

## JORDAN RIVER WATERSHED COUNCIL

Core Council

June 8, 2006 Meeting

**Attendees:** Barry Tripp; Utah State Lands  
Karen Nichols; Stantec  
Nicholas von Stackelbey; Stantec  
Don Hayes; University of Utah Civil and Environmental Engineering  
Daniel Laraway; West Jordan  
Terry Way; Salt Lake County  
Jacqueline Murphy; Salt Lake County Mayor's Office  
Thomas Holstrom; Central Valley Water Reclamation Facility  
Ron Roberts; Central Valley Water Reclamation Facility  
Neal Artz; Cirrus Ecological Solution  
Eric K. Duffin; Cirrus Ecological Solution  
Charles R. Condrat; Wasatch-Cache National Forest  
Molly Hanson; Wasatch-Cache National Forest  
Rhonda Thiele; Salt Lake Valley Health Department  
Phil Markham; Murray City  
Florence Reynolds; Salt Lake City Public Utilities  
Jim Harris; Division of Water Quality  
Merritt Frey; Utah Rivers Council  
Carl Adams; Utah Division of Water Quality  
Margaret Brady; East Liberty Park Community Organization  
Steve Burgon; Salt Lake County Stormwater Coalition  
Natalie Rees; Salt Lake County Public Works Engineering

### Water Quality Review

1. Eric K. Duffin of Cirrus Ecological Solutions gave a presentation of the water quality review for the Jordan River TMDL (see attached PDF).
2. The presentation compared irrigation and non-irrigation data. For the purposes of this study, irrigation season was defined from May 1<sup>st</sup> - October 30<sup>th</sup>. The non-irrigation season was defined from November 1<sup>st</sup> - April 30<sup>th</sup>.
3. Some of the highlighted findings from the Water Quality Review include:
  - a. **Phosphorus (TP)**—The major contributors of total phosphorus to the Jordan appear to be stormwater and the two (2) wastewater treatment facilities that discharge into the River.
  - b. **Total Dissolved Solids (TDS)**—Millcreek, Big Cottonwood, and Little Cottonwood creeks appear to contribute significant amounts of TDS. There was no TDS data for South Valley Water Reclamation Facility (SVWRF).
  - c. **Biological Oxygen Demand (BOD)**—Major contributors of BOD include SW 2-3, SW 4, SW 5 - 8, and the two (2) wastewater treatment facilities along the River.

- d. **Total Suspended Solids (TSS)**—The major contributors of TSS in the irrigation season are Big Cottonwood Creek and Little Cottonwood Creek. In the non-irrigation season, the major contributors include: SW 2 - 3, Central Valley Water Reclamation Facility, Mill Creek, Big Cottonwood Creek, Little Cottonwood Creek, SW 4, and SW 5 - 8.
4. The question was asked whether specific concentration data is being correlated with specific flow data. Currently, the model is based on average load multiplied by average concentration. Specific concentration/flow data is not currently being correlated.
5. The comment was made that hydrology of the River is a moving target with imports expected to exceed 90,000 acre-feet in the next few decades.

### **Flow Model**

1. Karen Nichols and Nicholas von Stackelberg of Stantec gave a powerpoint presentation concerning the water quality and flow data for the Jordan River.
2. Two (2) models were created for the Jordan River TMDL. One examines hydrology (Qual2K) while the other examines water quality and flow (HEC-RAS).
3. For the purposes of these models, the Jordan has been divided into ten (10) hydrologic reaches based on physical characteristics, not political boundaries. Notably, this differs from the Division of Water Quality's eight (8) TMDL segments. Two segments were added for a slope differential.
4. The Environmental Protection Agency (EPA) developed HEC-RAS model. HEC-RAS is used for channel characterization with the Qual2K model.
5. HEC-RAS divided the river into 163, 0.5 km segments.
6. In this model, eleven (11) tributaries, three (3) wastewater treatment facilities, ten (10) canals, and forty-seven (47) stormwater outflows are being used.
7. The model was calibrated using a two (2) week period in 2004. Notably, the model gives single point data.
8. A dissolved oxygen (DO) super saturation condition was noted at 7800 South.
9. The model was validated using data collected between January 1<sup>st</sup> and 14<sup>th</sup> of 2004.

### **Questions/Concerns**

1. It was emphasized that the model is using snapshot data to predict long-term trends. This may be further complicated by the fact that the Jordan River has a travel time of two (2) to three (3) days.

2. It was mentioned that set backs need to be addressed in the Jordan River TMDL since they have a direct impact on water quality.
3. Nutrient uptake is based on literature values, not data specific to the Jordan.
4. Some data gaps have been identified. These include: Dissolved Phosphorus, Phytoplankton, Algae, Soil Oxygen Demand (SOD), Chlorophyll a, Periphyton, Kjeldahl N, Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD).

### **Comments**

All comments in regard to the Jordan River TMDL should be directed to James Harris in the TMDL section of the Division of Water Quality. His contact information is as follows, [jamesharris@utah.gov](mailto:jamesharris@utah.gov) and (801) 538-6825.

### **Next Meeting**

The Core Council determined that they will continue to meet on a quarterly basis; however, if issues arise and there is a need for more frequent meetings, these will be accommodated. Barring any urgent concerns, the next meeting will be held September 14, 2006. Details will be distributed closer to this meeting date.