
Stakeholder Forum Meeting

Utah Department of Environmental Quality

March 2004

Jordan Valley Water Conservancy District

Southwest Groundwater Remediation and Treatment Project

Reverse Osmosis By-Product Disposal Alternatives

March 2004

Background

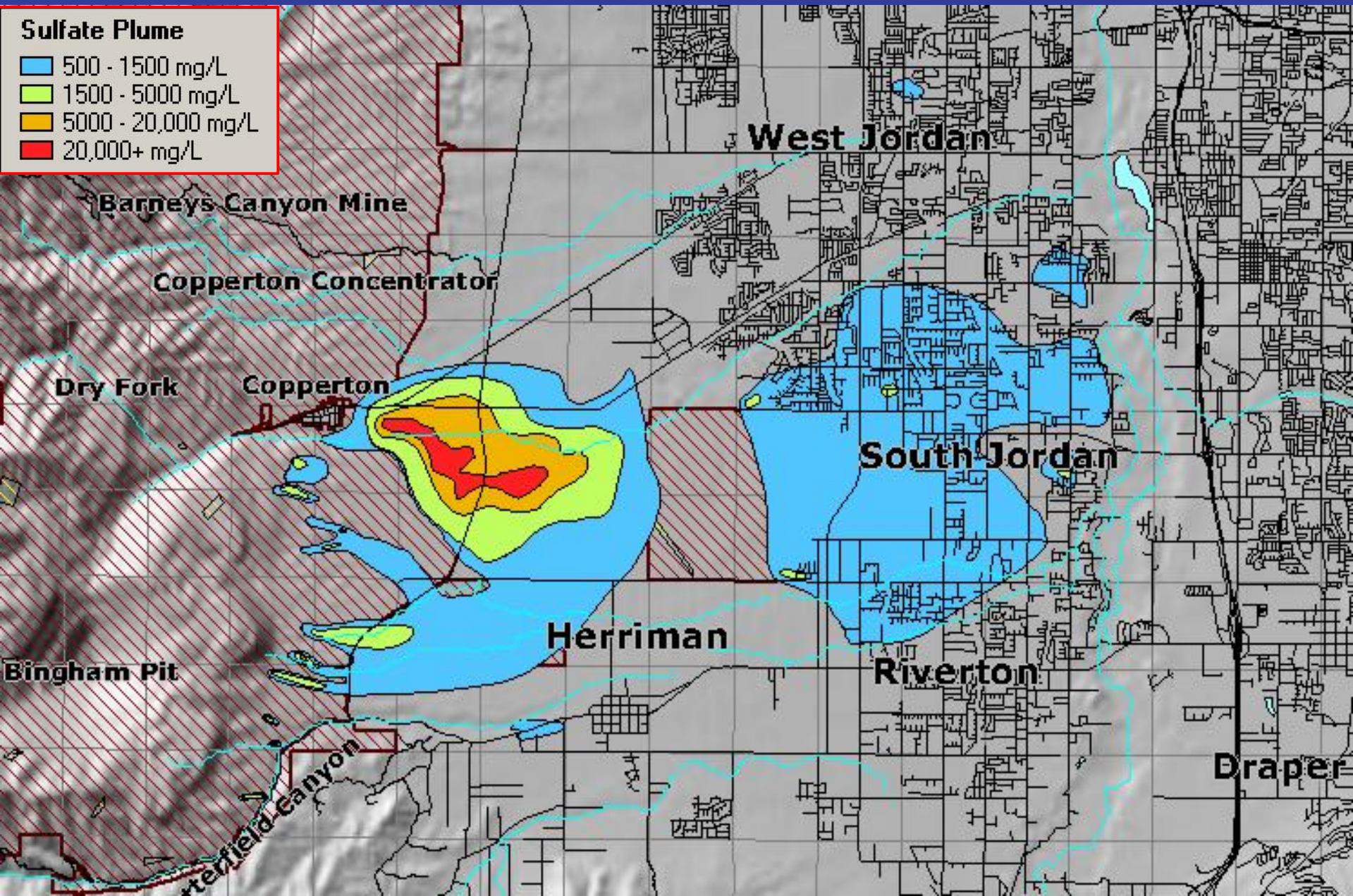
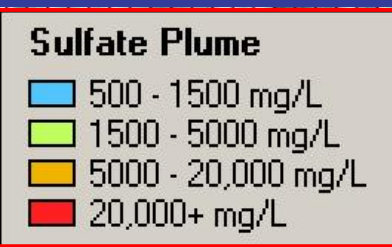
1890-1990 Groundwater contamination caused primarily by mining practices

1985 to
Present

Groundwater contamination investigations

- Zone A – high sulfate, low pH
- Zone B – moderately high sulfate

ZONE A AND ZONE B SULFATE PLUMES



Background

- Jordan Valley Water Conservancy District (JVWCD) is a public water supply agency
- JVWCD develops and delivers municipal water supplies to 19 member municipalities/agencies in Salt Lake and Utah Counties
- Groundwater contamination is in JVWCD's service area
- JVWCD, KUCC and UDEQ worked together to formulate the Consent Decree
- JVWCD has had an ongoing interest in the groundwater contamination

Background

- 1995 Consent Decree approved, and Trust Fund created, consisting of:
- \$28 million letter of credit for Affected Area from Kennecott
 - \$9 million cash trust fund for Lost Use from Kennecott
- 1995 Consent Decree authorizes the Trustee to use the funds for a 40 year project that will:
- 1) Contain the contaminated groundwater zones
 - 2) Remediate the aquifer
 - 3) Place water to beneficial municipal use

Background

- 1995 The Consent Decree provides for credits (against letter of credit) to Kennecott if Kennecott provides municipal quality water through treatment of contaminated water to a municipal and industrial water purveyor
- 1995 The cash trust fund can be used by the Trustee to restore, replace or provide the equivalent of the lost resource

Background

- 1999 JVWCD and KUCC submit a Joint Proposal for a project which would accomplish the objectives of the Consent Decree
- 1999 -2003 Substantial review of Joint Proposal by Technical Review Committee consisting of state agencies, federal agencies, local municipalities, and environmental interests

Background

2000-2003 Joint Proposal modified and resubmitted three times

2003 Trust fund escalates in value to \$61.3 million

Cost and value of Joint Proposal is \$103.9 million

Remaining funds, provided by KUCC and JVWCD

Kennecott/JVWCD Joint Proposal

Three Main Components:

1. Zone A Facilities

- Funded by Kennecott, with letter of credit reduction
- Process enhancements funded by JVWCD
- Constructed, owned and operated by Kennecott
- Produce 3500 ac-ft/yr of Municipal Quality Water
- From Kennecott water rights

2. Zone B Facilities

- Funded by Kennecott, with letter of credit reduction
- Process enhancements funded by JVWCD
- Constructed, owned and operated by JVWCD
- Produce 3500 ac-ft/yr of drinking water
- From JVWCD water rights

Kennecott/JVWCD Joint Proposal

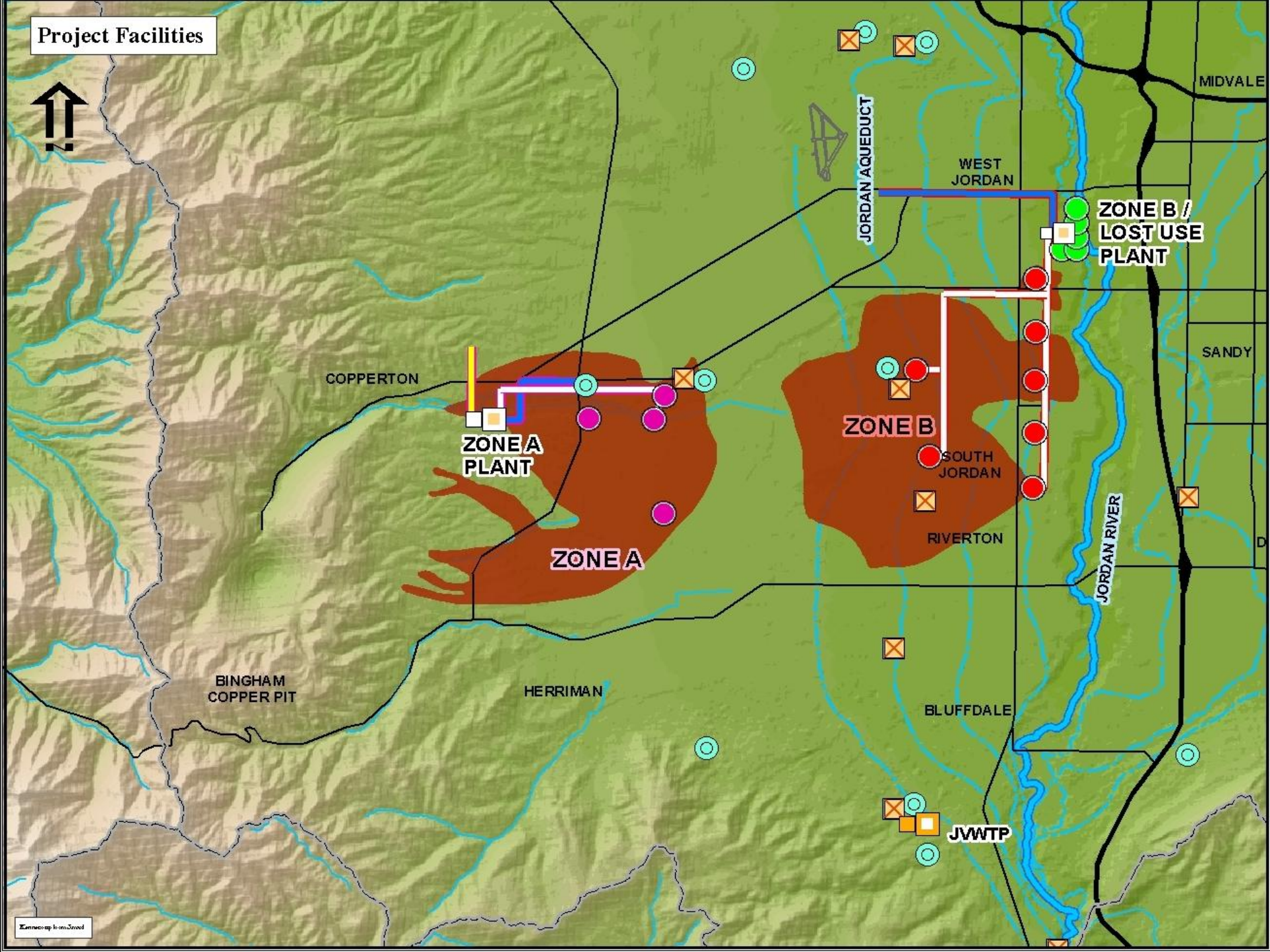
3. “Lost Use” component

- Funded by JVWCD and cash trust fund
- Constructed, owned and operated by JVWCD
- Produce 1235 to 2300 ac-ft/yr of drinking water
- From JVWCD water rights in shallow aquifer

Kennecott/JVWCD Joint Proposal

- All water delivered to the public in the Affected Area through JVWCD system
- JVWCD has a water distribution system to serve the public in the Affected Area
- JVWCD currently delivers water to the public in the Affected Area

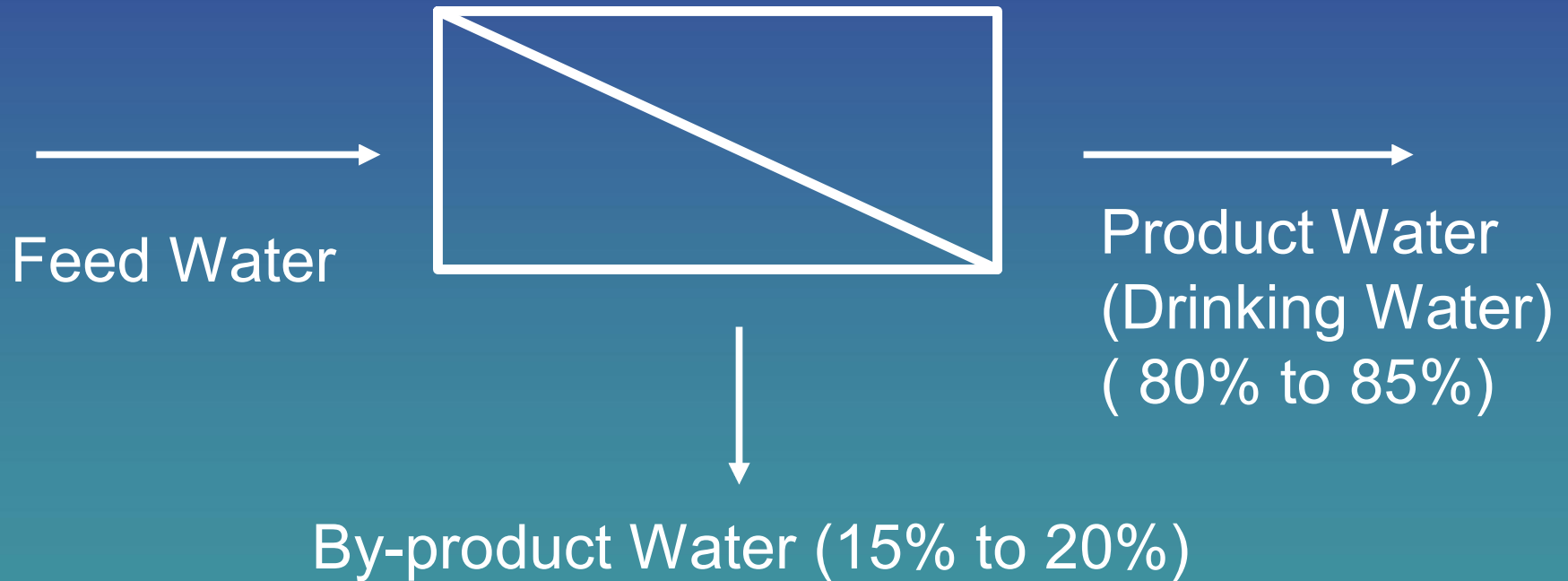
Project Facilities



Current Status

- Consent Decree and Trust Fund were established by federal court in 1995
- Public comments on the Joint Proposal have been received by the Trustee
- JWCD has withdrawn UPDES permit for Zone B and Lost Use by-product water discharge to Jordan River
- Stakeholders' input and expert analysis of Zone B and Lost Use by-product disposal alternatives are desired prior to proposing an alternate disposal plan to the Trustee

Zone B and Lost Use Reverse Osmosis (RO) By-Product



Zone B, Lost Use and Phase 2 RO By-product Water Characteristics

	Flow Rate (cfs)	Flow Rate (gpm)	TDS Concentration (mg/L)	Selenium Concentration (µg/L)
Zone B	1.24	557	8,300	25
Lost Use	0.51	229	8,200	47
Phase 2	1.95	876	8,000	47
Totals	3.70	1,662		
Weighted Average			8,240	38-47

Zone B/Lost Use Facilities

Other Discharges

- RO by-product water will be discharged nearly continuously (the subject of this Stakeholders Forum meeting)
- Other startup and maintenance discharges of short duration will occur
- The quality and characteristics of these other discharges are different from RO by-product water
- Some of these other discharges will occur at the plant site to the Jordan River

Description of Need

- Joint Proposal Project:
Select an alternative for disposal of Zone B and Lost Use RO by-product water
- JWCD Future (Phase 2) Project:
Select an alternative for disposal of RO by-product from a shallow groundwater treatment project.

Factors for Selection of Disposal Alternative

- To be developed from stakeholder process
- Needed for evaluation of disposal alternatives
- JWWCD will consider factors in evaluation of alternatives

Anticipated Schedule

March 17	Stakeholder meeting #1: discuss need, selection factors, and identify other disposal alternatives.
March 31	Stakeholder meeting #2: receive comments on selection factors, and alternatives
April 1 - 14	Alternative evaluations by JWCD and consultants/ experts commissioned by JWCD
April 14	Stakeholder meeting #3: Presentation and discussion of alternatives analyses and recommended alternative
April 28	JWCD discusses recommended alternative with its Board of Trustees
April 29	JWCD proposes disposal alternative to Trustee