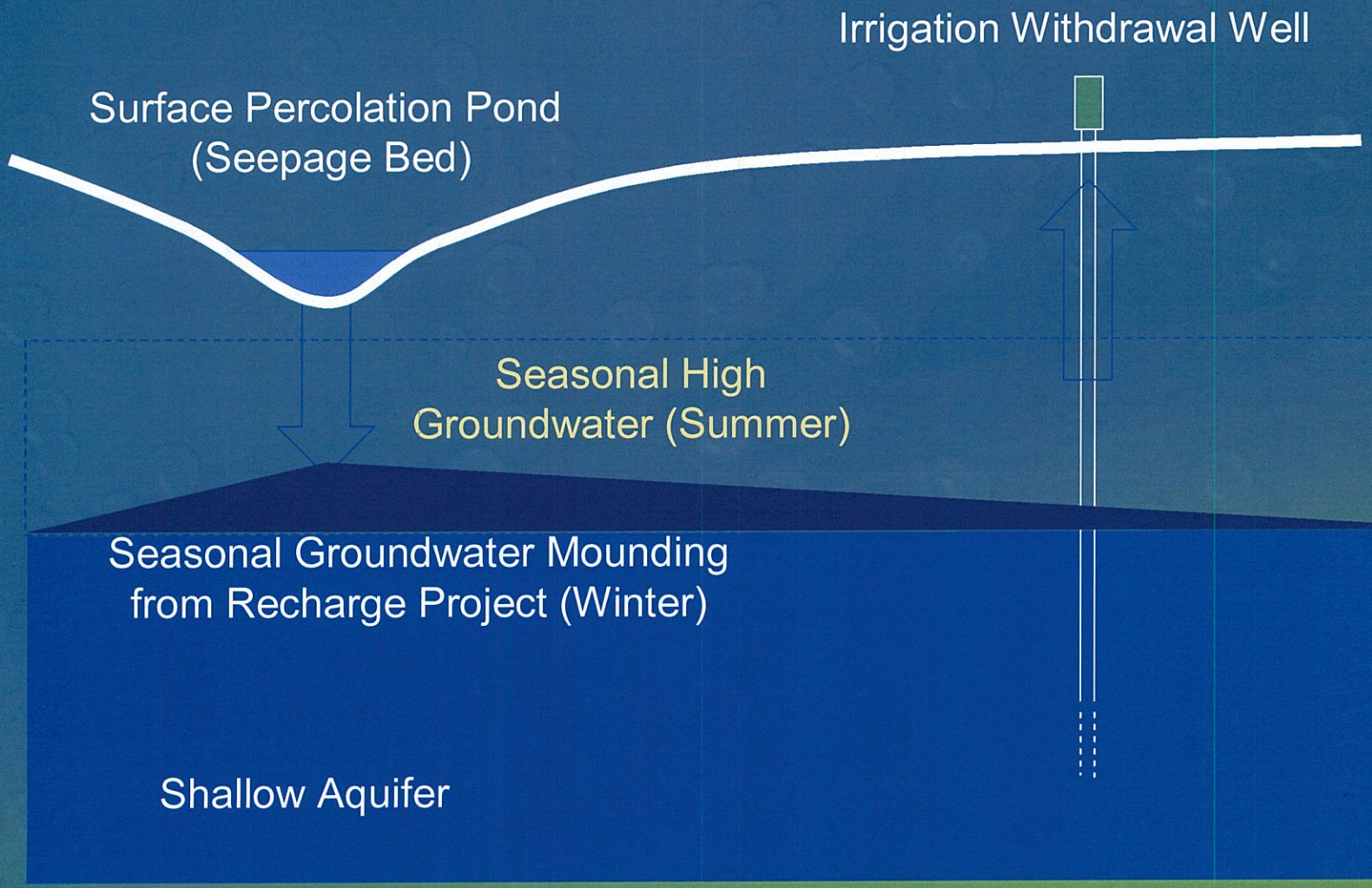
Classes of Reclaimed Water

- 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

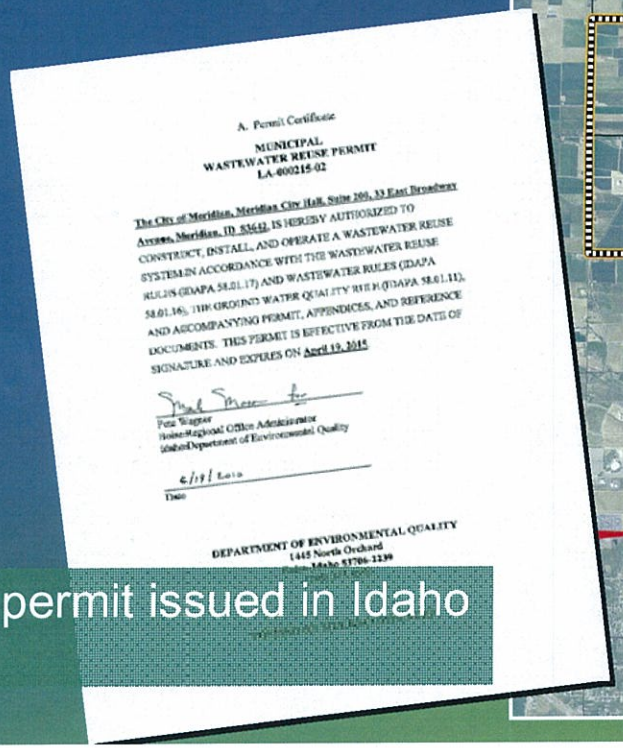


Summary of Meridian's Reclaimed Water Program

- 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



A. Permit Certificate

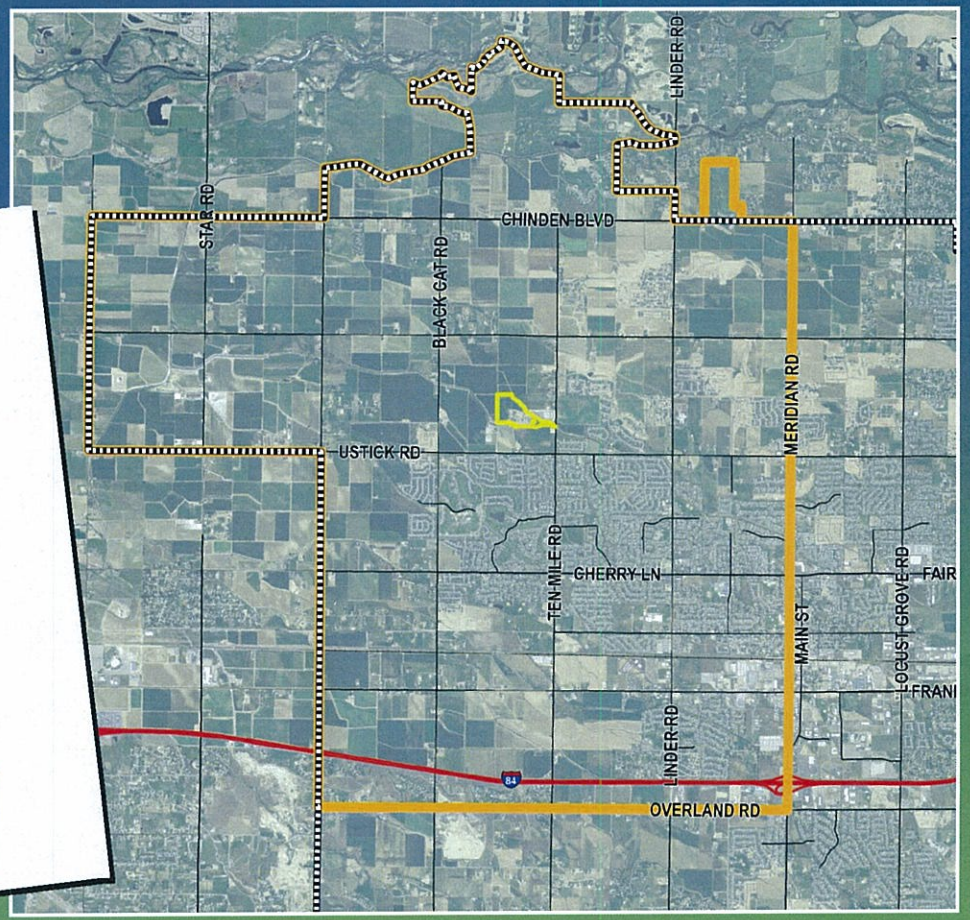
MUNICIPAL
WASTEWATER REUSE PERMIT
LA-000215-02

The City of Meridian, Meridian City Hall, Suite 100, 33 East Broadway Avenue, Meridian, ID 83642, IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE WASTEWATER RULES (IDAPA 58.01.17) AND WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT, APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON April 19, 2015

Pete Wagner
Boise Regional Office Administrator
Idaho Department of Environmental Quality

Date

DEPARTMENT OF ENVIRONMENTAL QUALITY
1445 North Orchard
Boise, Idaho 83706-2239



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

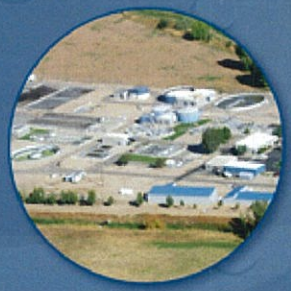
Final Heroes Park permit application submitted to IDEQ

2006

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

2005

City recognizes upcoming challenges with TP TMDL and water rights



Questions

RECLAIMED WATER
The Right Water for the Right Use

WE ARE USING WATER WISELY

MERIDIAN IDAHO

DO NOT DRINK
FROM THE IRRIGATION SYSTEM