

**FOCUSING ON WHAT'S  
IMPORTANT:  
PRIORITIZING AND  
IMPLEMENTING TMDLS**



Carl Adams, Utah Division of Water Quality

# 303(d) List

Assessment of Water Quality

Report on Condition

TMDL To-Do List

Restoration Goals

Pollutant Budget

## CHAPTER 5 303(D) LIST OF RIVERS AND STREAMS



2014

Integrated Report

UTAH DIVISION OF WATER QUALITY

# Clean Water Act

Designate Beneficial Uses of Water Bodies

Water Quality Standards (WQS) based on uses

Monitoring and Assessment

Meeting WQS?

No

Yes

Impaired Water  
[CWA 303(d) List]

Develop Strategies & Controls:  
Total Maximum Daily Loads

Implement Strategies

Point Source  
Permitting (UPDES)

Non-point Source  
Section 319/NPS Funds

Remove from  
303(d) list

Apply  
Antidegradation

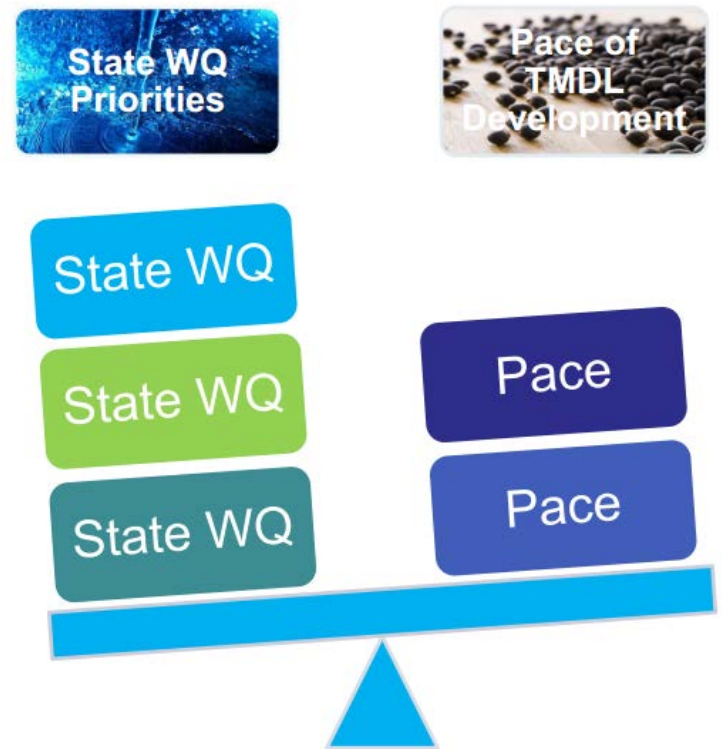
UPDES Permitting  
(402)

# 303(d) Past and Future

## Past



## Future





# Stakeholder Survey

## Which group(s) do you associate yourself with?

Answered: 417 Skipped: 10

Answer Choices	Responses
Advocacy group	11.27% 47
Concerned Citizen	58.75% 245
Education	21.58% 90
Federal agency	10.55% 44
Municipality or other local government	22.78% 95
Private sector business interest	11.51% 48
Research	17.75% 74
State agency	24.22% 101
<b>Total Respondents: 417</b>	



# Survey Questions

Please rank the following uses in order of importance for protection and improvement.

	<b>Most Important</b>	<b>Important</b>	<b>Less Important</b>	<b>Least Important</b>	<b>Total</b>	<b>Weighted Average</b>
Agricultural uses (irrigation and livestock watering)	<b>6.10%</b> 23	<b>33.95%</b> 128	<b>27.32%</b> 103	<b>32.63%</b> 123	377	2.14
Home uses / Drinking water	<b>71.47%</b> 278	<b>20.57%</b> 80	<b>6.17%</b> 24	<b>1.80%</b> 7	389	3.62
Wildlife / fisheries uses	<b>27.14%</b> 108	<b>31.91%</b> 127	<b>32.91%</b> 131	<b>8.04%</b> 32	398	2.78
Recreational uses (swimming, boating, wading)	<b>2.42%</b> 10	<b>18.60%</b> 77	<b>31.88%</b> 132	<b>47.10%</b> 195	414	1.76

# Survey Questions

## How important are the following to you?

	<b>Very Important</b>	<b>Important</b>	<b>Less Important</b>	<b>Not Important</b>	<b>No opinion</b>	<b>Total</b>	<b>Weighted Average</b>
Blue Ribbon Fisheries (see <a href="http://wildlife.utah.gov/hotspots/blueribbon.php">http://wildlife.utah.gov/hotspots/blueribbon.php</a> )	<b>27.86%</b> 117	<b>37.86%</b> 159	<b>22.62%</b> 95	<b>7.14%</b> 30	<b>4.52%</b> 19	420	2.91
Use of the water for industry and/or agriculture	<b>26.02%</b> 108	<b>41.93%</b> 174	<b>24.34%</b> 101	<b>6.99%</b> 29	<b>0.72%</b> 3	415	2.88
Recreational Areas (State Parks, National Parks, Trails, etc.)	<b>52.26%</b> 220	<b>39.43%</b> 166	<b>6.89%</b> 29	<b>1.43%</b> 6	<b>0.00%</b> 0	421	3.43
Sources of Drinking Water	<b>88.03%</b> 375	<b>9.86%</b> 42	<b>1.88%</b> 8	<b>0.00%</b> 0	<b>0.23%</b> 1	426	3.86
Scenic quality	<b>41.98%</b> 178	<b>43.63%</b> 185	<b>12.74%</b> 54	<b>1.42%</b> 6	<b>0.24%</b> 1	424	3.26
Important Bird Areas (defined by National Audobon Society)	<b>37.12%</b> 157	<b>35.46%</b> 150	<b>21.51%</b> 91	<b>5.67%</b> 24	<b>0.24%</b> 1	423	3.04
Unique ecosystem (e.g. Great Salt Lake)	<b>43.74%</b> 185	<b>35.93%</b> 152	<b>16.31%</b> 69	<b>3.78%</b> 16	<b>0.24%</b> 1	423	3.20

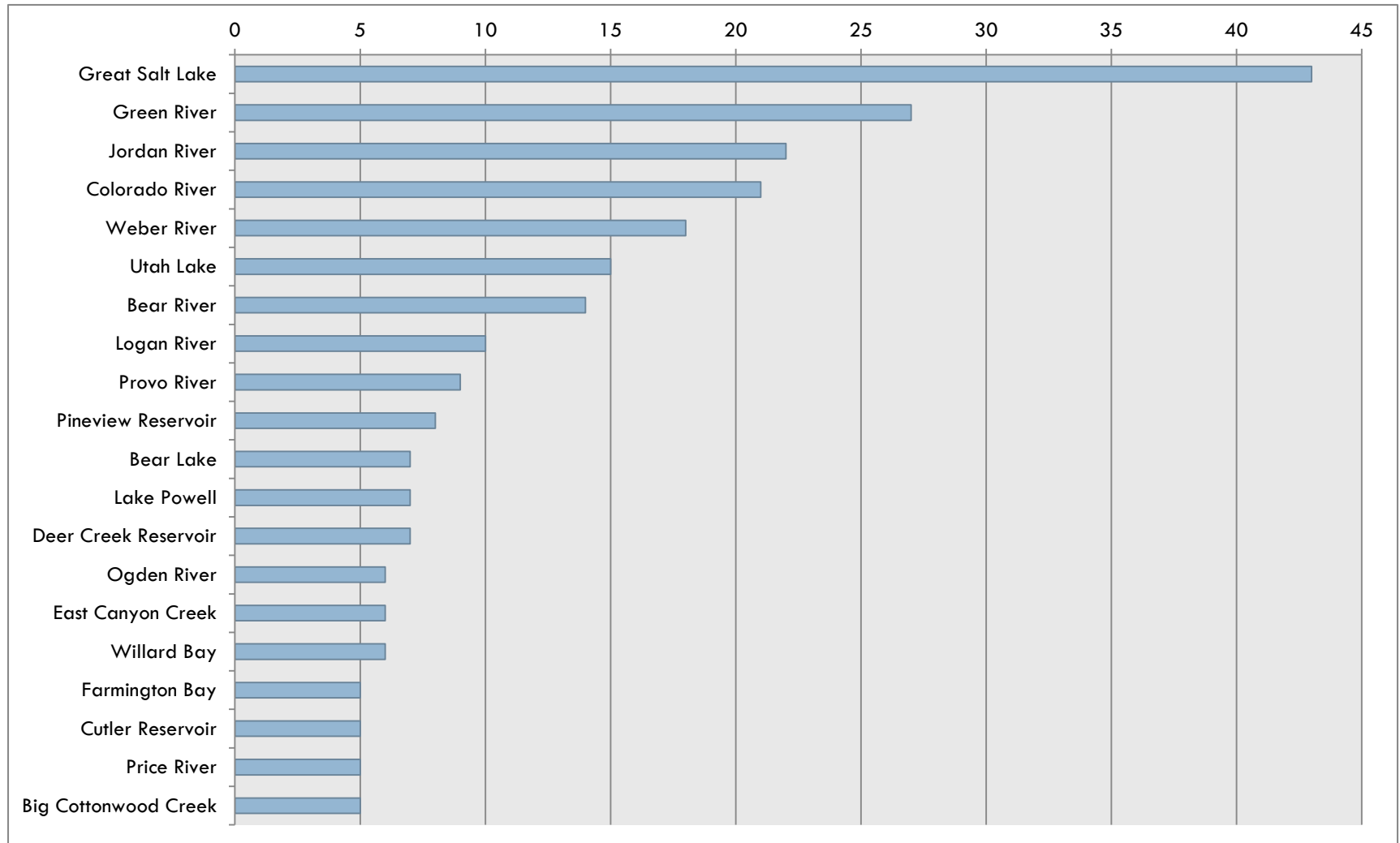
# Survey Questions

**How concerned are you about the following types of water quality issues?**

	<b>Very concerned</b>	<b>Somewhat concerned</b>	<b>Not concerned</b>	<b>Don't know</b>	<b>Total</b>	<b>Weighted Average</b>
Pond scum / green slime (Excessive Algae Growth)	<b>31.60%</b> 134	<b>52.83%</b> 224	<b>12.74%</b> 54	<b>2.83%</b> 12	424	2.19
Bacteria / Pathogens (E. coli, Giardia)	<b>58.69%</b> 250	<b>34.98%</b> 149	<b>5.40%</b> 23	<b>0.94%</b> 4	426	2.54
Nutrients / low dissolved oxygen (affects fish and other organisms)	<b>55.16%</b> 235	<b>39.91%</b> 170	<b>3.52%</b> 15	<b>1.41%</b> 6	426	2.52
Toxics and heavy metals (e.g. Mercury, Selenium)	<b>69.25%</b> 295	<b>27.23%</b> 116	<b>3.05%</b> 13	<b>0.47%</b> 2	426	2.67
Salt (affects growth of irrigated plants such as grass, alfalfa, vegetables, etc.)	<b>35.78%</b> 151	<b>52.37%</b> 221	<b>10.90%</b> 46	<b>0.95%</b> 4	422	2.25
Silt / muck (sediment / stream bank erosion)	<b>38.97%</b> 166	<b>49.30%</b> 210	<b>10.33%</b> 44	<b>1.41%</b> 6	426	2.29
Temperature of a stream or lake (affects aquatic life)	<b>46.59%</b> 198	<b>43.29%</b> 184	<b>8.71%</b> 37	<b>1.41%</b> 6	425	2.38
Invasive species (e.g. quagga mussel)	<b>65.80%</b> 279	<b>29.48%</b> 125	<b>4.01%</b> 17	<b>0.71%</b> 3	424	2.62
Litter, debris, trash	<b>58.73%</b> 249	<b>33.96%</b> 144	<b>7.08%</b> 30	<b>0.24%</b> 1	424	2.52



# Survey Questions





# Priority Factors

Priority	Impaired Use	Pollutant	Waterbody Specific Characteristics	Pollutant Sources	Recovery Potential
High	Drinking Water Recreation Ecological Health	Toxics Metals Bacteria DO Nutrients	Drinking Water Source Fed/State Parks High Rec. Use Ongoing study Blue Ribbon Fishery Important Bird Areas	Combination of Point and Nonpoint sources	High
Low	-	Temperature pH Sediment	-	NPS only, Natural, Habitat and Hydro mod	Medium-Low
Alternative	Agriculture	TDS	Source addressed by other program (e.g. Salinity Control Forum)	NPS only, Natural, Habitat and Hydro mod	High-Low

# Detailed High Priority Criteria

<b>Impaired Use</b>	<b>Pollutant Cause</b>	<b>Anti-deg Category</b>	<b>Audubon IBA</b>	<b>Drinking Water Intake</b>	<b>Blue Ribbon Fishery</b>	<b>Parks and Important Recreational Areas</b>	<b>Recovery Potential</b>
Agriculture (4)	TDS						>50 and outside Colorado Basin
Fishery (3A and 3B)	Not Temp, benthic, or pH				Yes		
Recreation (2A and 2B)	E. coli					Yes	
Drinking Water (1C)	Not pH			Yes			
Waterfowl (3D)	Not pH or Temp		Yes				
Any pre-2012	Not pH, Temp, benthic, unknown, or habitat alteration	Category 1					
Any	Nutrients			Yes		Yes; Lakes	

# 303(d) Priorities

WATERBODY NAME	IMPAIRMENT	RATIONALE FOR PRIORITY DESIGNATION
<b>Ninemile Creek</b>	Temperature	TMDL in Progress
<b>Huntington Creek-1</b>	Selenium	TMDL in Progress
<b>Red Creek Reservoir</b>	Phosphorus	TMDL in Progress
<b>Jordan River-1, 2, 3, 4* and 5*</b>	E. coli, Diss. Oxygen	TMDL in Progress; High recreational use; Important Fishery
<b>Utah Lake</b>	Phosphorus	History of Harmful Algal Blooms; High recreational use; Important Fishery; Tributary to Jordan River
<b>Mill Creek-1 and 3 (SLCity)</b>	E. coli	Trib to Jordan River E. coli impairment; High recreational use
<b>Big Cottonwood Creek-1</b>	E. coli	Trib to Jordan River E. coli impairment; High recreational use
<b>Little Cottonwood Creek-1</b>	E. coli, TDS	Trib to Jordan River E. coli impairment; High recreational use
<b>Emigration Creek Lower</b>	E. coli	Trib to Jordan River E. coli impairment; High recreational use
<b>Parleys Canyon Creek-1</b>	E. coli	Trib to Jordan River E. coli impairment; High recreational use
<b>Butterfield Creek</b>	E. coli	Trib to Jordan River E. coli impairment
<b>Rose Creek</b>	E. coli	Trib to Jordan River E. coli impairment
<b>Fremont River-3</b>	E. coli	Drinking water source; High recreational use (Capitol Reef NP)
<b>North Fork Virgin River-1 and 2</b>	E. coli	Drinking water source; High recreational use (Zion NP)
<b>Jordan River-8</b>	Arsenic	Drinking water source
<b>Silver Creek</b>	TDS	WLA determination
<b>Provo River-3</b>	Diss. Oxygen	Drinking water source; High recreational use
<b>Provo River-4</b>	E. coli	Drinking water source; High recreational use
<b>Provo River-6</b>	Aluminum, Zinc	Drinking water source; High recreational use
<b>Snake Creek-1</b>	Arsenic	Drinking water source
<b>City Creek-2</b>	Cadmium	High Quality Category 1 Water
<b>Starvation Reservoir</b>	Diss. Oxygen	History of Harmful Algal Blooms; Drinking Water source; Important Fishery
<b>Lower Bowns Reservoir</b>	Diss. Oxygen, Phosphorus	High Quality Category 1 Water



# Timeline

