

Southwest Groundwater Treatment Plant Proposed UPDES Permit

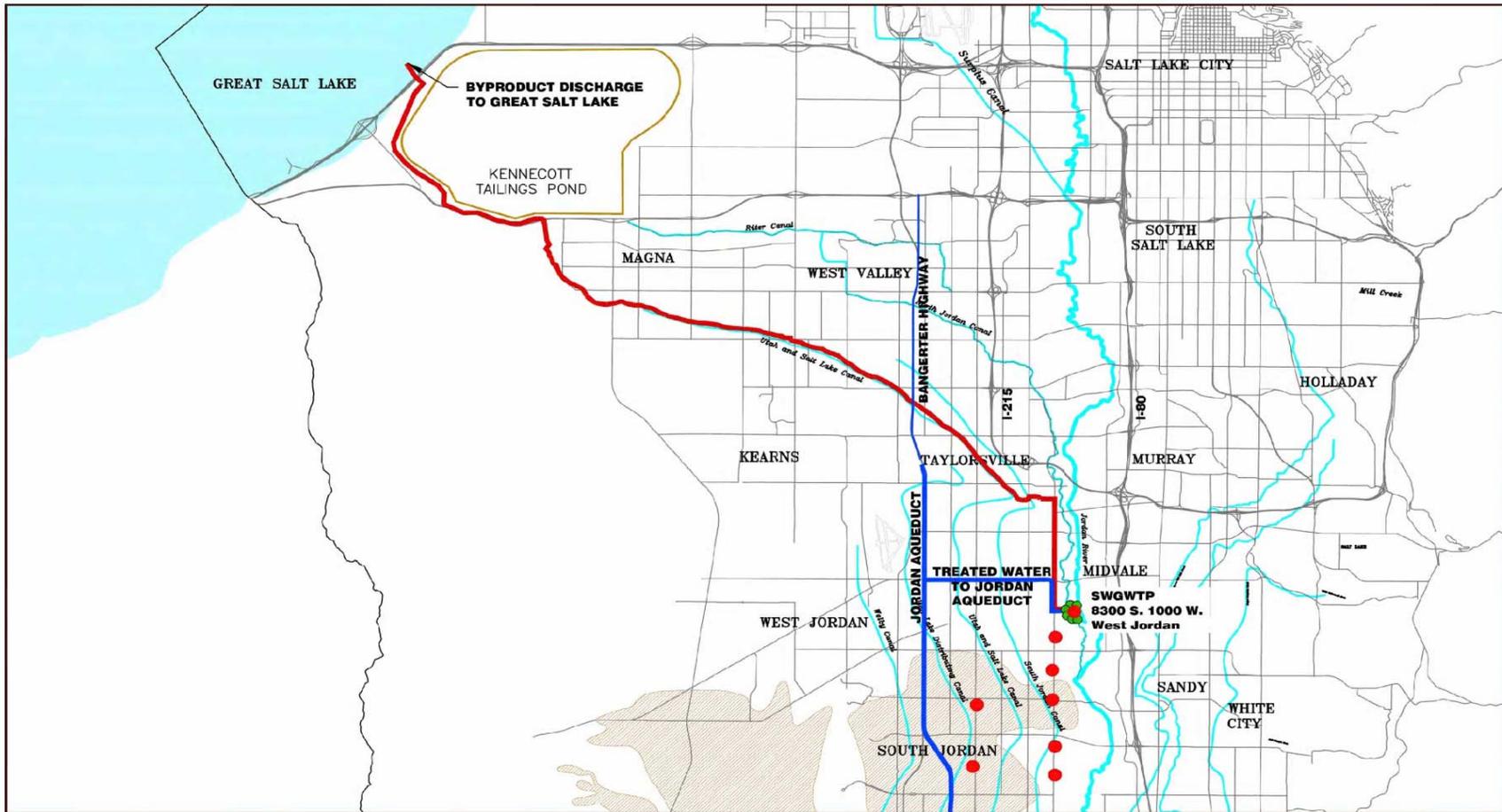
March 16, 2011

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UPDES Engineering Section
Utah Division of Water Quality



JVWCD UPDES Application

- Application submitted April 2009
 - revised February 2010
 - revised August 2010
- Proposes to discharge
 - 3 MGD of reverse osmosis byproduct to Gilbert Bay of the GSL
 - Shallow well feed water to the Jordan River



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.



**Jordan Valley Water
Conservancy District**
8115 SOUTH 1300 WEST
WEST JORDAN, UTAH 84088-0670
PHONE (801) 565-4300

DATE: 6/1/2010
 AT FULL SIZE
 (IF NOT 1" = SCALE ACCORDINGLY)
 DESIGN: TODD M. PETERSON
 DRAWING: TODD M. PETERSON
 REVIEW: DAVID R. MCLAREN
 APPROVAL:

SOUTHWEST GROUNDWATER TREATMENT PLANT

OVERALL PROJECT VIEW

SCALE: NTS
 DATE: 6/1/10
 PROJECT NUMBER: 1111
 DRAWING NUMBER: 1
 SHEET NUMBER: 1 OF 1

Draft UPDES Permit

- Effluent limits for Outfall 001 to Gilbert Bay and Outfall 002 to the Jordan River
- Monitoring of effluent and monthly reporting
- Annual monitoring of eggs, macroinvertebrates, sediment and water in 001 delta
- Monitoring of mercury in pipeline to evaluate if methylation is occurring
- Development of a Field Sampling Plan (SAP) for the delta
- Standard permit language for:
 - Noncompliance notification
 - Reopener provisions

Draft UPDES Permit: Outfall 001

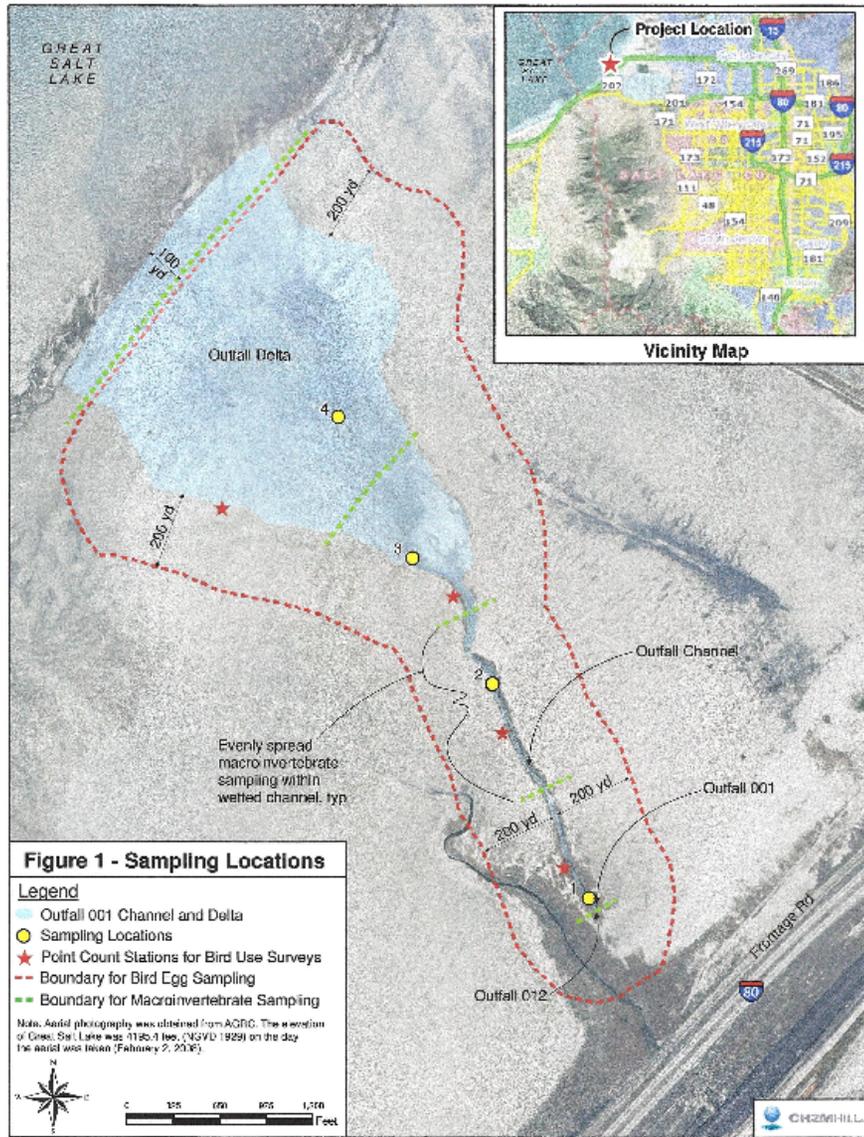
Parameter	Effluent Limitations Outfall 001, RO Concentrate to Gilbert Bay of GSL				
	Max Monthly Avg	Max Weekly Avg	Daily Min	Daily Max	Annual Max
Total Flow, MGD	3.0				
Selenium, total, mg/L				0.054	
Selenium, kg/year					224
Selenium					
TSS, mg/L	25	35		70	
Mercury, kg/yr					0.38
Oil & Grease, mg/L				10	
pH, Standard Units			6.5	9.0	

Draft UPDES Permit: 001 Self Monitoring Requirements

Self-Monitoring and Reporting Requirements, Outfall 001			
Parameter	Frequency	Sample Type	Units
Total Flow	Daily or Continuous	Measured	MGD
Total Mercury	Monthly	Composite or Grab	ng/L
Total Mercury	Monthly	Calculated	kg/yr
Total Selenium	2 x Weekly	Composite or Grab	mg/L
Total Selenium	Monthly	Calculated	kg/yr
TSS	2 x Weekly	Composite or Grab	mg/L
Selenium	Annually	Bird Eggs	mg/kg
Oil & Grease	Monthly if sheen is observed	Grab	mg/L
pH	Monthly	Grab	SU

Draft UPDES Permit: 001 Monitoring

- develop a comprehensive SAP by February 1, 2011
- annual bird surveys approximately every two weeks between May 1 and June 30 (four times per season) to document bird abundance, diversity, and use of the Outfall 001 mud flat habitat
- annually sample eight bird eggs in the mudflat area, if available, but not to exceed 20% available
- annually collect co-located macroinvertebrate, water and sediment samples one during each year eggs are sampled at 6 evenly spaced locations along the channel to waters edge
- Selenium and mercury concentrations for all samples collected



Implementation of the 12.5 mg/kg Se tissue based standard:

- 5.0 mg/kg Se and above: JWCD must revise the sampling and monitoring plan for Gilbert Bay of the GSL to address data gaps and loadings within 120 days of notice of this condition existing.
- 6.4 mg/kg Se and above: JWCD must re-evaluate the existing Level II ADR including alternatives analysis for reductions in Se loading and resubmit to the DWQ a Level II ADR for Outfall 001 within 180 days of notice of this condition existing.
- 9.8 mg/kg Se and above: JWCD must participate in preliminary TMDL studies to evaluate selenium loading sources and undertake engineering, if necessary, to meet future load restrictions identified in the TMDL.
- 12.5 mg/kg Se and above: The reopener provision for this permit will be exercised and JWCD will be subject to load restrictions as outlined in the TMDL.

Draft UPDES Permit: Outfall 002

Parameter	Effluent Limitations Outfall 002, Shallow Well Water to the Jordan River				
	Max Monthly Avg	Max Weekly Avg	Daily Min	Daily Max	Annual Max
TDS, mg/L				1,200	
Selenium, total, kg/yr					26.4
TSS, mg/L	25	35		70	
Oil & Grease, mg/L				10	
pH, Standard Units			6.5	9.0	
WET, Acute Biomonitoring, both species				Pass, LC ₅₀ EOP	

Draft UPDES Permit:

002 Self Monitoring Requirements

Self-Monitoring and Reporting Requirements, Outfall 002			
Parameter	Frequency	Sample Type	Units
Total Flow	Daily or Continuous	Measured	MGD
TDS	2 x Weekly	Composite or Grab	mg/L
Total Selenium	2 x Weekly	Composite or Grab	mg/L
Total Selenium <u>d</u> /	Annually	Calculated	kg/yr
TSS	2 x Weekly	Composite or Grab	mg/L
Mercury	Monthly	Composite or Grab	ng/L
Oil & Grease	2 x Weekly, if sheen is observed	Grab	mg/L
pH	2 x Weekly	Grab	SU
WET, Acute Biomonitoring	Quarterly, both species	Composite	Pass/Fail

Draft UPDES Permit Status

- **December 1, 2010: 60-day public comment period began**

- 45 comment letters received from other governmental agencies, advocacy groups and concerned citizens

- **January 4, 2011: Public Hearing**

- Oral comments received from 5 citizens, 30 attended

- **Feb 9, 2011: 30-day Public comment period on SAP began**

- 4 comments letters received from advocacy group and other governmental agencies

Once all comments have been evaluated, Executive Secretary will determine if the draft permit should be issued, revised or abandoned.