State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF WATER QUALITY
Walter L. Baker, P.E.
Director

Water Quality Board
Myron E. Bateman, *Chair*
Shane E. Pace, *Vice Chair*
Clyde L. Bunker
Gregg A. Galecki
Jennifer M. Grant
Hugo E. Rodier
Amanda Smith
Walter L. Baker
Executive Secretary

Utah Water Quality Board Meeting
DEQ Building Board Room 1015
195 North 1950 West
Salt Lake City, Utah 84116

Work Meeting Begins @8:00 a.m.

DWQ 101A Engineering & Financial Assistance ..... John Mackey

Board Meeting Begins @ 9:00 a.m.
AGENDA

A. **Water Quality Board Meeting – Roll Call**

B. (Tab 1) **Minutes:**
Approval of Minutes for April 29, 2015 WQ Board Meeting..... .....Shane Pace

C. **Recognition Award to Leland Myers for his service on the Water Quality Board**
.....Shane Pace

D. **Executive Secretary's Report** .....Walt Baker

E. (Tab 2) **Funding Requests:**
1. Financial Report ..... Emily Cantón

2. Central Utah Public Heath Dept.: *Monroe Ground Water Quality Study*
..... Keith Eagan

3. Willard City Loan Refinancing ..... Lisa Nelson

4. Helper Loan Request ..... Lisa Nelson

F. (Tab 3) **Rulemaking**:
1. R317-2 Standards of Quality for Waters of the State: *Request for Board Members to serve as public hearing officers* ..... Chris Bittner

G. (Tab 4) **Other Business:**
1. Logan City Update ..... Lisa Nelson

H. (Tab 5) **News Articles:**

Next Meeting June 24, 2015
DEQ Building Board Room 1015
195 North 1950 West
Salt Lake City, Utah 84116

Revised 05/19/15

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Dana Powers, Office of Human Resources, at (801) 536-4412, TDD (801) 536-4414, at least five working days prior to the scheduled meeting

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Amanda Smith
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Executive Secretary

MINUTES
UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
UTAH WATER QUALITY BOARD

Dixie Center
1835 S Convention Center Dr.
St. George UT 84790
April 29, 2015

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Clyde Bunker	Myron Bateman
Gregg Galecki	Merritt Frey
Clyde Bunker	Hugo Rodier

Excused: Jennifer Grant, Leland Myers & Amanda Smith

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

Walt Baker, Leah Ann Lamb, Erica Gaddis, Jenny Potter, Nicole Froula, Judy Etherington, John Mackey, Lisa Nelson, Emily Cantón, Mike Herkimer, Kari Lundeen, Matt Garn, Kim Shelley, Jennifer Robinson, Monique Rodriguez & Christopher Bittner

OTHERS PRESENT

Name	Organization Representing
Michael Foerster	WEAU
Philip Barlow	Hildale City
Justin Barlow	Hildale City
Mark Johnson	Central Davis Sewer
Jesse Stewart	Salt Lake City
Ruben VanTassell	JBS Hyrum
Tom Ward	Salt Lake City
Phil Heck	CVWRF
Angela Pritchett	JBS Swift
Dan Olson	Salt Lake City
Doug Nielsen	Sunrise Engineering
Marvin Wilson	Sunrise Engineering
Layne Jensen	Franson Civil Engineering
Mel Brown	NSPIC
Mark Judd	NSPIC
Ryan Jolley	Jones & DeMille

Myron Bateman called the Board meeting to order at 9:06 AM and took roll call for the members of the Board and audience.

APPROVAL OF MINUTES OF THE FEBRUARY 25, 2015 MEETING

Motion: **It was moved by Mr. Rodier to approve the minutes for the February 25, 2015 board meeting. Mr. Bunker seconded the motion. The motion was unanimously passed.**

RECOGNITION AWARDS

Merritt Frey: Mr. Bateman expressed appreciation for her service to the Utah Water Quality Board from July 2007-May 2015.

Terral Dunn & Cliff Specht: Mr. Bateman expressed appreciation for their service on the Utah Wastewater Operator Certification Council.

PRESENTATION

Annual Report: Mr. McFarland and Ms. Etherington presented the 2014 Annual Report for the Utah Wastewater Operator Certification Council to the Water Quality Board.

EXECUTIVE SECRETARY REPORT

- Mr. Baker announced that Amanda Smith has resigned as the Executive Director of DEQ. Her final day will be May 20, 2015. Amanda served for six years with DEQ. Governor Herbert will appoint a new DEQ Executive Director by the time of her departure.
- DWQ has several work groups including ones for mercury and E.coli. DWQ will be combining these two groups together and adding another that will be to address harmful algae blooms. This singular work group will engage interested stake holders and establish how to identify health related pollutants and address them.
- Union Pacific Railroad Bridge. There were two culverts along the Union Pacific Railroad (UPR) causeway in Great Salt Lake that were removed in 2013. A bridge expansion will replace the function of the culverts. DWQ was obligated to issue a 401 Certification for the removal of the culverts and construction of the bridge. The 401 Certification has been appealed by the railroad. DWQ has directed UPR to install the bridge by December 2016 or face administrative action. DWQ will keep the Board informed as this matter proceeds.
- New Board members. Two new members have been selected by the Governor to serve on the Board and their names have been forwarded to the Senate for confirmation. They are Mike Luers, to replace Leland Myers; and Steven Early, to replace Merritt Frey. Their first board meeting should be in May.
- DWQ is working on developing a strategy for optimizing wastewater treatment plants to remove nutrients that are contributing to algae blooms and reducing oxygen in our water. Rulemaking will be proposed over the next year.

FUNDING REQUESTS

Financial Reports: Ms. Cantón updated the Board on the Loan Funds, and Hardship Grant Funds, as seen in the Board Packet on pages E1-E3.

San Juan Spanish Valley SSD: The district requested a planning grant in the amount of $75,000 to evaluate its wastewater collection and treatment system needs and to prepare a master plan.

Motion: **Following a discussion Mr. Bunker made the motion to approve the grant for San Juan Spanish Valley SSD for $75,000. Mr. Pace seconded the motion. The motion was unanimously passed.**

North Summit Irrigation: North Summit Irrigation was seeking a $350,000 hardship grant to cover the increased cost of its project. Due to delays in the project connecting the Echo Dam, the cost dramatically increased. The irrigation company does not meet the normal requirement for collateral for a loan obligation as it can only pledge water shares. Therefore, staff recommends a hardship grant for funding.

Motion: **Following a discussion Ms. Frey made the motion to approve the grant for North Summit Irrigation for $350,000. Mr. Galecki seconded the motion. The motion passed, with Mr. Bunker voting in opposition.**

Hildale Request for Hardship Grant: Hildale was seeking a hardship planning advance in the amount of $40,000. It will be used to complete a wastewater treatment and collection system master plan to evaluate alternatives to address problems with the town's existing collection system and lagoon treatment facility.

Motion: **Following a discussion Mr. Bunker made the motion to approve the grant for Hildale for $40,000. Mr. Pace seconded the motion. The motion was unanimously passed.**

Tricounty Health Department: Tricounty Health Department was seeking a hardship planning grant for $45,000 to complete a facility plan to evaluate alternatives that address failing onsite systems in the Stonegate Subdivision.

Motion: **Following a discussion Mr. Pace made the motion to approve the hardship grant for $45,000. Ms. Frey seconded the motion. The motion was unanimously passed.**

SETTLEMENT AGREEMENT

Moroni Settlement Agreement: Wastewater overflows were not reported by Moroni Feed Company to the Division of Water Quality, as required by its permit. Instead the overflows were discovered by a DEQ District Engineer while visiting the treatment plant. DWQ issued a Notice of Violation for the overflows at the site, which happened at ten separate times. DWQ sought a penalty of $37,003. Because the penalty exceeded $25,000, the Board must approve the settlement.

Motion: **Following a discussion, Mr. Pace made the motion to approve the settlement agreement of $ 37, 003. Mr. Galecki seconded the motion. The motion was unanimously passed.**

RULEMAKING

Request to Adopt Rule Changes to Section R317-10-8: Ms. Etherington recommended that the Water Quality Board approve the proposed amendment to *R317-10, Certification of Wastewater Works Operators.* See Board Packet pages G-1 – G-4

Motion: **Following a discussion, Mr. Bunker made the motion to adopt the changes to R317-10. Mr. Pace seconded the motion. The motion was unanimously passed.**

Request to Proceed to Rulemaking on R317-2: Mr. Bittner recommended that the Water Quality Board allow DWQ to initiate rulemaking on *R317-2, Standards of Quality for Waters of the State.* See Board Packet pages G-5 – G-185.

Motion: **Following a discussion, Ms. Frey made the motion directing staff to initiate rulemaking for R317-2. Mr. Bunker seconded the motion. The motion was unanimously passed.**

OTHER BUSINESS

Sudweeks Committee: Mr. Baker confirmed that Mr. Galecki, Mr. Bateman, and Mr. Bunker would serve as members of the Sudweeks Committee. They will hold a conference call to discuss nominees and recommend the names of a recipient of the award.

Legislative Update:

- Mr. Baker discussed the Bear River Development project. DNR is moving forward with more outreach on the project. The Great Salt Lake has nearly reached all-time low levels, and it is important for water quality to make sure there are sufficient water flows into the lake. DWQ is engaged in the process.
- Senate Bill 200, sponsored by Senator Dayton, was passed by the legislature. The position on the Board for "water quality expert" will now be slotted to a member representing special service districts.
- Other legislation affecting DEQ also passed. SB244 changed the organization and structure of DEQ. The Division of Radiation Control and the Division of Solid and Hazardous Waste will now be combined into one division and will be called the Waste Management Division. As a result of the consolidation, DWQ will assimilate a person from the Division of Radiation Control who will become the division's spill coordinator.

Next Meeting – May 27, 2015
DEQ Building Board Room – 1015
195 North 1950 West
Salt Lake City, UT 84116

_____
Myron Bateman, Chair
Utah Water Quality Board

Eg

LOAN FUNDS
FINANCIAL PROJECTIONS

STATE REVOLVING FUND (SRF)	4th Qtr FY2015 Apr - June 2015	1st Qtr FY 2016 July - Sept 2015	2nd Qtr FY 2016 Oct - Dec 2015	3rd Qtr FY 2016 Jan - Mar 2016	4th Qtr FY 2016 Apr - June 2016	1st Qtr FY 2017 July - Sept 2016	2nd Qtr FY 2017 Oct - Dec 2016	3rd Qtr FY 2017 Jan - Mar 2017	4th Qtr FY 2017 Apr - June 2017	1st Qtr FY 2018 July - Sept 2017	2nd Qtr FY 2018 Oct - Dec 2017	3rd Qtr FY 2018 Jan - Mar 2018
Funds Available												
SRF - 1st Round (LOC) 2014 Cap Grant	5,665,381	-	-	-	-	-	-	-	-	-	-	-
Less: 2014 Principal Forgiveness Amount	(600,934)	-	-	-	-	-	-	-	-	-	-	-
SRF - 1st Round (LOC) 2015 Cap Grant	7,067,520	-	-	-	-	-	-	-	-	-	-	-
State Match	1,472,400	-	-	-	-	-	-	-	-	-	-	-
SRF - 2nd Round	80,901,562	93,915,681	92,220,100	93,938,951	68,881,161	72,538,775	62,586,525	54,287,160	48,090,875	41,879,210	33,911,513	25,149,234
Interest Earnings at 0.6%	121,352	117,395	115,275	117,424	86,101	90,673	78,233	67,859	60,114	52,349	42,389	31,437
Loan Repayments	655,400	1,925,024	1,603,576	4,724,786	3,571,513	1,957,076	1,622,402	4,685,856	3,728,221	1,979,954	1,195,332	4,711,189
Total Funds Available	95,282,681	95,958,100	93,938,951	98,781,161	72,538,775	74,586,525	64,287,160	59,040,875	51,879,210	43,911,513	35,149,234	29,891,860
Project Obligations												
Eureka City	-	(400,000)	-	-	-	-	-	-	-	-	-	-
Francis City	-	(3,338,000)	-	-	-	-	-	-	-	-	-	-
Granger-Hunter Improvement District	(702,000)	-	-	-	-	-	-	-	-	-	-	-
Kearns Improvement District (2011)	(665,000)	-	-	-	-	-	-	-	-	-	-	-
Loan Authorizations												
Logan City	-	-	-	-	-	(10,000,000)	(10,000,000)	(10,000,000)	(10,000,000)	(10,000,000)	(10,000,000)	(10,000,000)
Anticipated Projects												
Ammonia Projects	-	-	-	-	-	-	-	-	-	-	-	(13,647,000)
Phosphorus Projects	-	-	-	-	-	-	-	-	-	-	-	(23,377,500)
Bear Lake SSD	-	-	-	-	-	(2,000,000)	-	-	-	-	-	-
Moab City	-	-	-	(10,000,000)	-	-	-	-	-	-	-	-
Payson City	-	-	-	(6,900,000)	-	-	-	-	-	-	-	-
Salem City	-	-	-	(13,000,000)	-	-	-	-	-	-	-	-
Wellington City	-	-	-	-	-	-	-	(950,000)	-	-	-	-
Total Obligations	(1,367,000)	(3,738,000)	-	(29,900,000)	-	(12,000,000)	(10,000,000)	(10,950,000)	(10,000,000)	(10,000,000)	(10,000,000)	(47,024,500)
SRF Unobligated Funds	$ 93,915,681	$ 92,220,100	$ 93,938,951	$ 68,881,161	$ 72,538,775	$ 62,586,525	$ 54,287,160	$ 48,090,875	$ 41,879,210	$ 33,911,513	$ 25,149,234	$ (17,132,640)

UTAH WASTEWATER LOAN FUND (UWLF)	4th Qtr FY 2015 Apr - June 2015	1st Qtr FY 2016 July - Sept 2015	2nd Qtr FY 2016 Oct - Dec 2015	3rd Qtr FY 2016 Jan - Mar 2016	4th Qtr FY 2016 Apr - June 2016	1st Qtr FY 2017 July - Sept 2016	2nd Qtr FY 2017 Oct - Dec 2016	3rd Qtr FY 2017 Jan - Mar 2017	4th Qtr FY 2017 Apr - June 2017	1st Qtr FY 2018 July - Sept 2017	2nd Qtr FY 2018 Oct - Dec 2017	3rd Qtr FY 2018 Jan - Mar 2018
Funds Available												
UWLF	$ 13,880,085	$ 11,073,160	$ 9,609,710	$ 10,419,060	$ 11,765,795	$ 13,544,157	$ 14,570,840	$ 15,380,190	$ 16,673,620	$ 18,606,375	$ 19,670,158	$ 20,479,508
Sales Tax Revenue	-	896,875	896,875	896,875	896,875	896,875	896,875	896,875	896,875	896,875	896,875	896,875
Loan Repayments	115,000	469,200	252,000	789,385	1,221,012	469,333	252,000	736,080	1,375,404	506,433	252,000	704,080
Total Funds Available	13,995,085	12,439,235	10,758,585	12,105,320	13,883,682	14,910,365	15,719,715	17,013,145	18,945,900	20,009,683	20,819,033	22,080,463
General Obligations												
State Match Transfer	(1,472,400)	-	-	-	-	-	-	-	-	-	-	-
DWQ Administrative Expenses	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)
Project Obligations												
Murray City	(1,110,000)	-	-	-	-	-	-	-	-	-	-	-
Loan Authorizations												
Eagle Mountain City - White Hills	-	(490,000)	-	-	-	-	-	-	-	-	-	-
Planned Projects												
*Helper City	-	(2,000,000)	-	-	-	-	-	-	-	-	-	-
Total Obligations	(2,921,925)	(2,829,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)	(339,525)
UWLF Unobligated Funds	$ 11,073,160	$ 9,609,710	$ 10,419,060	$ 11,765,795	$ 13,544,157	$ 14,570,840	$ 15,380,190	$ 16,673,620	$ 18,606,375	$ 19,670,158	$ 20,479,508	$ 21,740,938

*Projects being presented to the WQB
Date Printed: 5/20/2015

HARDSHIP GRANT FUNDS
FINANCIAL PROJECTIONS

HARDSHIP GRANT FUNDS (HGF)	4th Qtr FY 2015 Apr - June 2015	1st Qtr FY 2016 July - Sept 2015	2nd Qtr FY 2016 Oct - Dec 2015	3rd Qtr FY 2016 Jan - Mar 2016	4th Qtr FY 2016 Apr - June 2016	1st Qtr FY 2017 July - Sept 2016	2nd Qtr FY 2017 Oct - Dec 2016	3rd Qtr FY 2017 Jan - Mar 2017	4th Qtr FY 2017 Apr - June 2017	1st Qtr FY 2018 July - Sept 2017	2nd Qtr FY 2018 Oct - Dec 2017	3rd Qtr FY 2018 Jan - Mar 2018
Funds Available												
Beginning Balance	$ -	$ 1,872,379	$ 145,003	$ (1,715,353)	$ (1,546,966)	$ (387,575)	$ (915,594)	$ (896,355)	$ (633,295)	$ 444,774	$ (103,292)	$ (76,943)
Federal HGF Beginning Balance	4,853,951	-	-	-	-	-	-	-	-	-	-	-
State HGF Beginning Balance	429,412	-	-	-	-	-	-	-	-	-	-	-
2014 Principal Forgiveness Amount	600,934	-	-	-	-	-	-	-	-	-	-	-
Interest Earnings at 0.6%	7,925	2,340	181	(2,144)	(1,934)	(484)	(1,144)	(1,120)	(792)	556	(129)	(96)
UWLF Interest Earnings at 0.6%	20,820	13,841	12,012	13,024	14,707	16,930	18,214	19,225	20,842	23,258	24,588	25,599
Hardship Grant Assessments	363,904	424,442	-	104,451	930,197	402,201	-	201,698	860,685	379,454	-	180,346
Interest Payments	-	58,000	2,450	53,057	216,420	53,335	2,170	43,257	197,334	48,667	1,890	33,132
Advance Repayments	1,613,500	-	-	-	-	-	-	-	-	-	-	-
Total Funds Available	7,890,446	2,371,003	159,647	(1,546,966)	(387,575)	84,406	(896,355)	(633,295)	444,774	896,708	(76,943)	162,038
Project Obligations												
Blanding City - Planning Advance	(39,900)	-	-	-	-	-	-	-	-	-	-	-
Eagle Mountain City - White Hills - Construction Grant	-	(580,000)	-	-	-	-	-	-	-	-	-	-
Echo Sewer SSD - Construction Grant	(251,000)	-	-	-	-	-	-	-	-	-	-	-
Eureka City - Construction Grant	-	(646,000)	-	-	-	-	-	-	-	-	-	-
Francis City - Construction Grant	-	-	(1,875,000)	-	-	-	-	-	-	-	-	-
Hildale City - Planning Grant	(40,000)											
Long Valley SID - Construction Grant	(1,150,000)	-	-	-	-	-	-	-	-	-	-	-
Payson City - Planning Advance	(88,000)	-	-	-	-	-	-	-	-	-	-	-
Salem City - Planning Advance	(112,300)	-	-	-	-	-	-	-	-	-	-	-
San Juan Spanish Valley - Planning Grant	(75,000)	-	-	-	-	-	-	-	-	-	-	-
TriCounty Health Dept. - Planning Grant	(45,000)											
Virgin Town - Planning Advance	(36,000)	-	-	-	-	-	-	-	-	-	-	-
Wellington - Planning Advance	(32,000)	-	-	-	-	-	-	-	-	-	-	-
Planned Projects												
*DWQ-Central Utah Pulic Health Dept - Planning Grant	(50,000)	-	-	-	-	-	-	-	-	-	-	-
Non-Point Source Project Obligations												
(FY11) Gunnison Irrigation Company	(48,587)	-	-	-	-	-	-	-	-	-	-	-
(FY11) DEQ - Willard Spur Study	(285,778)	-	-	-	-	-	-	-	-	-	-	-
(FY12) UDAF	(947,714)	-	-	-	-	-	-	-	-	-	-	-
(FY13) DEQ - Great Salt Lake Advisory Council	(400,000)	-	-	-	-	-	-	-	-	-	-	-
(FY14) UACD	(56,524)	-	-	-	-	-	-	-	-	-	-	-
(FY15) DEQ - Nitrogen Transformation Study	(150,000)											
(FY15) North Summit Irrigation Company	(350,000)	-	-	-	-	-	-	-	-	-	-	-
(FY15) Utah Open Lands	(100,000)	-	-	-	-	-	-	-	-	-	-	-
FY 2011 - Remaining Payments	(32,178)	-	-	-	-	-	-	-	-	-	-	-
FY 2012 - Remaining Payments	(59,713)	-	-	-	-	-	-	-	-	-	-	-
FY 2013 - Remaining Payments	(241,809)	-	-	-	-	-	-	-	-	-	-	-
FY 2014 - Remaining Payments	(651,405)	-	-	-	-	-	-	-	-	-	-	-
FY 2015 - Remaining Payments	(775,159)	-	-	-	-	-	-	-	-	-	-	-
FY 2016 Allocation	-	(1,000,000)	-	-	-	-	-	-	-	-	-	-
FY 2017 Allocation	-	-	-	-	-	(1,000,000)	-	-	-	-	-	-
FY 2018 Allocation	-	-	-	-	-	-	-	-	-	(1,000,000)	-	-
Non-Point Source Projects in Planning												
None at this time	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligations	(6,018,067)	(2,226,000)	(1,875,000)	-	-	(1,000,000)	-	-	-	(1,000,000)	-	-
HGF Unobligated Funds	$ 1,872,379	$ 145,003	$ (1,715,353)	$ (1,546,966)	$ (387,575)	$ (915,594)	$ (896,355)	$ (633,295)	$ 444,774	$ (103,292)	$ (76,943)	$ 162,038

*Projects being presented to the WQB
Date Printed: 5/20/2015

State of Utah
Wastewater Project Assistance Program
Project Priority List

FY15 Rank	Project Name	Funding Authorized	Total Points	Point Categories				Description of Project Status
				Project Need	Potential Improvement	Population Affected	Special Consideration	
1	Logan City	x	159	50	39	10	60	Planning
2	Price River Water Improvement District	x	145	70	48	7	20	Design
3	Coalville City	x	142	40	40	2	60	Construction
4	Eureka City	x	118	50	0	8	60	Construction
5	Echo City	x	112	70	41	1	0	Construction
6	Snyderville Basin WRD	x	107	10	29	8	60	Design
7	White Hills - Eagle Mountain	x	106	40	5	1	60	Design
8 (Tie)	Kearns Improvement District	x	105	40	16	9	40	Construction
	Granger-Hunter Improvement District	x	105	35	0	10	60	Construction
10	Ephraim	x	102	40	16	6	40	Construction
11	Salem City	x	94	50	18	6	20	Planning
12	Helper City		83	40	0	3	40	Planning
13	Long Valley Sewer Improvement District	x	79	10	7	2	60	Construction
14 (Tie)	Murray City	x	78	10	0	8	60	Construction
	Wellington City	x	78	35	1	2	40	Planning
16	Francis City	x	72	10	0	2	60	Design
17	Payson City	x	70	10	13	7	40	Planning
18	Midvalley Improvement District	x	68	40	0	8	20	Design/Construction

5/20/20157:02 AM

State of Utah

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Amanda Smith
Walter L. Baker
Executive Secretary

467.

Project Number: _____
Date Received: May 5, 2015
Date to be presented to the WQB: May 27, 2015

WATER QUALITY BOARD
REQUEST FOR HARDSHIP PLANNING GRANT TO
PREPARE GROUNDWATER QUALITY STUDY
AUTHORIZATION

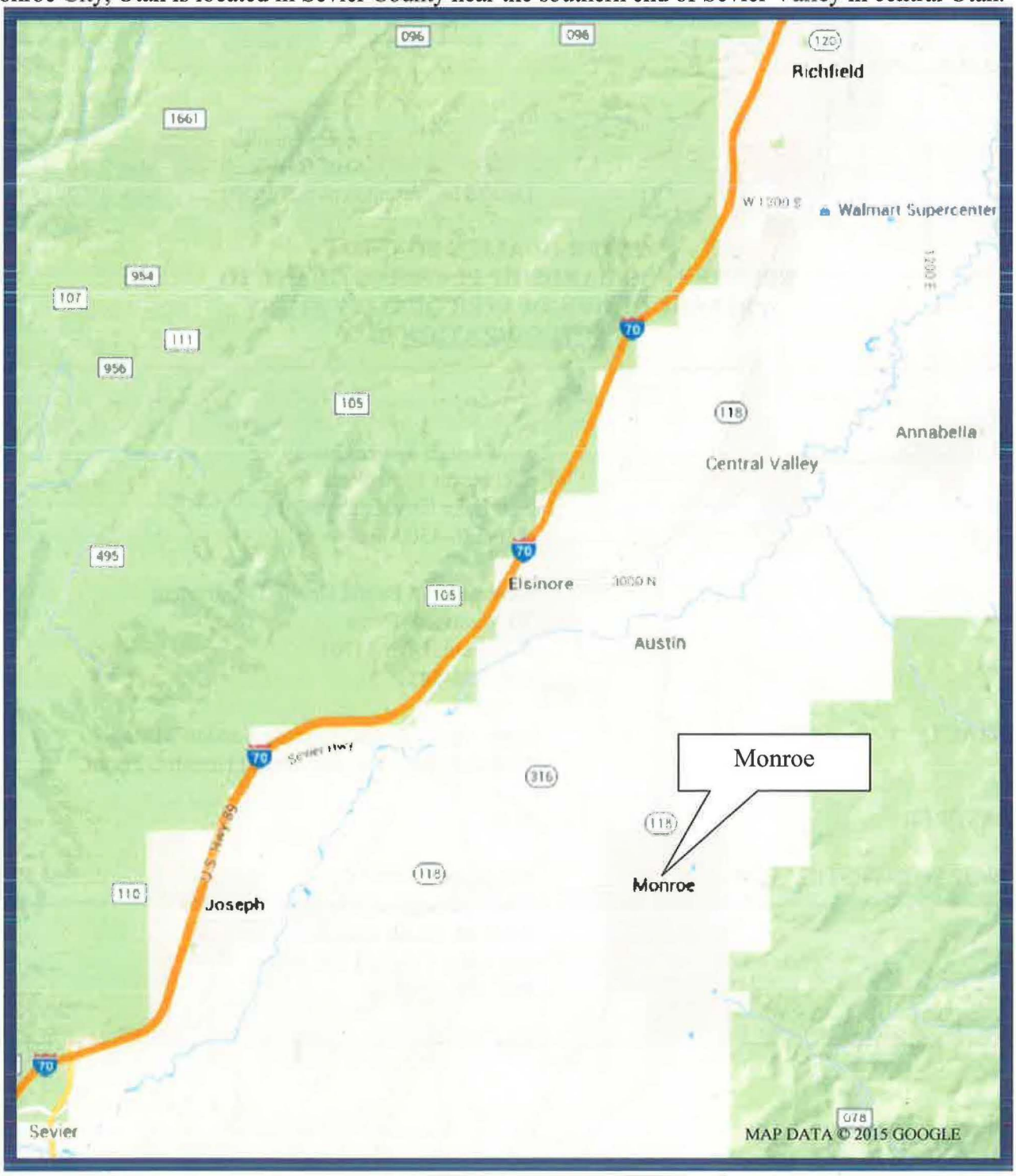
APPLICANTS:	Division of Water Quality 195 North 1950 West Salt Lake City, Utah 84114 801-536-4300 Central Utah Public Health Department 70 Westview Drive Richfield, Utah 84701 435-896-5451
CONTACTS:	John Mackey – Engineering Section Manager Nathan Selin – Environmental Health Director
TREASURER:	N/A
PRINCIPAL INVESTIGATOR:	Mike Lowe Utah Geological Survey 1594 W. North Temple Salt Lake City, UT 84116 801-537-3300
CITY ATTORNEY:	N/A

APPLICANT'S REQUEST:

The Division of Water Quality requests a **hardship planning grant in the amount of $49,300** to complete a baseline groundwater quality study in conjunction with the Central Utah Public Health Department to evaluate conditions and potential sources of pollution in the vicinity of Monroe, Utah.

APPLICANT'S LOCATION

Monroe City, Utah is located in Sevier County near the southern end of Sevier Valley in central Utah.



BACKGROUND

Monroe City has a population of approximately 2,300 residents in 865 households. The population of Monroe grew by over 20 percent in each of the last two decades. Irrigated agriculture is the largest land use in the valley. The median adjusted gross household income (MAGI) for Monroe was $37,115 in 2013 as compared with $40,489 for the state of Utah.

The community uses onsite systems (septic tanks) for wastewater disposal. Groundwater occurs in a basin fill aquifer and is relatively shallow at 50 to 100 feet below ground surface. This groundwater is used by private well owners as their primary drinking water source and as a supplement to Monroe's community water supply. Protecting this groundwater from negative impacts such as nitrate contamination from septic systems, fertilizers, or concentrated animal operations is important to ensure a safe and sufficient supply of drinking water for current and future residents and businesses.

The purpose of the proposed study is to establish baseline groundwater quality conditions in the vicinity of Monroe City. The study results will inform the Division of Water Quality and the Central Utah Public Health Department on the current quality of the groundwater underlying the City and the immediately surrounding area, providing accurate data on which the health department and the City can base its planning decisions and protect its groundwater supplies.

PROJECT DESCRIPTION:

The proposed study will be conducted by the Utah Geological Survey under direct contract with the Division. The proposed grant would be issued to the Division, at the request of the Central Utah Public Health Department, to facilitate (simplify) fund management and disbursement of payment requests. The study incorporates groundwater monitoring and surface investigations that will establish both the baseline groundwater quality and an inventory of potential groundwater contamination sources including onsite wastewater systems, agricultural, and other sources.

The study shall include the following tasks and deliverables:

- Identify and review existing groundwater data;
- Identify potential sources of groundwater contamination;
- Assemble existing well logs to establish general lithology and identify protective and confining layers;
- Identify 12 to 15 existing water wells and 3 to 5 important surface waters across the study area that will be sampled;
- Install five new permanent monitoring wells;
- Measure potentiometric elevations and collect 20 groundwater and surface water samples. Analyze all samples for general chemistry and anthropogenic markers;
- Perform statistical of water quality data;
- Prepare a Groundwater Baseline Quality Report. The report shall: (1) summarize methods used and the study results; (2) provide well completion logs for all new wells; (3) tabulate all water quality results; (4) discuss potential anthropogenic impacts to groundwater; (5) establish a baseline potentiometric surface map; and (6) provide concentration maps for important water quality parameters, describing graphically the overall groundwater quality in the study area.

IMPLEMENTATION SCHEDULE:

The study will be conducted between July 1, 2015 and June 30, 2016. Drilling will be completed in summer 2015 and sampling will be completed before winter 2015. The final report will be issued on or before June 30, 2016.

PROJECT PRIORITY LIST

A construction project is not anticipated at this time; therefore, the study is not given a priority listing. The study results are expected to inform decision makers for community planning, including the impacts that the community is having, e.g., by septic tank densities, on its groundwater.

COST ESTIMATE:

The proposed study will cost $76,500. The Utah Geological Survey plans to share the cost of their labor and expenses in the amount of $27,200. The balance of $49,300 is the requested amount that would be paid by the grant requested from the Water Quality Board.

Project Management and Administration	$	15,000
Field Work and Report Preparation	$	31,800
Laboratory Costs	$	7,700
Monitoring Well Construction	$	22,000
Total	**$**	**76,500**

Cost Sharing:

Utah Geological Survey	$	27,200
Water Quality Board Grant	$	49,300
Total	**$**	**76,500**

STAFF COMMENTS AND RECOMMENDATION:

This project is being presented as an authorization request to the Water Quality Board. Staff recommends the Board authorize the $49,300 requested for hardship planning grant to the Division. The grant is needed to assist Central Utah Public Health Department in developing this important planning tool.

SPECIAL CONDITIONS:

1. The Division of Water Quality must approve the engineering agreement and plan of study before the grant agreement will be executed.
2. This Planning Advance is a grant and will not be repaid.

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File: SRF-Central Utah Public Health Department/Planning/Section 1

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Department of
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Amanda Smith
Executive Director

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Executive Secretary

TO: Water Quality Board

THROUGH: Walter L. Baker, P.E. WLB.

FROM: Johnathan Cook, P.E.
Environmental Engineer

DATE: March 10, 2015

SUBJECT: Refinance Willard City Bond - $10,740,000

In December 2008, the Water Quality Board closed a $12,000,000, 0% interest, 30-year loan with Willard City for the construction of it wastewater collection system and its portion of the cost for the regional wastewater treatment facility that would be owned jointly with Perry City. Additionally a $5,636,000 Hardship Grant was provided Willard City. The City has asked the Division of Water Quality (DWQ) to consider refinancing its sewer bond in the principal amount of $ $10,740,000. Willard City has informed Staff that it will be able to make this year's payment on the bond. However, the City is projecting that it will not have sufficient funds to make a full payment on the bond next year.

There are several reasons why Willard is having difficulty making their bond payment:

1) The main problem has been a dramatic reduction in growth in Willard during the recession. At the time of the bond authorization, the Governor's Office for Planning and Budget (GOPB) was predicting a 4% growth rate. A growth rate of 2.7% was assumed in the bond. Estimates from the US Census Bureau show a 0.21% population decline in Willard and GOPB growth estimates have been reduced to 0.7% for the period from 2010 to 2040.

   In terms of connections to the system, the growth estimate used in the original bond predicted a growth from 662 ERUs in 2007 to 797 ERUs in 2014. The current number of ERUs connected to the system is 676.5. This equates to an average growth rate of 0.31%.

2) The operations and maintenance costs are significantly higher than originally anticipated. In the original bond, O&M costs were anticipated to be $105,500 for both collection and treatment. In actuality, the O&M costs for Willard this year are $117,161 for treatment only. The estimated additional O&M cost for the collection system is $42,178.

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The O&M costs for the treatment plant are greater than originally anticipated because language in the interlocal agreement that requires costs to be split based upon the percentage of ownership of the plant instead of percentage of flow into the plant. Perry City requested that the interlocal agreement be drafted this way and it was signed by both cities.

Staff has discussed the interlocal agreement with Perry City to get an idea if it were changed to split O&M costs based upon flow, would it assist Willard City without harming Perry. It turns out that Willard is currently paying 33% of the O&M costs for the plant and not the 39% that they own. Perry wants Willard to begin paying the full 39% next year.

In conversations with Perry, it became clear that they are subsidizing their payment on their sewer bond with other revenue because they have had also had dramatically reduced growth. Perry projects that as long as they maintain their current level of growth (≈1%) and shift 6% more of the O&M costs to Willard, they will be able to continue to be able to make full payments on their bond with the Division.

If Perry were to have to pay their current percentage of flow into the treatment plant, approximately 72%, it would likely result in them also making a request to the Water Quality Board to refinance their bond.

In order to get a worst case refinance scenario for the Division, Staff investigated how much grant would have to be provided to Willard in order to reduce the principal on the bond down to a level where they could have a static payment and maintain a sewer bill at 1.4% of their MAGI, $62.12/month. It would require $2,352,000 in Hardship Grant Fund (HGF) money to be transferred to the Utah Wastewater Loan Fund (UWLF). The costs for various percentages of grant and what it would make their sewer bill are summarized below.

Estimated Cost of Refinance

% of Principal converted to Grant	Additional WQB Grant	Refinance Bond Amount	WQB Loan Debt Service	Monthly Sewer Bill	% MAGI
0%	$0	$10,740,000	$358,000	$73.04	1.65%
4.4%	$472,000	$10,268,000	$342,267	$71.00	1.60%
13.1%	$1,412,000	$9,328,000	$310,933	$66.56	1.50%
21.9%	$2,352,000	$8,388,000	$279,600	$62.12	1.40%

Staff investigated other options for refinancing the bond. It was determined that the best available option would be to refinance Willard's bond with a 30-year term and reduce the payments on the bond for the first three years. The suggested payment schedule for the refinanced is provided in the following table. The original bond payment schedule is also provided in the table for comparison.

Refinance Payment Comparison

Year	Original Bond	Refinanced Bond
1 (2012)	$300,000	$300,000
2	$310,000	$310,000
3	$320,000	$320,000
4	$330,000	$330,000
5 (2016)	$340,000	$53,000
6	$350,000	$53,000
7	$355,000	$53,000
8	$360,000	$270,000
9	$365,000	$273,000
10	$370,000	$275,000
11	$375,000	$278,000
12	$380,000	$281,000
13	$385,000	$284,000
14	$390,000	$287,000
15	$395,000	$298,000
16	$400,000	$310,000
17	$405,000	$321,000
18	$410,000	$333,000
19	$415,000	$345,000
20	$420,000	$358,000
21	$425,000	$371,000
22	$430,000	$385,000
23	$440,000	$398,000
24	$450,000	$412,000
25	$460,000	$429,000
26	$470,000	$445,000
27	$480,000	$462,000
28	$490,000	$480,000
29	$490,000	$498,000
30	$490,000	$517,000
31		$537,000
32		$557,000
33		$577,000
34 (2045)		$600,000

This refinance scenario maintains the existing sewer bill of $59.50 per month per ERU. This is equivalent to 1.34% of Willard's 2013 MAGI. Staff is recommending a loan amortization that targets 1.34% of MAGI instead of 1.4% of MAGI ($62.12 per month per ERU) because the former allows the City to reasonably increase sewer rates if growth continues to be slow. In the event that Willard City does not experience 2.7% growth, it would be able to raise its sewer rates to the 1.4% MAGI level and avoid the risk of another potential bond default situation.

Staff proposes that the refinance amortization also include an early principal repayment provision similar to one in the original bond, however, it has been reduced to allow the City to apply its increased revenues to principal payments. The original bond's early principal repayment provision was set at $250 per ERU after 900 ERUs are connected to the system. The proposed early principal repayment provision under the refinanced bond is set at $71 per ERU after 800 ERUs are connected to the system.

Finally, it bears mentioning that even though the proposed refinance does not require the Board to authorize additional grant funds, it does come at a cost. Staff calculates that the present value cost of refinancing Willard City's bond is $404,100, based on a discount rate of 1%, the approximate interest rate on loans from the UWLF.

Staff recommends the Water Quality Board authorize the refinancing of Willard City's bond at $10,740,000 for 30 years at 0% with the referenced graduated repayment schedule and early principal repayment clause with the following special conditions:

1. Willard must agree to participate annually in the Municipal Wastewater Planning Program (MWPP).

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Willard refinance with 0.5% principal payments for the first 3 years. Cash Flow Model (2016 dollars)

WQB Loan Terms

11/2014 Balance =		11,070,000
Refinance Amount =		10,740,000
DWQ Loan Origination =		-
Refinance Bond Amount =		10,740,000
Loan Term:		30
Interest Rate:		0.0%
Average Annual Payment:	$	358,000

Annual Sewer Expenses (Estimated)

Refinanced Bond Amount	$	10,740,000
Estimated O&M Cost:	$	182,772
Annual O&M Cost Increase:		1.80%
Existing Debt Service:	$	-
Incremental Increase Year 1 - 10 =		20.0% / ERU
Incremental Increase Year 11 - 20 =		70.5% / ERU
Incremental Increase Year 20 - 30 =		80.0% / ERU

Sewer Revenue Sources (Projected)

Beginning Cash:	$	-
Initial Customers (ERU):		677
Projected Growth Rate:		2.70%
Willard Impact Fee:	$	7,200
2013 MAGI:	$	53,249
Existing Monthly User Charge 1.34%:	$	59.50
Monthly User Charge 1.4% MAGI:	$	62.12

Sewer Revenue Projections

Year	Growth Rate (%)	Annual Growth (ERU)	Total Users (ERU)	User Charge Revenue	Impact Fee Revenue	Total Revenue	Base WQB Loan Repayment	Additional WQB Loan Repayment	Amortized WQB Loan Repayment	Early Repayment Provision	Amortized w/ Early Repayment	WQB Loan Reserves	Current Principal	Remaining Principal	Existing Sewer Debt Service	O&M Expenses	Total Expenses	Beginning Cash	Ending Cash Flow	Net Revenue	Debt Service Ratio
2016	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,740,000	10,687,000	-	182,772	289,472	0	193,549	193,549	5.67
2017	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,687,000	10,634,000	-	207,082	313,782	193,549	362,788	169,239	5.21
2018	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,634,000	10,581,000	-	210,810	317,510	362,788	528,299	165,511	5.14
2019	2.7%	18	695	495,873	129,600	625,473	270,000	-	270,000	-	270,000	53,700	10,581,000	10,311,000	-	214,604	538,304	528,299	615,468	87,169	1.52
2020	2.7%	19	714	509,439	136,800	646,239	270,000	3,000	273,000	-	273,000	53,700	10,311,000	10,041,000	-	218,467	542,167	615,468	719,539	104,072	1.57
2021	2.7%	19	733	523,005	136,800	659,805	270,000	5,000	275,000	-	275,000	53,700	10,041,000	9,771,000	-	222,400	546,100	719,539	833,245	113,705	1.59
2022	2.7%	20	753	537,285	144,000	681,285	270,000	8,000	278,000	-	278,000	53,700	9,771,000	9,501,000	-	226,403	550,103	833,245	964,427	131,182	1.64
2023	2.7%	20	773	551,565	144,000	695,565	270,000	11,000	281,000	-	281,000	53,700	9,501,000	9,231,000	-	230,478	554,178	964,427	1,105,813	141,387	1.66
2024	2.7%	21	794	566,559	151,200	717,759	270,000	14,000	284,000	-	284,000	53,700	9,231,000	8,961,000	-	234,627	558,327	1,105,813	1,265,246	159,432	1.70
2025	2.7%	21	815	581,553	151,200	732,753	270,000	17,000	287,000	1,030	288,030	53,700	8,961,000	8,691,000	-	238,850	562,550	1,265,246	1,435,449	170,203	1.72
2026	2.7%	22	837	597,261	158,400	755,661	270,000	28,000	298,000	2,592	300,592		8,691,000	8,421,000	-	243,149	513,149	1,435,449	1,677,960	242,512	1.72
2027	2.7%	23	860	613,683	165,600	779,283	270,000	40,000	310,000	4,225	314,225		8,421,000	8,151,000	-	247,526	517,526	1,677,960	1,939,717	261,757	1.72
2028	2.7%	23	883	630,105	165,600	795,705	270,000	51,000	321,000	5,858	326,858		8,151,000	7,881,000	-	251,982	521,982	1,939,717	2,213,441	273,723	1.69
2029	2.7%	24	907	647,241	172,800	820,041	270,000	63,000	333,000	7,562	340,562		7,881,000	7,611,000	-	256,517	526,517	2,213,441	2,506,964	293,524	1.69
2030	2.7%	24	931	664,377	172,800	837,177	270,000	75,000	345,000	9,266	354,266		7,611,000	7,341,000	-	261,135	531,135	2,506,964	2,813,007	306,042	1.67
2031	2.7%	25	956	682,227	180,000	862,227	270,000	88,000	358,000	11,041	369,041		7,341,000	7,071,000	-	265,835	535,835	2,813,007	3,139,399	326,392	1.67
2032	2.7%	26	982	700,791	187,200	887,991	270,000	101,000	371,000	12,887	383,887		7,071,000	6,801,000	-	270,620	540,620	3,139,399	3,486,770	347,371	1.66
2033	2.7%	27	1,009	720,069	194,400	914,469	270,000	115,000	385,000	14,804	399,804		6,801,000	6,531,000	-	275,491	545,491	3,486,770	3,855,748	368,978	1.66
2034	2.7%	27	1,036	739,347	194,400	933,747	270,000	128,000	398,000	16,721	414,721		6,531,000	6,261,000	-	280,450	550,450	3,855,748	4,239,045	383,297	1.64
2035	2.7%	28	1,064	759,339	201,600	960,939	270,000	142,000	412,000	18,709	430,709		6,261,000	5,991,000	-	285,498	555,498	4,239,045	4,644,486	405,441	1.64
2036	2.7%	29	1,093	780,045	208,800	988,845	270,000	159,000	429,000	20,768	449,768		5,991,000	5,721,000	-	290,637	560,637	4,644,486	5,072,694	428,208	1.63
2037	2.7%	29	1,122	800,751	208,800	1,009,551	270,000	175,000	445,000	22,827	467,827		5,721,000	5,451,000	-	295,869	565,869	5,072,694	5,516,376	443,682	1.60
2038	2.7%	30	1,152	822,171	216,000	1,038,171	270,000	192,000	462,000	24,957	486,957		5,451,000	5,181,000	-	301,194	571,194	5,516,376	5,983,353	466,977	1.60
2039	2.7%	31	1,183	844,305	223,200	1,067,505	270,000	210,000	480,000	27,158	507,158		5,181,000	4,911,000	-	306,616	576,616	5,983,353	6,474,242	490,889	1.59
2040	2.7%	32	1,215	867,153	230,400	1,097,553	270,000	228,000	498,000	29,430	527,430		4,911,000	4,641,000	-	312,135	582,135	6,474,242	6,989,661	515,418	1.58
2041	2.7%	33	1,248	890,715	237,600	1,128,315	270,000	247,000	517,000	31,773	548,773		4,641,000	4,371,000	-	317,753	587,753	6,989,661	7,530,223	540,562	1.57
2042	2.7%	34	1,282	914,991	244,800	1,159,791	270,000	267,000	537,000	34,187	571,187		4,371,000	4,101,000	-	323,473	593,473	7,530,223	8,096,541	566,318	1.56
2043	2.7%	35	1,317	939,981	252,000	1,191,981	270,000	287,000	557,000	36,672	593,672		4,101,000	3,831,000	-	329,295	599,295	8,096,541	8,689,227	592,686	1.55
2044	2.7%	36	1,353	965,685	259,200	1,224,885	270,000	307,000	577,000	39,228	616,228		3,831,000	3,561,000	-	335,223	605,223	8,689,227	9,308,889	619,662	1.54
2045	2.7%	37	1,390	992,103	266,400	1,258,503	270,000	330,000	600,000	41,855	228,315		3,561,000	3,291,000	-	341,257	611,257	9,308,889	9,956,136	647,246	1.53
							7,449,000	3,291,000	10,740,000	413,540	10,740,000										

Total Principal Payment =	10,740,000

When ERUSs exceed 800 , Willard must pay an additional $ 71.00 per ERU

Willard refinance with 0.5% principal payments for the first 3 years. Cash Flow Model (2016 dollars)

WQB Loan Terms

11/2014 Balance =		11,070,000
Refinance Amount =		10,740,000
DWQ Loan Origination =		-
Refinance Bond Amount =		10,740,000
Loan Term:		30
Interest Rate:		0.0%
Average Annual Payment:	$	358,000

Annual Sewer Expenses (Estimated)

Refinanced Bond Amount	$	10,740,000
Estimated O&M Cost:	$	182,772
Annual O&M Cost Increase:		1.80%
Existing Debt Service:	$	-
Incremental Increase Year 1 - 10 =		20.0% / ERU
Incremental Increase Year 11 - 20 =		70.5% / ERU
Incremental Increase Year 20 - 30 =		80.0% / ERU

Sewer Revenue Sources (Projected)

Beginning Cash:	$	-	
Initial Customers (ERU):		677	
Minimum Growth Rate:		0.23%	2.70%
Willard Impact Fee:	$	7,200	
2013 MAGI:	$	53,249	
Existing Monthly User Charge 1.34%:	$	59.50	
Monthly User Charge 1.4% MAGI:	$	62.12	

Sewer Revenue Projections

Year	Growth Rate (%)	Annual Growth (ERU)	Total Users (ERU)	User Charge Revenue	Impact Fee Revenue	Total Revenue	Base WQB Loan Repayment	Additional WQB Loan Repayment	Amortized WQB Loan Repayment	Early Repayment Provision	Amoritized w/ Early Repayment	WQB Loan Reserves	Current Principal	Remaining Principal	Existing Sewer Debt Service	O&M Expenses	Total Expenses	Beginning Cash	Ending Cash Flow	Net Revenue	Debt Service Ratio
2016	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,740,000	10,687,000	-	182,772	289,472	0	193,549	193,549	5.67
2017	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,687,000	10,634,000	-	207,082	313,782	193,549	362,788	169,239	5.21
2018	0.0%	0	677	483,021	-	483,021	53,000	-	53,000	-	53,000	53,700	10,634,000	10,581,000	-	210,810	317,510	362,788	528,299	165,511	5.14
2019	0.2%	2	679	**505,812**	14,400	520,212	270,000	-	270,000	-	270,000	53,700	10,581,000	10,311,000	-	214,604	538,304	528,299	510,207	(18,092)	1.13
2020	0.2%	2	681	507,303	14,400	521,703	270,000	3,000	273,000	-	273,000	53,700	10,311,000	10,041,000	-	218,467	542,167	510,207	489,743	(20,464)	1.11
2021	0.2%	2	683	508,794	14,400	523,194	270,000	5,000	275,000	-	275,000	53,700	10,041,000	9,771,000	-	222,400	546,100	489,743	466,837	(22,906)	1.09
2022	0.2%	2	685	510,285	14,400	524,685	270,000	8,000	278,000	-	278,000	53,700	9,771,000	9,501,000	-	226,403	550,103	466,837	441,419	(25,418)	1.07
2023	0.2%	2	687	511,776	14,400	526,176	270,000	11,000	281,000	-	281,000	53,700	9,501,000	9,231,000	-	230,478	554,178	441,419	413,417	(28,002)	1.05
2024	0.2%	2	689	513,267	14,400	527,667	270,000	14,000	284,000	-	284,000	53,700	9,231,000	8,961,000	-	234,627	558,327	413,417	382,758	(30,660)	1.03
2025	0.2%	2	691	514,758	14,400	529,158	270,000	17,000	287,000	-	287,000	53,700	8,961,000	8,691,000	-	238,850	562,550	382,758	349,366	(33,392)	1.01
2026	0.2%	2	693	516,249	14,400	530,649	270,000	28,000	298,000	-	298,000		8,691,000	8,421,000	-	243,149	513,149	349,366	366,865	17,500	0.96
2027	0.2%	2	695	517,740	14,400	532,140	270,000	40,000	310,000	-	310,000		8,421,000	8,151,000	-	247,526	517,526	366,865	381,479	14,614	0.92
2028	0.2%	2	697	519,231	14,400	533,631	270,000	51,000	321,000	-	321,000		8,151,000	7,881,000	-	251,982	521,982	381,479	393,129	11,649	0.88
2029	0.2%	2	699	520,722	14,400	535,122	270,000	63,000	333,000	-	333,000		7,881,000	7,611,000	-	256,517	526,517	393,129	401,734	8,605	0.84
2030	0.2%	2	701	522,213	14,400	536,613	270,000	75,000	345,000	-	345,000		7,611,000	7,341,000	-	261,135	531,135	401,734	407,212	5,478	0.80
2031	0.2%	2	703	523,704	14,400	538,104	270,000	88,000	358,000	-	358,000		7,341,000	7,071,000	-	265,835	535,835	407,212	409,481	2,269	0.76
2032	0.2%	2	705	525,195	14,400	539,595	270,000	101,000	371,000	-	371,000		7,071,000	6,801,000	-	270,620	540,620	409,481	408,456	(1,025)	0.72
2033	0.2%	2	707	526,686	14,400	541,086	270,000	115,000	385,000	-	385,000		6,801,000	6,531,000	-	275,491	545,491	408,456	404,051	(4,405)	0.69
2034	0.2%	2	709	528,177	14,400	542,577	270,000	128,000	398,000	-	398,000		6,531,000	6,261,000	-	280,450	550,450	404,051	396,177	(7,873)	0.66
2035	0.2%	2	711	529,668	14,400	544,068	270,000	142,000	412,000	-	412,000		6,261,000	5,991,000	-	285,498	555,498	396,177	384,747	(11,430)	0.63
2036	0.2%	2	713	531,159	14,400	545,559	270,000	159,000	429,000	-	429,000		5,991,000	5,721,000	-	290,637	560,637	384,747	369,669	(15,078)	0.59
2037	0.2%	2	715	532,650	14,400	547,050	270,000	175,000	445,000	-	445,000		5,721,000	5,451,000	-	295,869	565,869	369,669	350,850	(18,819)	0.56
2038	0.2%	2	717	534,141	14,400	548,541	270,000	192,000	462,000	-	462,000		5,451,000	5,181,000	-	301,194	571,194	350,850	328,197	(22,653)	0.54
2039	0.2%	2	719	535,632	14,400	550,032	270,000	210,000	480,000	-	480,000		5,181,000	4,911,000	-	306,616	576,616	328,197	301,613	(26,584)	0.51
2040	0.2%	2	721	537,123	14,400	551,523	270,000	228,000	498,000	-	498,000		4,911,000	4,641,000	-	312,135	582,135	301,613	271,001	(30,612)	0.48
2041	0.2%	2	723	538,614	14,400	553,014	270,000	247,000	517,000	-	517,000		4,641,000	4,371,000	-	317,753	587,753	271,001	236,261	(34,740)	0.46
2042	0.2%	2	725	540,105	14,400	554,505	270,000	267,000	537,000	-	537,000		4,371,000	4,101,000	-	323,473	593,473	236,261	197,293	(38,968)	0.43
2043	0.2%	2	727	541,596	14,400	555,996	270,000	287,000	557,000	-	557,000		4,101,000	3,831,000	-	329,295	599,295	197,293	153,993	(43,300)	0.41
2044	0.2%	2	729	543,087	14,400	557,487	270,000	307,000	577,000	-	577,000		3,831,000	3,561,000	-	335,223	605,223	153,993	106,258	(47,736)	0.39
2045	0.2%	2	731	544,578	14,400	558,978	270,000	330,000	600,000	-	600,000		3,561,000	3,291,000	-	341,257	611,257	106,258	53,979	(52,279)	0.36
							7,449,000	3,291,000	10,740,000	-	10,740,000										

Total Principal Payment = 10,740,000

When ERUSs exceed 800 , Willard must pay an additional $ 64.00 per ERU

State of Utah

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Environmental Quality

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Water Quality Board
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Clyde L. Bunker
Jennifer M. Grant
Hugh E. Rodier
Gregg A. Galecki
Amanda Smith
Walter L. Baker
Executive Secretary

Application Number: _____
Date Received: May 15, 2015
Date to be presented to the WQB: May 27, 2015

WATER QUALITY BOARD
FEASIBILITY REPORT FOR WASTEWATER TREATMENT PROJECT
INTRODUCTION

APPLICANT:	Helper City 73 South Main Street Helper, UT 84526 Telephone: (435) 472-5391
PRESIDING OFFICIAL:	Edward Chavez, Mayor
TREASURER/RECORDER:	Jona Skerl, Recorder
CONSULTING ENGINEER:	Chad Brown, PE Franson Civil Engineers Telephone: (801) 756-0309
BOND COUNSEL:	TBD

APPLICANT'S REQUEST:

Helper is requesting financial assistance in the amount of a $2,314,000 loan with a repayment term of 30 years at 0% for the completion of the sewer replacement project that is replacing mains throughout the city.

APPLICANT'S LOCATION:

Helper City is located at the mouth of Price Canyon, alongside the Price River.

MAP OF APPLICANT'S LOCATION

BACKGROUND:

Helper has primarily developed along with coal mining and power plant operations in the region. The 2010 Census population for Helper was 2,201. Currently, sewage is collected in the City's sewerage system and delivered to the Price River Water Improvement District where it is treated and then discharged into the Price River.

PROJECT NEED:

The sewerage system in Helper City was constructed before the 1950s and was primarily comprised of clay pipe. A visual inspection of sewer lines in 2011 determined that the sewer system was deteriorating rapidly. In January 2012, a capital facilities master plan was completed that recommended replacing sewers in seven areas in the City. Also in 2012, Helper obtained $5,500,000 in funds from the Community Impact Board (CIB) for this project.

Helper has since been bidding the master plan recommended projects as separate phases. Five of seven projects that were funded by CIB have been completed and the sixth project can be completed with the existing funding. Due primarily to increases in construction costs since 2012 when the CIB loan was closed, there are insufficient funds remaining from the CIB loan to

complete the last remaining area, Area 2.

ALTERNATIVES TO BE EVALUATED:

An alternatives analysis was performed for the project in the capital facilities master plan. Staff will review the Capital Facilities Master Plan for compliance with DWQ SRF funding requirements to make sure the alternatives analysis meets our requirements prior to closing the loan.

Helper City holds a current construction permit issued by the Division when the project was originally planned, anticipating full funding by CIB.

POSITION ON PROJECT PRIORITY LIST:

This project is ranked 15th out of 16 projects on the Wastewater Treatment Project Priority List.

POPULATION GROWTH:

Helper City is not expected to see a substantial amount of growth, on average, about 0.3% per year. The anticipated closure of Rocky Mountain Power's Carbon Power plant and associated losses in jobs that support the power plant may also adversely affect the community's population and growth rate, which could be an additional hardship. The Governor's Office for Planning and Budget shows the following projections for Helper City:

Year	Population
2010	2,201
2020	2,221
2030	2,272
2040	2,351
2050	2,425
2060	2,508

PROJECT SCHEDULE:

Introduction to the WQB	May 27, 2015
Apply to WQB for Authorization:	June 24, 2015
Facility Plan Approval	July 2015
Rebid Project	August 2015
Loan Closing	September 2015
Construction Completion	December 2016

COST ESTIMATE:

Bonding	$35,000
DWQ Loan Origination Fee (1%)	$23,000
Engineering – Construction Services	$200,000
Administration	$6,000
Legal – ROW & Easements	$10,000
Construction	$1,855,000
Contingency	$185,000
Total Project Cost:	$2,314,000

APPLICANT'S CURRENT USER CHARGE:

Currently Helper charges a base sewer fee of $35.00 per month per Equivalent Residential Connection (ERU). Staff estimates that Helper will need to increase its basic sewer rate to about $42/month to pay for its current sewer debt obligation.

STAFF RECOMMENDATION::

The Water Quality Board established a loan affordability criterion of 1.40 percent of the local median adjusted household income (MAGI) that is used by staff to recommend financing conditions. The attached cost model (Attachment 1) shows that to achieve affordable financing, a loan of $1,314,000 at 0% interest for 30 years coupled with a grant of $1,000,000 would be applicable. This financing package would require Helper to increase its basic sewer rate to $46.73 per effective residential unit per month, an increase of $11.73 per month.

Helper requested supplemental funding of $2,000,000 for 30 years at 0% from CIB for this project. The CIB advanced the request to its priority list (which is over extended) for $2,000,000 for 30 years at 2.5%, which is equivalent to 1.56% of the MAGI. The applicant's request for $2,314,000 from the Water Quality Board at 0% interest for 30 years (1.51% MAGI) should also be considered by the board in establishing an appropriate financing package for supporting the final phase of Helper's sewer improvement project. This is an introduction of the Helper project and staff proposes to return to the board in June to request authorization at that time. Staff requests that the board consider its financing alternatives for the Helper project in light of information presented to the board by the applicant, the board's affordability criteria including affordability and local economic conditions, and the alternative financing that may be available through CIB.

SPECIAL CONSIDERATIONS:

Special conditions will be recommended with the request for loan authorization..

Helper City
2015 SEWER LINE REPLACEMENT PROJECT

Project Costs	
Bonding	35,000
Loan Origination Fee	23,000
Construction	1,855,000
Contingency	185,000
Engineering - Basic	-
Engineering - Special Services	200,000
Administration	6,000
Legal- ROW & Easements	10,000
Land	-
Total Project Cost:	**2,314,000**

Project Funding	
Applicant Contribution	-
CIB	2,314,000
	2,314,000

Project Funding	
Grant	-
Loan	2,314,000
	2,314,000

Current Customer Base & User Charges	
Residential Customers (connections):	927
Comm/Indust Customers (connections):	69
Additional based upon 2014 billing (ERUs):	54
Total 2014 ERUs:	1,050
MAGI for Price (2013)	$39,942
Current Impact Fee (per ERU):	$250
Current Monthly User Fee (per ERU)	$35.00
Current Monthly User Fee (% MAGI)	1.05%

Annual Sewer O&M Cost	
Existing O&M expenses Treatment & Collection	277,200
New O&M expenses Treatment & Collection	$268,885

Existing Sewer Debt Service	
Existing Sewer Debt Service	$263,000

Funding Conditions	
Loan Repayment Term:	30
Reserve Funding Period:	5

ESTIMATED COST OF SEWER SERVICE

DWQ Grant Amount	DWQ Loan Amount	DWQ Loan Interest Rate	DWQ Loan Debt Service	DWQ Loan Reserve	Annual Sewer O&M Cost	Existing Sewer Debt Service	Total Annual Sewer Cost	Monthly Sewer Cost/ERU	Sewer Cost as a % of MAGI
-	**2,314,000**	**0.00%**	**$77,133.33**	**23,140**	**268,885**	**$263,000**	**$632,158.33**	**50.17**	**1.51%**
-	2,314,000	0.50%	$83,255.22	24,977	268,885	$263,000	640,117	50.80	1.53%
-	2,314,000	1.00%	$89,663.13	26,899	268,885	$263,000	648,447	51.46	1.55%
-	2,314,000	1.50%	$96,353.08	28,906	268,885	$263,000	657,144	52.15	1.57%
-	2,314,000	2.00%	$103,319.92	30,996	268,885	$263,000	666,201	52.87	1.59%
-	2,314,000	2.50%	$110,557.46	33,167	268,885	$263,000	675,610	53.62	1.61%
1,000,000	1,314,000	0.00%	$43,800.00	13,140	268,885	$263,000	$588,825	46.73	1.40%
1,000,000	1,314,000	0.50%	$47,276.30	14,183	268,885	$263,000	593,344	47.09	1.41%
1,000,000	1,314,000	1.00%	$50,915.02	15,275	268,885	$263,000	598,075	47.47	1.43%
1,000,000	1,314,000	1.50%	$54,713.89	16,414	268,885	$263,000	603,013	47.86	1.44%
1,000,000	1,314,000	2.00%	$58,670.00	17,601	268,885	$263,000	608,156	48.27	1.45%
1,000,000	1,314,000	2.50%	$62,779.82	18,834	268,885	$263,000	613,499	48.69	1.46%
2,256,000	$0	0.00%	$0.00	-	268,885	$263,000	$531,885.00	42.21	1.27%

*Bonding and Loan Origination not required for 100% Grant

2013 CIB Bond	Total
125000	125000
128000	128000
132000	132000
135000	135000
138000	138000
142000	142000
145000	145000
149000	149000
153000	153000
156000	156000
160000	160000
164000	164000
168000	168000
173000	173000
177000	177000
181000	181000
186000	186000
191000	191000
195000	195000

State of Utah

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Amanda Smith
Walter L. Baker

MEMORANDUM

TO: Water Quality Board

THROUGH: Walter L. Baker, P.E. WLB.

FROM: Chris Bittner, Standards Coordinator

DATE: May 15, 2015

SUBJECT: Request for Water Quality Board member to serve as hearing officer for proposed revisions to R317-2 Standards of Quality for Waters of the State

Action Item: Selection of a Board member to serve as hearing officer or designation of staff to serve as hearing officer.

Per Utah Code (19-5-110), public hearings are required prior to the Board adopting revisions to the Standards. Staff has filed the proposed changes with the Utah Division of Administrative Rules as approved by the Board at the April 2015 Meeting. A public hearing for these revisions is scheduled:

June 29, 2015 from 6:00-7:00 p.m.
Brigham City Library Conference Room
26 E. Forest St.
Brigham City, Utah 84302

Traditionally, Board members have volunteered to serve as the hearing officer and represent the Board. Staff will provide the Board member with a copy of the Hearing Officer Statement included at the end of this memorandum and attend to the logistics of the hearing. If none of the Board members are able to serve, the Board can designate staff (Chris Bittner) to serve as the hearing officer. The Board should be aware that staff anticipates that attendance and interest in these proposed revisions will be low and no one may attend the hearing to give comments.

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144870 • Salt Lake City, UT 84114-4870
Telephone (801) 536-4300 • Fax (801) 536-4301 • T.D.D. (801) 536-4414
www.deq.utah.gov
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Hearing Officer Statement

Public Hearing:

An opportunity to comment on the proposed revisions to Utah's Standards of Quality for Waters of the State (R317-2)

Date, Time, Location:

June 29, 2015 6:00 to 7:00 pm
Brigham City Library Conference Room
26 E. Forest St.
Brigham City, Utah 84302

Hearing Officer: [Name]

Good Evening:

My name is [Name] and I am a member of the Utah Water Quality Board. I will be conducting the public hearing this evening. The purpose of this hearing is to receive formal comments on the proposed changes being considered for R317-2: Standards of Quality for Waters of the State. This is a formal hearing conducted under the laws of the State of Utah.

I welcome you and thank you for taking the time to provide feedback on the proposed rule changes. If you have not done so, please sign the attendance sheet on the table near the door.

We are solely receiving comments today for our consideration. There will be no attempt by us to address your concerns in this forum. No items will be voted on and no actions will be taken. We may ask for clarifications. Comments can also be submitted in writing until July 6, 2015.

Following this hearing, we will take all the comments received during the public comment period and at the public hearing and evaluate them. Division of Water Quality staff will prepare a response and make recommendations to the Water Quality Board. The Water Quality Board decides whether to adopt the changes as proposed or with modifications.

At this time, I ask that those of you who wishing to make a formal statement, to please come to the table, speak into the microphone, state your name and affiliation for our records and provide your comments.

[Public Comments]

I thank you for your comments.

The public hearing is adjourned.

(http://www.prnewswire.com/)

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American Sands Energy Corp. Receives Utah DEQ Permit

SALT LAKE CITY, April 28, 2015 /PRNewswire/ -- American Sands Energy Corp. (OTCBB: AMSE, "AMSE" or the "Company"), an oil sands exploration and development company operating in Utah, is pleased to announce the publication for comment of its Ground Water Discharge Permit and its associated Construction Permit.

"The publication of these permits by The Utah Department of Environmental Quality's Division of Water Quality demonstrates the lack of impact that American Sands will have on ground water in the Bruin Point area," stated William Gibbs, Company CEO. AMSE's groundbreaking, water-free extraction process is able to extract bitumen from the sands without using or discharging any water. We believe our Sunnyside Project will become a leading example of clean bitumen extraction for unconventional oil recovery projects."

"Obtaining the approval of the DEQ is a major achievement for American Sands," according to COO Robin Gereluk. "Once we are fully permitted, AMSE hopes to be producing bitumen within 18 months at the rate of up to 9,000 barrels per day. With a cost basis of under $40 per barrel, and our limited environmental impact, we anticipate being a leader in the nascent oil-wet oil sands extraction industry."

The Company is also currently in the process of working on its Large Mine Permit. AMSE believes it has met all the requirements for this permit and hopes to have this permit published for public comment in the near future.

About American Sands Energy Corp.

American Sands Energy Corporation is a development stage Delaware company with primary operations in Utah. The Company has acquired rights to oil sand ore covering approximately 1,800 private acres of prime oil sand deposits in the Sunnyside area of Utah. The Company has an extraction and recovery system using a licensed proprietary solvent that separates oil and other hydrocarbons from sand, dirt and other substances without creating tailing ponds and other environmental hazards. For more information, visit www.americansandsenergy.com (http://www.americansandsenergy.com/).

Forward Looking Statements

This release contains forward-looking statements regarding AMSE's future plans and expected performance based on assumptions the Company believes to be reasonable. A number of risks and uncertainties could cause actual results to differ materially from these statements, including, without limitation, the success rate of business development efforts, exploration efforts and the timeliness of development activities, the ability to place the project into full production; the ability to secure all necessary mining permits in a timely manner, fluctuations in energy prices, confirmation of estimated resources, and other risk factors described from time to time in the Company's reports filed with the SEC. In addition, the Company operates in an industry sector where securities values are highly volatile and may be influenced by economic and other factors beyond the Company's control. American Sands Energy Corp. undertakes no obligation to publicly update these forward-looking statements, whether as a result of new information, future events or otherwise. This press release does not constitute an offer to sell or a solicitation of an offer to buy any of AMSE's securities, and there shall not be any sale of AMSE's securities in any jurisdiction in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction, or the availability of an exemption therefrom.

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Cache Valley fourth-graders learn about water issues

By Kelly Cannon | Posted: Wednesday, April 29, 2015 8:50 pm

Learning about water contamination

Students from Summit Elementary School learn how water can become contaminated during a Water Fair at the Cache County Fairgrounds on Wednesday.

Over 1,500 fourth-graders from 21 elementary schools in the valley learned about water during the annual Water Fair on Tuesday and Wednesday at the Cache County Fairgrounds. Hosted by the Cache County Storm Water Coalition, students learned about various topics through hands-on activities.

"We also try to pick topics that correlate to the fourth-grade core curriculum relative to the water cycle and water systems," said Bill Young, the city engineer of Logan. "This hopefully works as a good review this time of year as they go into core testing and being able to review that aspect of their core curriculum."

Students transitioned between stations manned by volunteers from 10 cities in the county as well as from Utah State University, the Rural Water Association and the Natural Resources Conservation Service. Students learned about water treatment, water conservation, source protection of wells and groundwater, the water cycle, cross contamination of water, the importance of minimizing erosion and how to prevent surface contamination.

The Cache County Storm Water Coalition has been hosting the Water Fair for the past nine or 10 years.

"As part of our permit with the (Utah Department of Environmental Quality), we provide some public education and outreach," Young said. "This is one of the activities that we do."

Fourth-grade teacher Greg Cox from Ellis Elementary said he appreciated that the whole county was involved in putting on the Water Fair.

"It lets the students know that this isn't just a city issue. This is a county and state issue," Cox said. "It teaches the importance of water conservation and using water correctly."

Cox explained that the water cycle is a big part of the fourth-grade science curriculum, and these types of activities are really engaging for the students.

"I think that they like coming out and seeing all of the activities that we as teachers can't do in our

classroom because we don't have the resources," Cox said.

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Herald | MEDIA

Know your city's outdoor water policy as dry summer approaches

MAY 03, 2015 12:30 PM • CATHY ALLRED DAILY HERALD

UTAH COUNTY -- Salem City has some big, sharp, scary-looking teeth within its outdoor watering ordinance.

Mayor Randy Brailsford said the city had several work meetings in early 2014 before finalizing the city's pressurized irrigation water use ordinance.

"We need people to watch what they are doing," Brailsford said, adding that 99 percent of residents are conservation conscious during a drought.

"That 1 percent has got to realize that we have a water shortage and they need to work with us," he said. "The heavier fine might wake them up to comply along with the rest of the residents."

How heavy is the fine? As much as $750, and that fine goes toward supplying the offender with a pressurized irrigation water meter.

Upon a fourth violation, Salem City will shut off the offender's pressurized irrigation system for the 2015 season.

The second-driest state in the U.S., Utah is also one of the most abusive when it comes to conserving water.

"My biggest concern is, as mayor, I want to make sure we have water in our homes, second is to have water for our firefighters, third and very last is green lawns," Brailsford said. "I never heard of a house fire where someone said, 'Too bad about that house fire, but they sure had a green lawn.'"

Salem isn't the only municipality getting tough on water conservation violations. Payson's ordinance for misusing its pressurized water irrigation system can sic an offender with a $750 fine or up to 90 days in jail, or both.

Each Utah County city has a different system and a different ordinance geared toward its water needs. Elk Ridge, Genola, Highland, Orem, Provo, Santaquin, Spanish Fork, Springville, Vineyard and Woodland Hills either have a different watering system (culinary water) for outdoor watering or have no severe water shortage predicted for the season.

Mapleton is one local city that has not imposed water restrictions. The city does, however,

have a plea written by its mayor in the May edition of the city newsletter.

"We have had early reports that our springs are already dropping in volume and that the wells have begun to drop as well," Mayor Brian J. Wall said. "Please do what you can to conserve water in an effort to avoid mandated watering restrictions."

While south Utah County seems to be more progressive in reining in excessive water use, north Utah County governments are beginning to create stronger consequences for water waste.

City leaders in American Fork showed initiative by becoming one of the first municipal legislative bodies to institute an earlier water conservation program for secondary irrigation use.

Other north Utah County cities soon followed suit. Lehi City Council members approved an amended ordinance to provide more kick if someone is found wasting water. The new law goes into effect May 15: first violation, warning; second violation, a $150 fine; every violation after that is a $500 fee.

Each time, the water is turned off until the fine is paid.

The most common water conservation ordinance for outdoor watering includes an odd-even address regulation. Residents in homes with an odd-numbered address can water on Monday, Wednesday and Friday. Those with an even-numbered address can water on Tuesday, Thursday and Friday.

Cedar Hills Mayor Gary Gygi has been focused on water conservation in his city since taking office in 2012.

"I studied our pressurized irrigation data and compared that to the state's recommended usage and found out we use almost three times what the state says we should be using," Gygi said.

He created a water conservation committee primarily composed of residents and staff to study the city's water usage.

"The committee stated that the only long-term solution is to meter our secondary water," Gygi said.

Saratoga Springs officials have done just that, installing a metered secondary irrigation system so its users pay on tiered levels of usage. The more they use for outdoor watering, the more they pay.

Gygi said many residents are water conservationists who don't want to over water, nor supplement others who can't seem to reign in their watering.

"Any city with pressurized irrigation without meters has a situation where some residents are subsidizing other residents' watering habits because in most cities, everyone pays only a base rate," Gygi said.

"I believe in the free markets, and this is not a free market where one group is subsidizing another group; I believe we should pay for what we use."

Residential outdoor water use

The odd and even address rule: odd numbered-addresses water Mondays, Wednesdays, Fridays; even addresses water Tuesdays, Thursdays, Saturdays. Depending on the city, Sunday is a day reserved for dry spot waterings or not at all.

Those cities in Utah County with an active outdoor watering ordinance, listed alphbetically:

ALPINE

Affective April 15, 3 days a week, odd and even address rule. Watering allowed from 7 p.m. to 7 a.m.

Enforcement: First offense, warning; second offence, $50 fine paid before water turned back on; third and future offences $200 fine, also required before water turned back on.

AMERICAN FORK

Affective March 24, 3 days a week, odd and even address rule. Watering allowed from 6 p.m. to 10 a.m. Residents without automated sprinkler systems water on Monday, Wednesday and Friday between 10 a.m. and 6 p.m. to offset demand. Sundays, dry spot watering.

Enforcement: The first offense, warning; second offense locked out of water system, $100 reinstatement fee; third offense is a Class C misdemeanor and a $300 fine.

CEDAR HILLS

The city of Cedar Hills developed a plan to educate and encourage water conservation in 2014. City elected officials discussed mandatory conservation measures on April 21.

EAGLE MOUNTAIN

Operation of irrigation systems between the hours of 10 a.m. to 6 p.m. daily is prohibited. Penalty for violating the code is first a written warning and second, termination of water service until a $100 reconnection charge is paid to the city.

LEHI

Affective May 11, 2 days a week, odd addresses water on Mondays and Fridays, even on Tuesdays and Saturdays, Sundays for dry spot watering. Recreation sprinklers and outdoor water toys prohibited. Hard surface watering prohibited. No time restriction.

Enforcement: The first offense, warning; second offense is a $100 fine; and third and future offences will be a $500 fine.

LINDON

City policy is no watering from 10 a.m. to 6 p.m. Violators will be warned. If necessary, water will be shut off. Other water conservation measures are recommended.

PAYSON

Water 3 days a week, odd and even address rule. No watering on Sunday. Watering time period limited to 15 to 20 minutes. Water between 6 p.m. to 10 a.m. preferred.

Enforcement: The first offense, a warning; second offense, $25 fine; third and future offenses will be a Class C misdemeanor requiring a mandatory appearance in Payson Justice Court and a possible $750 fine and up to 90 days in jail.

PLEASANT GROVE

Water 3 days a week, odd and even address rule. No residential watering on Sunday.

Enforcement: First offense, warning; second offense, disconnection and $50 reconnection fee; third offense $200 reconnection fee; fourth offense, $500 reconnect fee (2014 amendment).

SALEM

No outside watering between 10 a.m. and 6 p.m., no exceptions. No watering on Tuesdays or Fridays for residential homes. City parks, schools and businesses water on Fridays. Residents are allowed to water on Mondays, Wednesdays, Saturdays and Sundays.

Enforcement: A written warning for the first violation. A second violation by a residential user within the same calendar year, a $100.00 penalty and the valve shall be turned off and tagged until fee is paid in full. A third violation has a $750.00 penalty and the pressure irrigation service shall be metered and a metered rate paid for the water used. A fourth violation and irrigation service will be terminated for the irrigation season.

SANTAQUIN

No mandatory conservation measures. City reserves the right to issue a proclamation and enforce consequences for violating the proclamation.

See your city's website or call to find out more about your municipality's water conservation ordinance.

'Water Week' to promote conservation

David DeMille, *7:05 p.m. MDT May 3, 2015*

(Photo: Jud Burkett / The Spectrum & Daily News)

After another warm, dry winter, southwest Utah is facing a fourth straight year of what some longtime locals are calling the worst drought in memory.

So this week water managers are hoping a series of water-focused events will encourage residents to conserve.

The annual "Water Week" campaign gets under way today, kicking off a series of workshops, tours and other activities hosted by the Washington County Water Conservancy District and St. George City.

"All activities are designed to recognize the essential role water plays in our daily lives," said Julie Gillins, conservation manager for the district. "We want people to think about water and better understand how it gets to our homes and how we can use it more efficiently."

Events start today with the Garden Fair, scheduled for 4 p.m. to 7 p.m. at Tonaquint Park, 1851 S. Dixie Drive, featuring various interactive displays and educational booths, before elected officials lead a two-mile "water walk" from the park in a symbolic gesture of the distance people in water-stressed communities have to walk daily for water.

Later in the week, residents are invited to tour the water treatment plants at either end of the St. George area's municipal water system.

Since Gov. Jon Huntsman Jr. declared the first Water Week in 2007, state leaders have used the occasion to get the public involved, and educated, with the goal of cutting water per-capita usage statewide by 25 percent by 2025.

More than 60 percent of Washington County's water use goes toward irrigation, according to area water managers, and despite the desert environment the county's use as of 2010 was 320 gallons per person per day, compared to a statewide average of 240, according to a Utah Division of Water Resources report from last year.

However, the county faces a number of unique challenges when it comes to measuring per-capita use — heavy tourism and a large number of second homes contribute to overall water use.

Residential use was lower than the rest of the state, and in the last decade the county saw a 47 percent drop in residential outdoor use, from 180 gpcd in 2000 to 95 gpcd in 2010.

"Our community has come a long way in terms of water awareness but there is always more we can do," Breckenridge said.

Follow David DeMille on Twitter, @SpectrumDeMille (http://www.twitter.com/spectrumdemille), and on Facebook at www.facebook.com/SpectrumDeMille (http://www.facebook.com/SpectrumDeMille).

Water Week

May 4

•Garden Fair: Interactive displays, children's games, educational booths, prizes, music, refreshments and other activities, from 4 p.m. to 7 p.m., Tonaquint Park, 1851 S. Dixie Dr., St. George.

•Water Walk: A symbolic walk covering two miles - the distance some in water-stressed countries must walk every day to get water- from 7 p.m. to 8 p.m., Tonaquint Park, 1851 S. Dixie Dr., St. George.

May 5

•Quail Creek Dam tours: A guided tour through the dam holding back Quail Creek Reservoir, which feeds the regional water treatment plant from which most residents get their water, from 1 p.m. to 4 p.m. starting at the treatment plant, 270 N. 5300 West, Hurricane.

May 6

•Waste Water Treatment Plant tours: A guided tour through the plant where water is treated before being released back into the Virgin River, 1 p.m. to 3 p.m. at the plant, 3780 S. 1500 West, St. George.

For more information call the Washington County Water Conservancy District at (435) 673-3617 or visit www.wcwcd.org (http://www.wcwcd.org).

Michelle Deras, aquatics biologist and chief operator at the Quail Creek Water Treatment Plant for the Washington County Water Conservancy District, describes the process behind the treatment of water during a tour of the facility Tuesday, May 6, 2014. Similar tours are being offered this week as part of the 2015 "Water Week" celebration in Washington County. *(Photo: Jud Burkett / The Spectrum & Daily News)*

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Audit reveals flawed projections on Utah's water needs

By Amy Joi O'Donoghue, Deseret News

Follow @amyjoi16

Published: Tuesday, May 5 2015 7:31 p.m. MDT
Updated: Tuesday, May 5 2015 7:31 p.m. MDT

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Water levels remain low at Jordanelle State Park Tuesday, May 5, 2015. Projections of Utah's water needs have been made for the Legislative Audit Committee.

Jeffrey D. Allred, Deseret News

Summary

An audit found the state of Utah is relying on inaccurate water data, using outdated basin plans and ignoring development of local water supplies when it projects the amount of water to meet demands of a population that will double by 2060.

SALT LAKE CITY — A legislative audit released Tuesday concludes state water managers have no real idea how much water is being used across Utah so the projection that developed supplies will be exhausted by 2040 is not reliable.

The audit, performed by the Office of the Legislative Auditor General, was requested by lawmakers and pushed by advocacy groups that argue Utah's pursuit of the Lake Powell Pipeline and Bear River Development project is a waste of taxpayer dollars.

The audit is being presented Tuesday at 9 a.m. before the Legislative Audit Subcommittee.

While it did not conclude the two projects are unnecessary, the audit did say that the baseline data used to project future water needs is fraught with significant inaccuracies and flawed estimates derived from submissions by 468 public community water managers that are not verified or questioned.

In one instance, a city's water use in 2013 was double that of 2012 and in another, a city's public works director acknowledged that there were serious problems in documenting water use prior to 2009, so that information should be ignored.

Both state divisions that work with the numbers

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submitted by local water providers acknowledge problems with the information's veracity, leading the audit recommend that the parent department, Natural Resources, take the lead in ensuring better numbers.

The release of the audit brought strong reaction from those opposed to the pipeline project.

"The Division of Water Resources has been using bad data to support billions of dollars in unnecessary spending for massive water projects," said Zach Frankel, executive director of the Utah Rivers Council.

"This marks the first time in two decades that this agency will have any oversight."

In a written response to the audit, the state Division of Water Resources director Eric Millis agreed there needs to be a more sophisticated system that measures water use across the state, better methods for validating the results and plans need to be updated on a more routine basis.

Millis also said the division plans to work more closely with other entities to refine estimates on developed water supplies.

The audit found that the water resources division is wrongly ignoring local areas' development of water supplies and that seven of 11 individualized water basin plans have not been updated in a decade or more.

Utah water managers are also over estimating daily consumption requirements, keeping the same number well into the future that ignore savings that will naturally be achieved through smaller lots, greater use of low-flow appliances and more aggressive conservation strategies that could be implemented.

"In conclusion, opportunities to continue reducing per capita water use remain abundant," the audit said. "Better data, more thoroughly analyzed, is needed to inform policymakers."

Information compiled in the long-awaited audit also reveals a haphazard system of secondary water use in which waste is rampant and conservation rarely encouraged.

The audit pointed to a 10-year Utah State University study of outdoor watering practices in Salt Lake City that found residents, as recently as 2010, were applying twice the amount of water needed for plants to be healthy.

While acknowledging that states have different reporting methods and varying climates, the audit shows Utah has the highest per capita water use in the nation — at 248 gallons per capita, compared to Nevada's 229, Arizona's 196 and Colorado's 180.

The differences are so large, the audit notes, that it questions statewide conservation targets that could be more aggressive to bump up additional water savings.

Auditors point to unfettered water use that is driven in large measure by low water rates and lack of secondary water metering that fails to encourage conservation.

The audit brings up a study that looked at the price of

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The audit brings up a study that looked at the price of water in 30 U.S. cities that revealed Salt Lake City's water rates at a lower level than nearly every other city analyzed. A comparable look at a household's use of 100 gallons of water per day showed that Phoenix charges 30 percent more, Las Vegas 36 percent more and Santa Fe 82 percent more than Salt Lake City does for water.

A number of recommendations are included in the audit report — some of which would require a change in state law — such as requiring universal metering, reduction of water provider reliance on property taxes that subsidize water rates and the use of conservation pricing structures.

This story will be updated following Tuesday morning's Legislative Audit Subcommittee meeting.

Email: amyjoi@deseretnews.com, Twitter: amyjoi16

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Water Pipeline Triggers Debate About Utah's Future

By JUDY FAHYS (/PEOPLE/JUDY-FAHYS) • MAY 4, 2015

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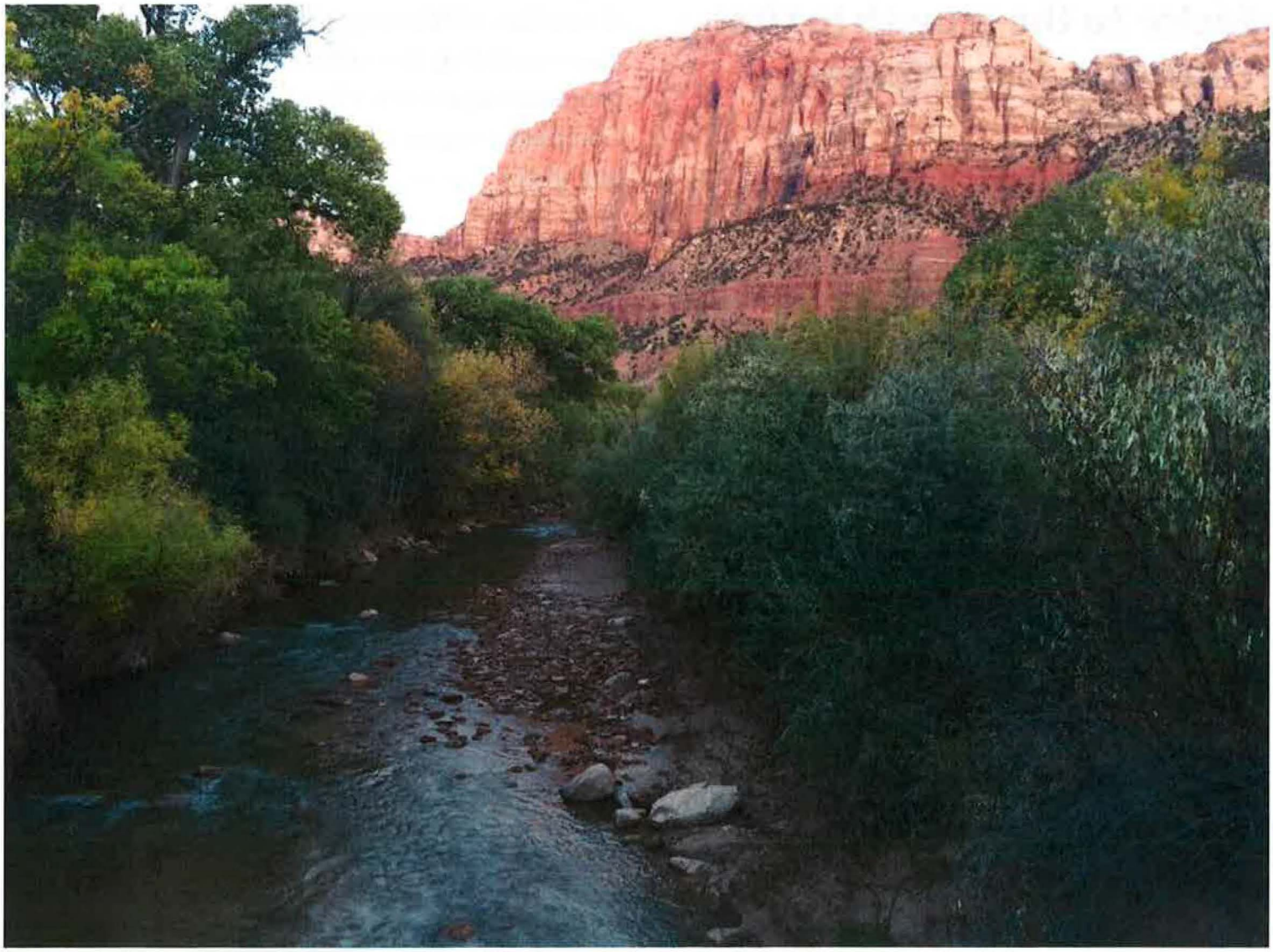

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The Virgin River (shown here near ZIon National Park) is the primary water source for the Washington County Water Conservancy District. The district says the Lake Powell would provide a backup source of water for this growing area.

JUDY FAHYS/KUER

Ron Thompson sees a future when four times as many people could be living here in St. George, and they'll need more water than the Virgin can provide. That's why he wants the Lake Powell Pipeline (http://www.wcwcd.org/projects/current-projects/lpp-lake-powell-pipeline/).

"I think we'll hit that limit in about a decade," says Thompson, general manager of the Washington County Water Conservancy District. "We will have developed everything we can, and unless we bring a project similar to Lake Powell online, we're really out of water in this basin. Either people gotta start bringing their water with 'em or stay away."

Water is the only limiting factor to the growth in Utah - Utah Gov. Gary Herbert

The pipeline would be a giant straw, nearly 6 feet in diameter and winding halfway across the state with enough water to support thousands of families in Washington and Kane counties. It also would help the state capture water promised under the 1922 Colorado River Compact – water some consider Utah's birthright.

The state officially became the project's leader in 2006, when lawmakers passed the Lake Powell Pipeline Development Act. Since then, the Utah Division of Water Resources has spent roughly $25 million of statewide sales tax revenues on the application to license the project through the Federal Energy Regulatory Commission. The application is due in a year.

Thompson says Utahns see the pipeline as an economic investment. It's also a means of fulfilling the state's and the region's destiny.

"The question really is: Does Utah, who has a big water right that comes into Lake Powell every year, can only get out of Lake Powell, do they allow that water to stay here so it sustains our economy and we use our water here?" Thompson asks, "Or do we allow it to go downstream to support and sustain other economies and other citizens that doesn't help our kids or our economy?"

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Lake Powell water would be stored at Sand Hollow Reservoir if the pipeline's built. But Jane Whalen hopes that won't happen. She's a founding member of the local environmental group, Citizens for Dixie's Future (http://citizensfordixie.org/lake-powell-pipeline/).

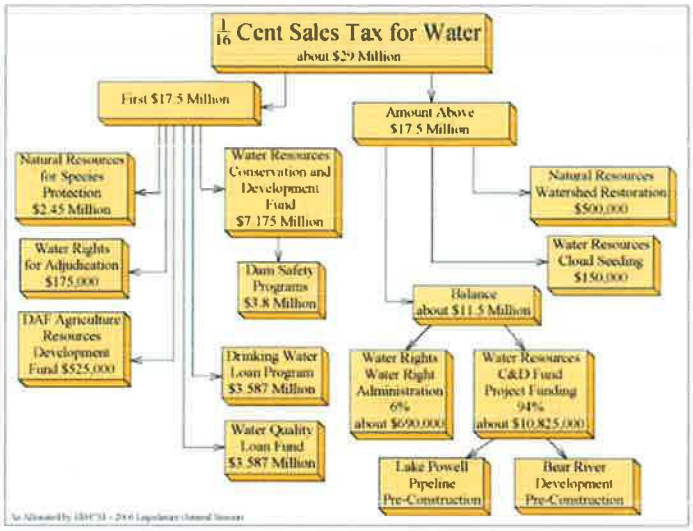
"I think there's great strides that we can make that would fill the need for water for the future," she says, "and we should just be self-reliant on the water supplies that we have here first before we try to bring in a pipeline."

Whalen says pipeline supporters are exaggerating demand projections and underestimating conservation. And, while supporters say the pipeline will cost less than $1 billion dollars, critics like Whalen predict it will be much more expensive.

"If it's gonna be paid with impact fees and things like that and water rates, property taxes -- they're all gonna have to go up to pay for it," she says. "So, in the long term, it's really a bad thing for our local community to take on that type of debt."

Environmentalists have developed an alternative plan (http://www.westernresourceadvocates.org/water/pdf/altlakepowellreport.pdf) that promises enough water to keep up with growth at about one third the cost -- by reusing water, updating farm

irrigation and other water-saving measures. It also calls for higher prices that reflect how valuable water is in a desert. That's opposite of what's happening now with St. George water rates, Whalen says.



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A tiny percentage of statewide sales tax revenues has gone to helping pay for the Lake Powell Pipeline license application. It's due next year at the Federal Energy Regulatory Commission.

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"They're using the most water per person, and it's the cheapest water in the West," she says. "That's what they're telling us, yes. And that's what the reports say."

Critics like Dan Beard say the practice of using property taxes help pay for water service sends customers the wrong message about using it wisely.

"If you give people something for free, they'll waste it," says Beard, former director of the Bureau of Reclamation, the federal agency that created Lake Powell. "If you want to promote conservation, the first thing you need to do is raise the price of water."

The West's 15-year drought is already heating up the broad water debate, with California's turmoil dominating the news. But water has risen to the top of Utah's agenda too.

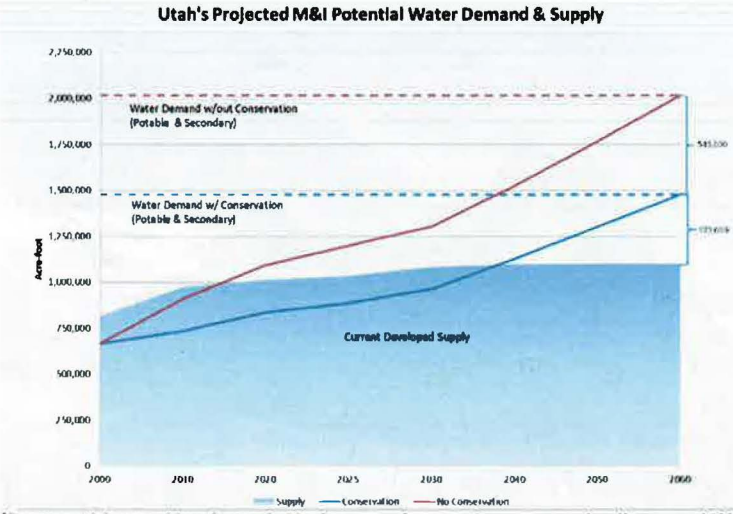
Utah lawmakers created a multi-million-dollar fund this winter to help plan for projects like the Lake Powell Pipeline. And Governor Gary Herbert has hinted the project will be part of the state's water solution.

"Water is the only limiting factor to the growth in Utah," he told reporters at the KUED monthly news conference in April.

"It's going to be a matter of conserving what we have and also developing what we need going into the future. That's a significant challenge. We live in an arid climate. You know, it's a desert."

It's a challenge that Washington County won't be able to avoid. Last summer dozens of farmers lost the right to irrigate their crops from Virgin River tributaries because water supplies were so tight.

It became clear that the situation hasn't improved (http://www.wcwcd.org/announce/water-conditions-make-case-for-lake-powell-pipeline/) when water managers throughout the state met last month at Salt Lake City's National Weather Service office. Hydrologist Brian McInerney detailed the gloomy water situation statewide and how the winter's lean snowpack has starved the Virgin River again.



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The water-demand curve shows what government agencies and the business community say are Utah's water needs going into the future. They consider trends based on conservation and no new conservation. Environmentalists say these demand projections and possibly the population projections, too.

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"So there you have it. There's my info," McInerney said. "I feel like the Grim Reaper. I just travel around giving depressing news to everybody all the time. I'm getting a complex -- as everyone else is."

Utah's debate about building the Lake Powell Pipeline remains contentious after more than a decade. But it's also fueling a crucial discussion about how Utah can't keep growing without rethinking its strategies for managing this vital resource.

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Drought-stricken Utah draws visit from top BLM officials

By Amy Joi O'Donoghue, Deseret News

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Published: Monday, May 4 2015 6:20 p.m. MDT
Updated: Monday, May 4 2015 6:20 p.m. MDT

A prolonged drought in the West is prompting a visit from the director of the Bureau of Land Management and his deputy director. Multiple meetings will be held in Utah, Nevada and Idaho.

Douglas C. Pizac, Associated Press

Enlarge photo»

Summary

A prolonged drought in the West is prompting a visit from the director of the Bureau of Land Management and his deputy director. Multiple meetings will be held in Utah, Nevada and Idaho.

<p>SALT LAKE CITY — The parched ranges of western Utah and two other states are drawing a visit from top officials with the Bureau of Land Management, who plan to see firsthand the devastating impacts of a four-year drought.

The national director of the BLM, Neil Kornze, was briefed on the drought and on what sort of preparations are being carried out for the upcoming wildfire season. He was in Boise to meet with authorities at the National Interagency Fire Center and is determining the extent of measures that will be put into place to protect sage grouse habitat from the onslaught of what is expected to be an active wildfire season.

Interior Secretary Sally Jewell issued an order that directs use of the best science to protect sage-grouse sensitive lands from wildfire, which is among the top threats to the chicken-size bird.

"This fire season could be quite challenging, and we need to be coordinated and prepared," Kornze said in statement released after his briefing. "I grew up right here in the Great Basin, and I'm glad to have this opportunity to see familiar country and to visit with local ranchers, county commissioners and other key stakeholders. I look forward to discussions about how we can best collaborate to address drought issues in a way that allows for continued uses of the public lands and responsible management."

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Kornze is accompanied by his deputy director Steve Ellis. The two are planning to meet with local leaders in both Utah and Nevada. Of the five Great Basin states, Utah, Idaho and Nevada are 99 percent impacted by severe drought.

After touring the fire center in Boise, Ellis plans to meet with Box Elder County elected officials and ranchers to see restoration efforts that have reduced the proliferation of cheat grass and resulted in juniper removal at Dove Creek and other areas of the county. In addition, Ellis will visit Juab County to discuss local issues that include law enforcement.

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430 migrants to Indonesia

A flotilla of Indonesian fishermen rescued more than 430 migrants who were stranded at sea and brought them ashore to safety Wednesday, the latest victims of a humanitarian crisis confronting Southeast Asia. Hoping to find a solution, Indonesia, Thailand and Malaysia held an emergency meeting to address the plight of the migrants who are fleeing persecution in Myanmar and poverty in Bangladesh.

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About the Author

Amy Joi O'Donoghue

Amy Joi O'Donoghue is the environmental reporter the Deseret News, specializing in coverage of issues that affect land, air, water and energy development. She has worked here since 1998 and has been an assistant city more ..

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South Jordan City converts City Park to secondary water irrigation

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SOUTH JORDAN, Utah (ABC 4 Utah) The City of South Jordan recently completed a project that switched the source of water used to irrigate City Park from drinking water to a secondary water irrigation system.

City Park consists of 50 acres of irrigated turf and the conversion will save $133,000 per year by not using drinking water. City officials expect annual savings will increase each year as the cost of drinking water increases.

City officials say in total more than 256 acre feet or 86,000,000 gallons of drinking water will be saved annually. The amount of drinking water saved and conserved is enough to supply 465 homes annually, both indoor and outdoor usage.

City Park is located at 11010 South Redwood Road and features fields used for football, soccer, baseball, softball, playgrounds and more.

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From Watershed to the Faucet: The Path of Salt Lake City Drinking Water

By TERRY GILDEA (/PEOPLE/TERRY-GILDEA) • MAY 5, 2015

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A free flowing stream in Big Cottonwood Canyon.

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When we turn on our faucets at home we expect water to come rushing out of them on demand. It's easy not to think about where that water comes from or how it's treated. But with climate change and persistent droughts across the West, many city water managers have to find creative ways to supply growing populations with the water they need. We continue our series, Utah's Uncertain Water Future, with a look at the sophisticated system that brings clean drinking water to the residents of Salt Lake City.

City Creek, Parleys, Big and Little Cottonwood Canyons are the water sheds Salt Lake City depends on for drinking water. Laura Briefer is the water resources manager for the city. She says our population is extremely fortunate to have such access to such clean sources.

"A drop of water would come down Big Cottonwood Stream, go into our water treatment plant at the mouth of Big Cottonwood Canyon , into our water distribution system and then ultimately to our taps in the Salt Lake Valley. It takes about 24 hours for that drop to make that journey," says Briefer.

Just last month, city water mangers took the Big Cottonwood Canyon water treatment plan off line to make some improvements. A brand new water intake structure was built as a first line of defense against unwanted particles. Bill Meyer is a water treatment plant manager for Salt Lake City.

"We try to remove as much of the debris before it goes into the facility and then of course the treatment process starts there. The old one like I said only could remove the sands and rocks and so on and so forth. The way this one is designed is that it will remove all of the vegetation as well because of the one millimeter screens we're putting in. So we will only get basically water coming into the facility," says Meyer.

The filtration process continues inside the building and then the water is chemically treated.

"We do generate our own chlorine here on site so it's a weak solution, it's very safe to use and of course it keeps us from smelling like chlorine all the time – like a pool in here which is nice. Once that's done we add ferric, which is right here and then we flash mix it. These big mixers in here stir this up very rapidly to bring all of that together," says Meyer.

Meyer says the ferric has a positive charge that helps pull microscopic solids out of the water. A small amount of lime is added for PH adjustment. Workers also insert fluoride at the end of the process. All of the valves in the filter building were recently refurbished or replaced. Meyer says that improvement will dramatically increase efficiency in the filtration process.

"Well, we were losing a lot of water. It turns out to be about 250,000 dollars worth of chemical and electrical costs it was charging us on just water loss returned back to the facility because we don't really lose our water, we just have to retreat it. So we decided to stop that by replacing and refurbishing all of the valves in this filter building," says Meyer.

Once the treated water leaves the plant, it's channeled into the city's vast pipe infrastructure and eventually makes it way to the taps of Salt Lake residents. But not every city in the U.S. has the ample surface water resources of the Wasatch Front. Severe drought in south and west have forced municipalities to find unorthodox ways to meet drinking water demand. The city of Wichita Falls in north Texas recently found itself in a crippling drought that was drying up the two lakes it depends on for its drinking water.

"By the end of 2011 we were nearing fifty percent in our combined capacity. Over the next few years up to date, we've actually dropped from fifty percent down to the low twenties," said Mark Southard, Water Purification Manager for Wichita Falls.

With his city facing a serious crisis, Southard and other water mangers implemented a program that now recycles human waste water and blends it with lake water to produce the city's drinking water supply. Southard says public reaction has been mostly positive.

"We've heard a lot of comments from people that say they actually think the water tastes better with fifty percent reverse osmosis blended with fifty percent raw lake water. So, we've had some very positive comments even after the water's gone out to the public," says Southard.

Waste water recycling is a strategy more cities are willing to consider as surface water sources shrink. It's not a choice that Salt Lake City currently has to consider, but a dry winter and lean snowpack have forced city officials to acknowledge that we are facing a drought. The city issued a stage one water advisory recently asking to residents to practice conservation. But Laura Briefer says that for now enough water is stored to meet the challenge.

"We have participated in the development of the Deer Creek and the Jordanelle system in the Provo River drainage and right now the capacity of that reservoir system is about ninety seven percent. Last year we really managed our sources of water to carry over some of that storage capacity in case we had a drought this year," says Briefer.

Briefer says climate change will be the factor that has greatest influence on how many cities develop strategies to face water challenges. That means that even though we still get water on demand, we need to start paying more attention to how much we use and stop taking this precious resource for granted.

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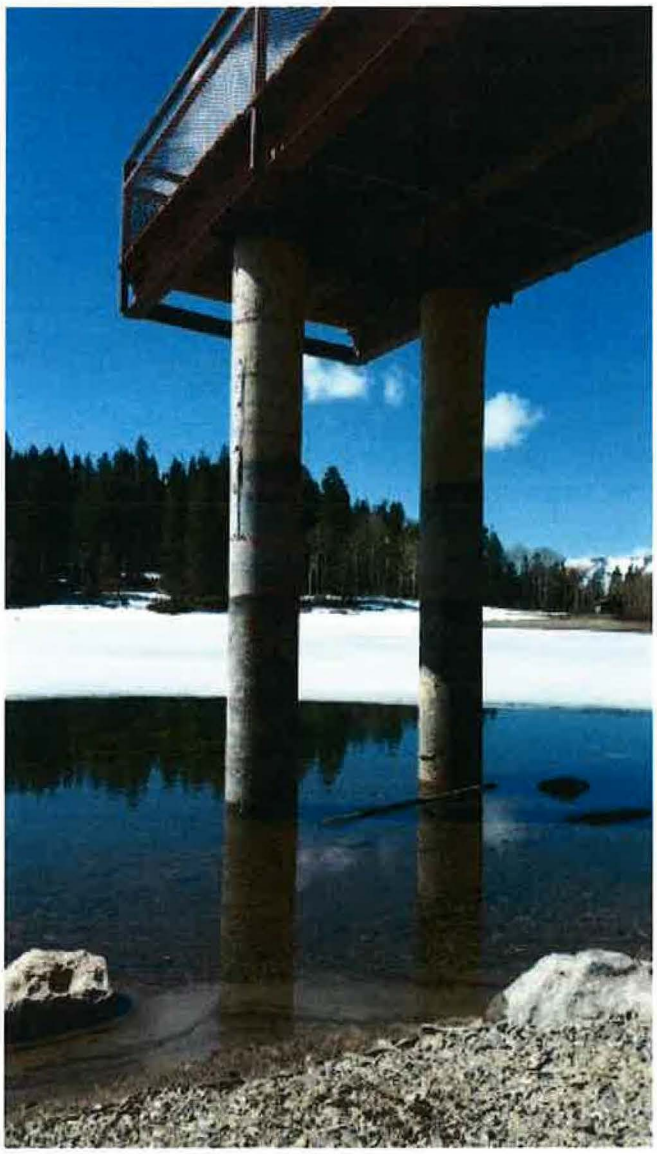
Payson mayor to enact stricter water restrictions



MAY 07, 2015 7:30 PM • DANIELLE DOWNS DAILY HERALD

PAYSON — Mayor Richard Moore of Payson is expected to sign a proclamation soon enacting additional water restrictions for the city.

According to the proclamation, residents are restricted to two watering days per week, as opposed to the current three-day schedule. It also included a new penalty requiring third-time offenders to pay for the installation of a water meter on their property.

Residents with odd-numbered addresses can water only on Tuesday and Saturday, while those with even-numbered addresses are allowed only Monday and Friday. Large water users, churches, schools, city parks and large agricultural users are allotted Wednesday and Sunday. No watering is allowed Thursday.

Residents using pop-up sprinkler heads are encouraged to water for a maximum of 20 minutes and 30 minutes or less for rotating sprinkler heads.

The proclamation cited "extreme drought conditions" with the pressurized irrigation system and Payson Lakes at insufficient levels to sustain the system throughout the irrigation season as reasons for increasing restrictions.

Restrictions are effective until Sept. 30.

The proclamation also identified top maintenance properties throughout the watering season including Payson City Cemetery, Memorial Park, city recreational fields and Gladstan Golf Course. It noted that other city properties will be kept alive though not watered as frequently as designated priority areas.

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Drought is the 'new normal,' water strategist says

By Cassidy Hansen, Deseret News
Published: Friday, May 8 2015 11:29 p.m. MDT
Updated: Friday, May 8 2015 11:29 p.m. MDT

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A water strategist warned Friday that the drought is here to stay and said Utahns need to take water conservation seriously.

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Summary

A water strategist warned Friday that the drought is here to stay and said Utahns need to take water conservation seriously.

SALT LAKE CITY — A water strategist warned Friday that the drought is here to stay and said Utahns need to take water conservation seriously.

"We need to stop calling it a drought. This is now the new normal," said Will Sarni, who has worked for both the public and the private sectors over the last three decades. "A 'good rain' is not going to make life good."

Sarni was the keynote speaker at the Salt Lake Chamber's "Water is Your Business" forum Friday. He said both public and private leaders are playing "catch-up" as they create new policies to combat current water shortages. Part of the rush is because they are running short on time as water projections created to mimic the year 2025 are a reality in 2015.

The water issue expands far beyond the concern of whether there is enough water for Utahns to turn on their sprinklers or faucet. Water is essential to the emerging middle class and a growing economy, he said.

At fist glance, it's difficult to trace part of the water issue to a growing socioeconomic class. To explain the concept, Sarni projected three food options and the amount of water that the items require to be produced: An apple requires 19 gallons of water; a hamburger, 634 gallons; and a 10.5-ounce steak, 1,189 gallons.

Because of dietary preference and a more expendable budget, middle-class residents increasingly pick food

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options with higher protein values to replace lower production cost items, in terms of both money and water. That means that as the middle class grows in numbers, the number of gallons of water it takes to produce these types of food will also increase.

As for the economy, water is essential to attracting new businesses to a state, Sarni said. "If you have water over the next several decades, that has value."

The "value" of water to businesses is no longer solely dependent on the monetary cost of receiving water in an operational facility or office; rather, water is now seen as a "business risk" by water conscious companies, he said.

The absence of water in an economy can be costly. In fact, Sarni cited water issues in California as causing the state approximately $3 billion in economic growth because the value of water in the state was considered too risky based on three categories of evaluation: physical, regulatory and reputational.

Physical is the simplest of the categories, it deals with water availability in a geographical sense. In other words, is there enough, and is the proper infrastructure present for water delivery?

Regulatory deals with relationships between businesses and local governments. It specifically investigates the public policies that have been implemented by local governments and value is based on the types of regulations and restrictions placed on industries' ability to get water. Monetary value is also an aspect of this category.

Reputational deals with how the businesses and states manage their water, specifically if these entities are considered water stewards or water consumers.

Water reputation is evidently important on a social level, seeing that one of the proposed post-2015 Millennium Development Goals established by the United Nations is to "ensure availability and sustainable management of water and sanitation for all," but water reputation is now important to a successful business model, Sarni said.

However, the way that businesses treat water is becoming increasingly important. "Millennials now buy on brand value," he said.

Millennials and others who are environmentally conscious spend more money on products that are conscious of the environment. Thus, water is becoming an issue that extends beyond public policy.

Sarni suggested that businesses and governments begin on a path of water stewardship. This can be accomplished by developing policies that serve as catalysts to preservation, innovation and engagement in the context of the water issue.

Suggestions for getting consumers on the path included incentives for less water usage, educating consumers about water use, and measuring water consumption in units that are familiar for consumers.

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"I think it has to be more than just trying to convince the consumer that conserving water is a smart move. There has to be market signals, there has to be incentives, and you have to mobilize other industry sectors," said Sarni.

Email: chansen@deseretnews.com

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Utah vastly overstating future water shortages

State projections downplayed what conservation and agriculture can provide.

Sarah Gilman | May 7, 2015 | *Web Exclusive*

Utah's Division of Water Resources has painted a bleak picture for the state's hydrological future. Even if water use is cut through conservation, officials project that demand will outstrip available supplies by 2040, as the population nearly doubles to 6 million people by 2060. A whopping $33 billion in upgrades, maintenance of existing water systems and development of new supplies will be needed to make up the shortfall.

Set against a backdrop of a few difficult drought years (http://www.deseretnews.com/article/865627931/Drought-stricken-Utah-draws-visit-from-top-BLM-officials.html?pg=all), reservoirs dropping and some communities overpumping aquifers (http://kuer.org/post/falling-water-table-creates-hazards-cedar-valley), the scenario can seem a pretty compelling argument for two massive and controversial water projects (https://www.hcn.org/issues/319/16209) that the state wants to build: A 6-foot-diameter, 140-mile-long pipeline (http://www.water.utah.gov/lakepowellpipeline/generalinformation/default.asp) that would allow Utah to draw its remaining share of Colorado River water from Lake Powell and pump it to Kane and Washington Counties; and a new dam (http://www.gslcouncil.utah.gov/docs/2014/10Oct/BearRiverPipelineProject.pdf) on the Bear River system, which feeds into the Great Salt Lake, that would supply 220,000 acre-feet of water to surrounding communities.

Trouble is, that scenario may be flat wrong, or at the very least overstated.

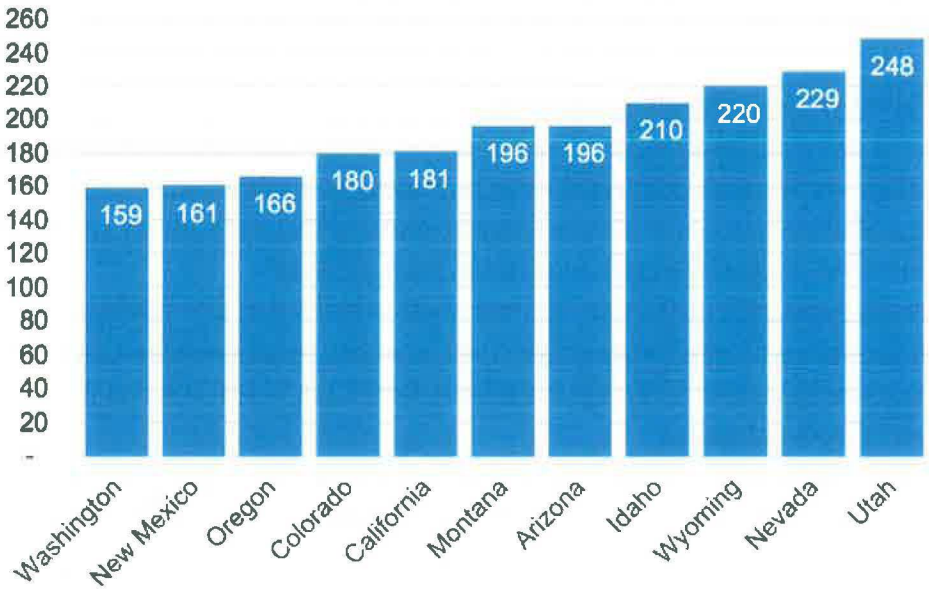
On May 5, Utah's Legislative Auditor General released a damning (damming?) report (http://le.utah.gov/audit/15_01rpt.pdf) revealing that the water agency's forecasts are based on unreliable data and failed to adequately account for the possible contributions of conservation and irrigation water freed up as new homes consume farmland. "By excluding this added water supply," the auditors write, "the projections accelerate the timeframes for developing costly, large-scale water projects." Zach Frankel of the Utah Rivers Council, which opposes the pipeline and stumped for the audit along with several other groups, puts it more bluntly: "We are not," he says, "running out of water."

The data problems are partly driven by inefficiency and inadequate resources. The division obtains information about water use from 468 local water providers secondhand through another agency. Just one staffer is devoted to this task, and though that person attempts to verify data by calling local officials directly every five years, errors slipped through. Sometimes, water providers made mistakes because they weren't properly trained or didn't understand the instructions or purpose of the data. One city even reported water use for 2012 by submitting data from a city in New York with an identical name.

"We agree with many of the audit conclusions and recommendations and believe that (they) will enable us to strengthen our processes," Division of Water Resources Director Eric Millis told lawmakers at a hearing the day the report was released. "We tried to do the best we could with what we had available."

The audit's conclusions about conservation are even more troubling. Despite being one of the nation's most arid states, Utah consistently tops nearly every other state in per capita water use. And yet the division assumes that conservation can only drop statewide consumption by 25 percent. Its projections have water use flatlining at 220 gallons per person, per day after 2025 – still much higher than *current* use in many other Western states.

Figure 3.3 A Comparison of Water Use Among the Western States. At 248 gpcd, Utah's municipal and industrial water use, as well as residential water use, is reported to be the highest of these 10 western states.



Source: Estimated use of water in the United States in 2010: U.S. Geological Survey Circular 1405, 2014
Note: Use only includes water from public providers.

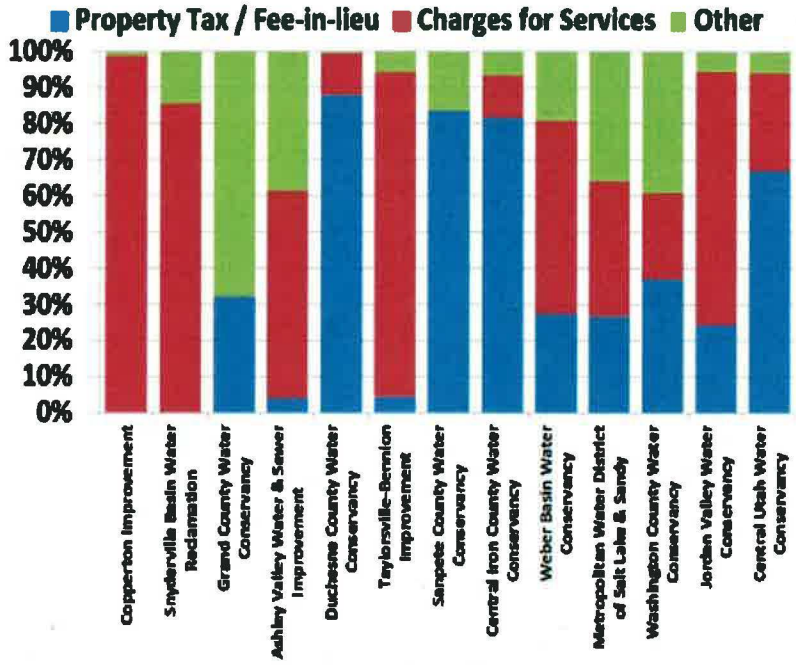
Graph shows average statewide water use in gallons per person per day, by state. Courtesy of the Legislative Auditor General

"We find one regional comparison that is insightful," the auditors write. "The Southern Nevada Water Authority, which serves the Las Vegas region, has a goal to reduce water use to 199 (gallons per person per day) by 2035. In contrast, the communities in Southwestern Utah, which have a climate similar to that of Southern Nevada, have a goal to reduce water use to 292 by the year 2060."

That's the area that would be served by the Lake Powell Pipeline. Given the project's expected cost of $1 billion to $3.5 billion, Frankel calls southwestern Utah's conservation goals "appalling for a state that claims to value water and fiscal conservatism."

The audit identifies numerous areas for improvement, not least of which are Utah's incredibly cheap water rates, which are heavily supported by property taxes. "We subsidize water more than any other state," says Republican state Senator Howard Stephenson, president of the Utah Taxpayers Association. "When my neighbor is running his garden hose down the gutter while he's washing his car, there's no impact to his pocket book because he's socializing the waste among all of his neighbors. If people actually bear the cost of their choices, you'd assure more conservation." The state could also implement tiered rate structures in which heavy users pay more, and actually meter "secondary" — or outdoor — water systems, which, unlike several other Western states, Utah has yet to tackle.

Figure 3.5 Property Taxes and Charges for Service as a Percent of Total Budget, Selected Local Entities. One reason water prices in Utah are low is that many water conservancy districts rely heavily on local property taxes and other fees unrelated to water use.



Source: Office of Legislative Research and General Counsel from the District Financial Statements Submitted to Utah State Auditor.

Graph courtesy of Legislative Auditor General.

And though much of Utah's expected residential growth will gobble up farmland on the Wasatch Front, the Division appears to vastly underestimate the amount of freed up irrigation water that would be shifted over to residential use. In the Weber River Basin, for example, the auditors found that 52,000 more acre-feet would be available than the state has projected. That's roughly equivalent to the share of water that communities there would receive from the $1.5 billion Bear River Project.

Department of Natural Resources Executive Director Mike Styler, who oversees the Division of Water Resources, told lawmakers at the May 5 hearing that the audit was "a great help" for predicting future water use and that his staff was already looking into implementing recommendations. If anyone should be nervous

about the report, he added, it's "you in the Legislature. (This audit) is suggesting that you look at ways to alter water demand. That's saying, 'Folks, we want you to consider changing your way of life.' … That will take great courage."

Sarah Gilman is a contributing editor at High Country News. Follow @Sarah_Gilman (https://twitter.com/Sarah_Gilman)

Homepage image of Salt Lake City courtesy of Skyguy414, Wikimedia Commons (https://commons.wikimedia.org/wiki/File:Saltlakecity_winter2009.jpg#/media/File:Saltlakecity_winter2009.jpg).

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Logan River restoration in works

Lis Stewart | Posted: Sunday, May 10, 2015 12:15 am

A group of outdoors enthusiasts and experts intend to start work on restoring the Logan River, as well as get input from local residents, this year.

The effects for flood mitigation on the river are not as apparent as they were last year when Logan city wrapped up its government-funded project that included cutting down trees and channelizing sections of the river, but members of the Logan River Task Force, formed amidst public outcry over the work, still see where work can be done to improve the river to a state even better than it was before.

"We've certainly been critical with the city about what happened before, but they've been really good to work with," said Frank Howe, chair of the Logan River Task Force. "They've been coming to all our meetings and listening to our suggestions."

The 26-member task force has a $600,000 grant from the Utah Division of Water Quality, and a $400,000 city match, to use for the restoration work. They hope to have the first phase, which includes the area from Golf Course Road to 1000 West, wrapped up by 2017. Howe said the task force is looking at the restoration as a long-term approach.

Meetings will be held with stakeholders along the river this year, Howe said, to determine what their wants and needs are. The task force separated the river into sections according to the environment around it: residential, commercial, recreational, agricultural and the Cutler Reservoir area owned by Pacificorp.

By next year, Howe said he would like to have public meetings finished and have started monitoring the river for things like water quality and habitat. He would like to have barriers and objectives identified. He also hopes to start planting vegetation where needed, with the help of a riparian planting guide published by the Utah State University Extension.

Howe also wants to work with residents on using the information from the Extension to suggest planting native vegetation to hold in banks, rather than the traditional practice of putting in concrete.

One aspect of the projects is restoring fish habitat, which, according to local anglers, was impacted by the flood mitigation.

Kurt Finlayson, a local fisherman who represents Cache Anglers on the task force, said the flood mitigation had a pendulum effect.

"Now that they've ripped everything out, there's tons of access, but unfortunately a lot of what they've done has destroyed (habitat)," Finlayson said.

The river is a good resource for the city because of its accessibility, he said.

"It's kind of downtown Logan, which is why it's such a great area to try to help out," he said. "You don't have to go 20 miles up the canyon or go to the Blacksmith (Fork River). I can walk out of ICON and go fishing in three minutes."

Finlayson said he's optimistic for the future of the Logan River restoration, if a bit impatient to get things going.

"There are a lot of people working on this, including the city, that are trying to fix what we've done, and they see the river as a precious resource, and they're all working, I think, very hard to go over that and make it better frankly than it was."

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lstewart@hjnews.com

Twitter: @CarpetComm

KUED addresses Utah's water future with program

For The Spectrum & Daily News *10:10 p.m. MDT May 10, 2015*

(Photo: Submitted)

Are we approaching a day when turning on a Utah tap won't provide water on demand? Could Utah's heralded economic engine grind to a halt for lack of water?

For the state's water managers, Utah is at a crossroads for answering those questions.

The latest UtahNOW production, Utah's Uncertain Water Future, foreshadows the struggle ahead over securing this essential resource in the nation's second driest state. A collaboration between KUED and Utah NPR affiliate, KUER 90.1, the half-hour program was written and produced by KUER's award-wininng environmental reporter Judy Fahys in partnership with KUED's Emmy-winning producer Joe Prokop.

It first aired May 6 and will repeat May 18 at 8:30 p.m. and May 30 at 5:30 p.m.

"Few issues are as central to life in the Intermountain West as water, and yet the complexity of the issue drives many broadcasters away from the topic," said Ken Verdoia, KUED Director of Production. "I think KUER and KUED recognize this as a special opportunity in our service — to explore a story that touches our lives and to dedicate enough time to elevate our understanding."

The Sand Hollow water plant is shown. *(Photo: Submitted)*

Utah's Uncertain Water Future explores Utah's relationship with water — from the days when pioneers dug canals by hand to a future riddled with deep droughts and other uncertainties. The program focuses on the challenges southwestern Utah faces as it plans to furnish enough water for growing populations.

KUER will air radio features that complement the documentary. Website extras include expanded interviews, informative graphics, and links to valuable resources. (*kued.org/water* (http://kued.org/water))

"As we find ourselves at a crossroads in our relationship with water, the documentary examines the hard questions about the past and positions us to live in the reality of the 21st century," said writer/producer Judy Fahys.

A historic view of pipeline in Washington County is shown. *(Photo: Library of Congress)*

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Joining Forces in the Search for Utah's Water Future

By JUDY FAHYS (/PEOPLE/JUDY-FAHYS) • MAY 8, 2015

Twitter (http://twitter.com/intent/tweet?url=http%3A%2F%2Fwww.tinyurl.com%2Fkbyoryq&text=Joining%20Forces%20in%20the%20Se

(http://mediad.publicbroadcasting.net/p/kuer/files/styles/x_large/public/201505/IMG_4909.JPG)

Soils scientist Scott Jones checks instruments that measure weather and moisture high in the Wasatch Mountains in hopes of learning how different vegetation types use water.

JUDY FAHYS/KUER

Scott Jones steers a snowmobile into the T.W. Daniel Experimental Forest deep in the mountains above Logan. He's a soils physicist at Utah State University, and he's studying how forests use and store water.

"Understanding the processes up here will help us anticipate what's happening in the valleys and streams," he says.

Jones and a colleague measure water the snowpack's holding after Utah's warmest and driest winter on record. Data like this can help water managers plan for the future.

Comparing the water Utah can count on with the water it needs has been an obsession since settlers arrived. And now it's a big factor in the water challenges ahead of us, and some say it's essential for disparate groups to share their best ideas to find meaningful solutions.

Historian Lyman Hafen recalls how pioneers labored in Washington County to supply water to the growing population. Hafen says their values are embodied in a St. George ordinance.

"If any water taker shall waste water or allow it to be wasted by negligence...."

Wasting water back then, he says, could mean a stiff twenty-five-dollar fine or time behind bars.

"So that gives you an idea of how precious water was in 1909 and that conservation ethic," he says. "You could go to jail for twenty-five days for having a leaky faucet. There are the two aspects of the culture that we now have and the one keeps us developing more and more water. But the part of the culture other that hasn't carried through as much is that we should be conserving."

Utah finds itself at a similar crossroads today. The state's population of 3 million is expected to double by 2040, and there's no more water today than there was when pioneers arrived.

It was just this week that lawmakers heard state auditors explain that its hard to plan for that growth because basic data on supplies and demands are riddled with errors. Salt Lake City Democratic Rep. Brian King called for action.

"We've got to make decisions about how much money we're going to plow into – as a legislature how much money we're going to allocate and budget and raise from taxpayer funds – for those kinds of infrastructure projects, and I just want to make the best decisions possible."

Climate change is an even bigger question mark for Utah's water. Rob Gillies, director of the Utah Climate Center at USU, also serves on the Gov. Gary Herbert's multidisciplinary Water Strategy Advisory Team. As it drafts a master water to-do list for the next half-century, the group has discussed conservation and technology, Gillies says.

"But then it was noted that actually the greatest risk for the state is water resources," he recalls, "and the greatest component of that risk is climate change."

The Climate Center has pointed out that Utah is already warming twice as fast as the global average, and the science suggests the state is likely to get hotter. But Gillies says the trend for water is unforeseeable. Wilder fluctuations between flooding and longer, deeper droughts are making it impossible to plan ahead.

Pat Mulroy considers questions like these for the Brookings Mountain West think tank and the World Economic Council's water committee. Especially climate change.

"It is definitely a game changer," she says. "I think it's a game changer in how we use water, and I think it's a game changer in how we manage water, and I think it's going to redefine relationships."

Mulroy says interest groups, like farmers, environmentalists and water managers have to stop fighting one another over water. So do the seven Colorado River states. She predicts there will be a day when Utah finds itself in a drought as deep as California's or a water shortage as severe as Nevada's thanks to climate change.

"There is real strength in strategic partnerships," she says. "You help buffet against you help buffet each other's weaknesses and exposures, and the whole is greater than the sum of the parts."

Back when she was water boss for southern Nevada, Mulroy gained worldwide recognition for making water-wise practices routine. She persuaded homeowners to rip out their lawns and golf courses to keep their turf green with gray water. She established a water-banking program with Arizona. Mulroy says Utah is behind the times when it comes to proactive efforts like these.

"My only advice to Utah is they need to become more actively engaged in helping resolve issues as they're arising in the basin and not view themselves as separatists," she says.

She points to Denver's efforts to work with farmers to protect environmental funding for Utah and the three other states in the upper-Colorado River Basin. Utah's politicians, cities and farmers are AWOL on efforts like these," she says.

"You know, you are part of a larger region, and you want your neighbors to be supportive of you-you need to be standing with your neighbors when your neighbors need you."

As big-picture issues like on the table elsewhere, Utah leaders have been sending mixed messages about the need for change. Not one of the state's conservation plans for 11 water basins mentions climate change. And efforts are just beginning to stop groundwater mining that's causing fissures and deal with subsidence in Utah farmlands even though the problem has been around for decades.

Back up in the mountains east of Logan, Scott Jones and his team monitor the remote research sites, looking for clues about what's ahead.

"The data," says the soils scientist, "is probably going to take longer in order to develop an answer that is meaningful to the citizens and meaningful in terms of the science."

Jones says it probably will be years before his research has something definitive to say about Utah's water.

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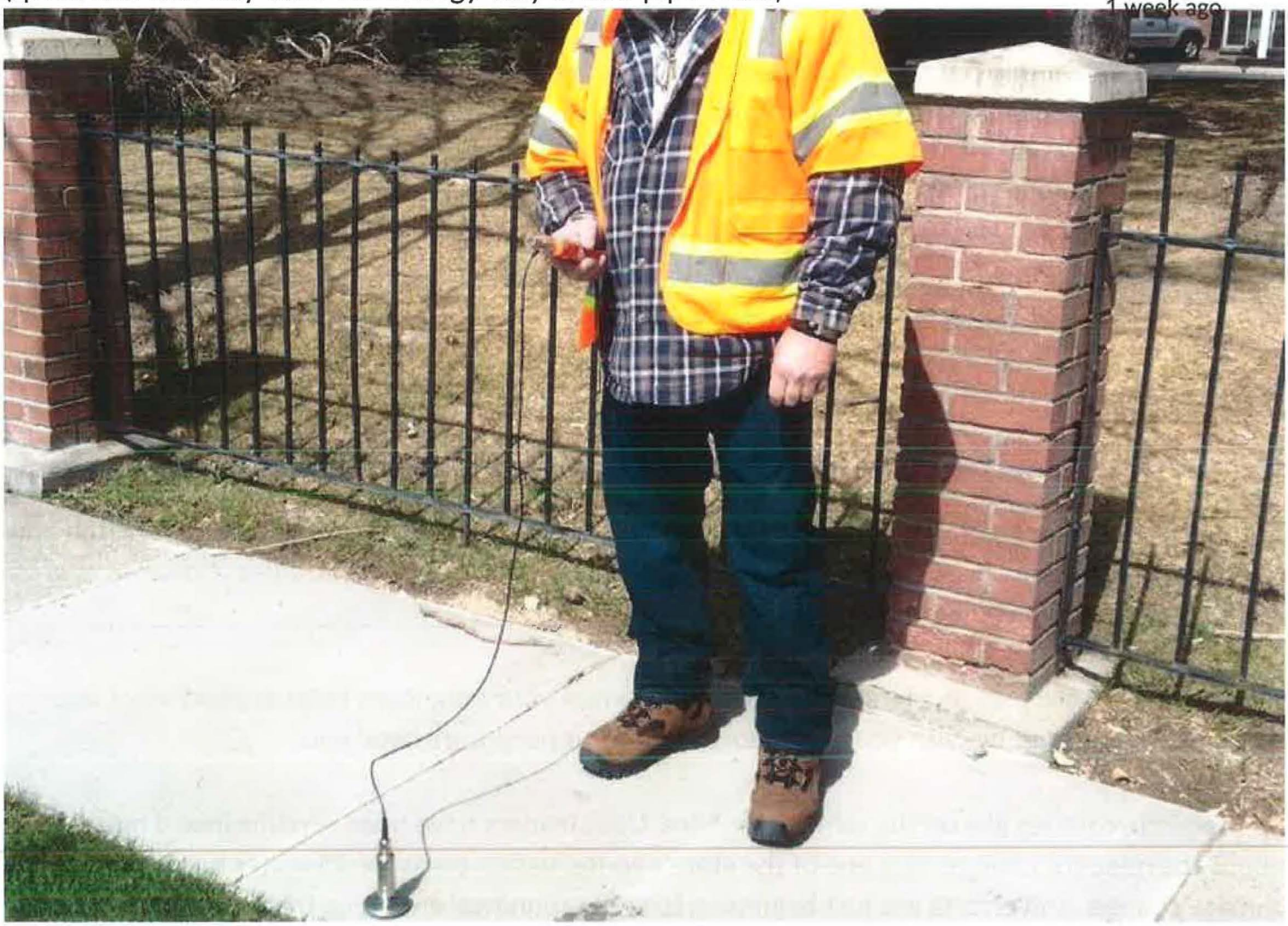

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Water treatment plant in Washington County getting an upgrade

POSTED 5:55 PM, MAY 14, 2015, BY ZACH WHITNEY

WASHINGTON COUNTY, Utah – An upgrade at the Quail Creek Water Treatment Plant aims to say ahead of future demand.

The population in Washington County is expected to grow by more than 30 percent in the next five years. It's a projection that has water district managers worried about being able to provide for all those people.

"There's a lot of people using water, washing their cars, drinking the water: all the things people need water for," said Washington County Water Conservancy District associate general manager Corey Cram. "We have to provide that peak (

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Currently, the treatment plant is capable of p table water per day, and the improvements will increase that cap:

The expansion doesn't involve making the bu ng the efficiency of the individual parts. Crews are working to re ıd filter material. It's a small change that will make a big improveme

"Changing some component, we can increase able to produce," Cram said.

Upgrading features has a significant cost sav cost approximately $3.60 per gallon capacity. This way, the wate er gallon capacity.

Water is always on the minds of residents in ' . . . esident Gordon Empey said he's careful to only water at certain times a day and limits his indoor use. He's glad something is being done to address those future needs.

"We will definitely run out of water," Empey said. "Maybe not in my lifetime because I'm old, but in my kids' and grandkids'."

Cram said recent water activity also suggests homeowners are doing their part. During recent rainstorms, demand dropped almost 50 percent.

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Major clean-up in Weber County after heavy rainfall

Aldo Vazquez ()

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05/17/2015 11:30 PM 05/18/2015 06:32 AM

WEBER COUNTY, Utah (ABC 4 Utah) - A massive clean up effort in Weber County as residents are left with the devastation left behind by flooding due to a canal spilling over into their homes.

It was a much drier scene this evening than what Greg Stowe and his family witnessed earlier today.

"My boy woke up about 2:30 in the morning saying there was water in the basement, so I ran downstairs and sure enough the whole basement was engulfed in water," said Weber County resident Greg Stowe.

The weekend storm proved to be too much for the canal just feet away from Greg's house as the water spilled over its banks.

"I came out and ran out the garage door and this all was under 15-18 inches of water," he said.

The area around his house had been completely overwhelmed and under several inches or water. Greg said the water was so high it came up to his knees, and caused major damage to the basement of his house - where three of his four children sleep - and raised concerns about the clean-up.

"...Nothing my insurance can do because we don't have flood insurance, which I really wasn't expecting to have insurance out here," said Stowe.

Since the early morning Greg has been pumping the water from his property. Neighbors came over in the early hours of the day and helped buckets gallons of water from his home.

County officials also came by and provided him with several

> "I came out and ran out the garage door and this all was under 15-18 inches of water."

(Greg Stowe)

(Greg Stowe)

sandbags to barricade his home from further damage.

And many northern Utahns are in the same situation as Greg, as several are dealing with the aftermath from the heavy rain.

"Our fire crews were just running all over the place just trying to deal with properties that were flooding," said Fire Marshal, with the Weber Fire District.

Firefighters answered several calls from residents last night about flooding in their basements, garages and fields.

The canal at Greg's house shutdown 4000 N for hours, but should be open at this time. And as the water subsides, and the clean-up continues, Greg is so thankful to his neighbors who helped save his home.

"A lot of good people out here and I'm grateful for that," said Stowe.

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The Salt Lake Tribune

Crews removing 5,000 gallons of spilled crude from Uinta Basin wash

BY BRIAN MAFFLY

THE SALT LAKE TRIBUNE

PUBLISHED: MAY 19, 2015 06:32AM

UPDATED: MAY 20, 2015 09:51AM

Crews on Monday were expected to finish scooping more than 5,000 gallons of waxy crude from a dry wash in the Uinta Basin oil patch after a tanker truck rolled Saturday on Nine Mile Canyon Road south of Myton.

The hot oil flowed for about a mile down the wash before it hardened, but none of it is expected to reach a stream, according to Darrin Brown, environmental health director for the TriCounty Health Department. There may still be mop-up chores after Monday.

"Once you scoop it out, you leave small pieces behind," Brown said.

Preliminary estimates indicated 120 barrels had spilled, but Brown said he won't know the actual total until he inspects the truck's manifest to determine how much crude it was hauling.

The accident occurred Saturday evening as the truck was hauling two tanks north on the two-lane road, about 10 miles north of where it leaves Nine Mile Canyon. The rig, operated by Foreland Transportation, failed to negotiate a slight left-hand curve and flipped into the wash, rupturing both tanks, according to the Utah Department of Environmental Quality.

The driver, a 44-year-old from Layton, was taken to a Roosevelt hospital with serious injuries, then flown to Intermountain Medical Center in Murray.

Saturday's accident illustrates the transportation perils of moving Uinta crude. There are no rail lines or pipelines serving the thousands of oil wells in the basin, which produce a high-paraffin product that must be transported hot so it won't solidify in transit. Tanker rollovers along Highways 40 and 191 and Interstate 80 are

not uncommon, but they typically result in minor releases of oil because the tanks often remain intact.

"You poke a hole in the tank or crack the lid," Brown said. "In this case, they lost all of it."

An oil-field services crew used heavy equipment to move the congealed oil and contaminated sand from the wash to trucks, which transported it to a licensed hazardous-waste center operated by Environmental Energy Innovations near Myton. The wash heads north, feeding Pariette Wash several miles upstream from its confluence with the Green River. Officials do not believe any oil will reach water as long as it doesn't rain heavily during the cleanup.

Tracy Williams, the Foreland foreman who reported the incident to authorities, declined to comment. "It's under investigation," he said.

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Scary drought islands popping up in Lake Powell on the border between Utah and Arizona

By Mary Papenfuss

May 19, 2015 03:39 BST

A chilling series of land forms are beginning to emerge within the shores of massive Lake Powell on the border of Utah and Arizona, giving environmentalists, farmers and urban administrators nightmares.

The second largest reservoir in the US is so impacted by a record drought in the south west that islands are beginning to appear for the first time in nearly half a century when the lake was formed by construction of the Glen Canyon Dam.

The relentless drought is also starkly apparent in the whitish "bathtub ring" around the massive lake's 1,900-foot shore that now soars some 100 feet above boaters.

"There are parts of the lake that have pretty much become mud flats," aquatic biologist and nearby resident Erin Janicki tells the Guardian. "The inlets get silted up. It takes longer to jet around the lake because some of the waterways aren't open and you have to go around obstacles. There's still a lot of water out there, but there's been a big change. People hit rock islands all the time."

The lake is at only 45% of capacity, a troubling situation for the 40 million people in seven states who rely on it for water. The lake and the Colorado River which feeds into it serve Wyoming ranches, Arizona boom towns and agriculture, and Las Vegas and other cities throughout the region. It even helps quench the thirst of southern California through a complex system of water provisioning that also involves Lake Mead, a sister reservoir.

There's even less hope in Lake Mead, the nation's largest reservoir, which has sunk 150 feet in 14 years. It's at 37% capacity. Federal analysts predict the lake will hit a marker by 2017 that will mandate massive water cuts to Arizona and Nevada. Arizona's allocation of Colorado River water could be slashed up to 11.4%, the amount typically used by 600,000 homes.

Some regional managers are still keeping their fingers crossed, looking at the sky. But

scientists are more realistic.

"To simply turn your head and say it's not going to affect us is insanity," says Pat Mulroy, senior fellow with the American Brooking Institute.

To see both Lake Mead and Lake Powell "going down to quarter capacity is a pretty scary proposition," she notes. "The loss of water in that reservoir system has been enormous. Go look at the bathtub rings, they're scary."

Rain soaks Northern Utah, but is it enough?

TUESDAY , MAY 19, 2015 - 6:24 AM

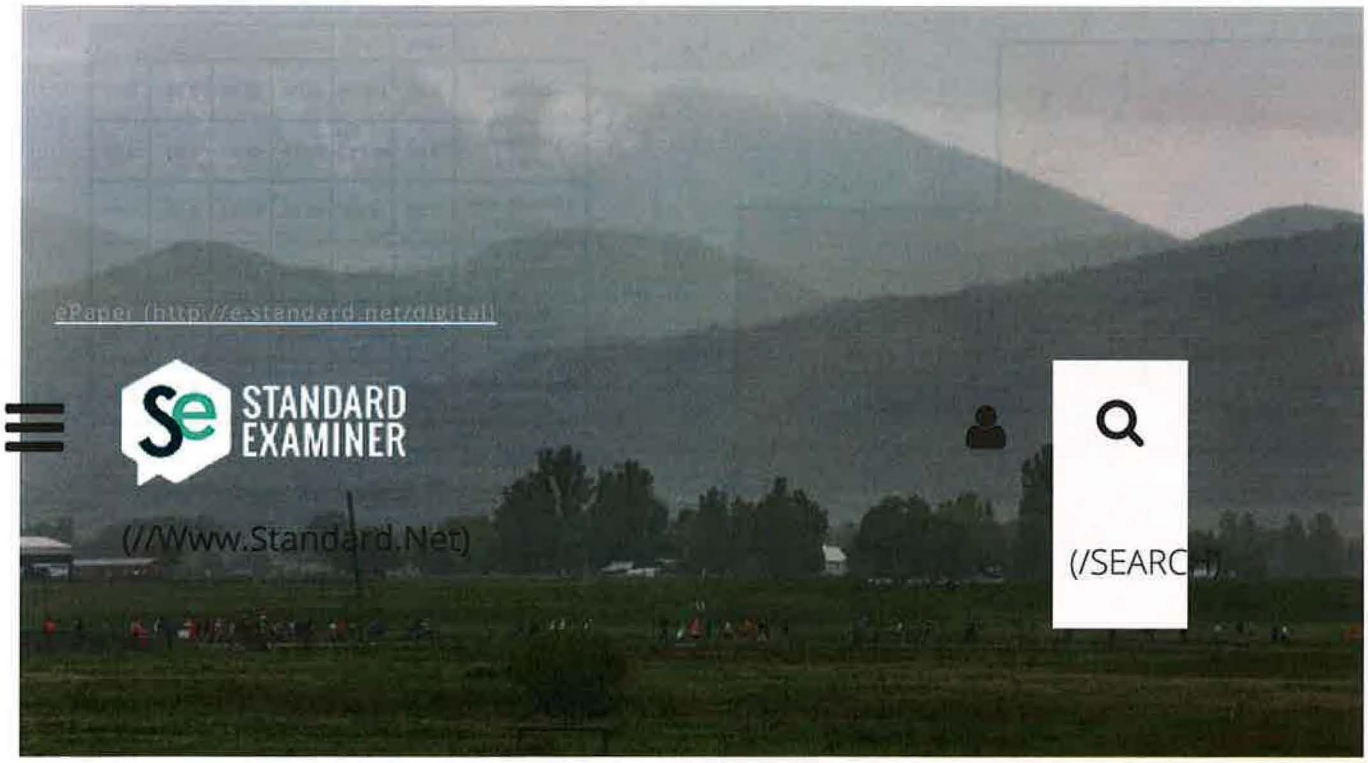

Image by: BENJAMIN ZACK/Standard-Examiner

Thousands of runners braved the rain and cold to run in the Ogden Marathon and Half Marathon on Saturday, May 16, 2015.

(/profile?userid=851&lname=Larsen&fname=Leia)

Leia Larsen

Reporter

(/profile?userid=851&lname=Larsen&fname=Leia)

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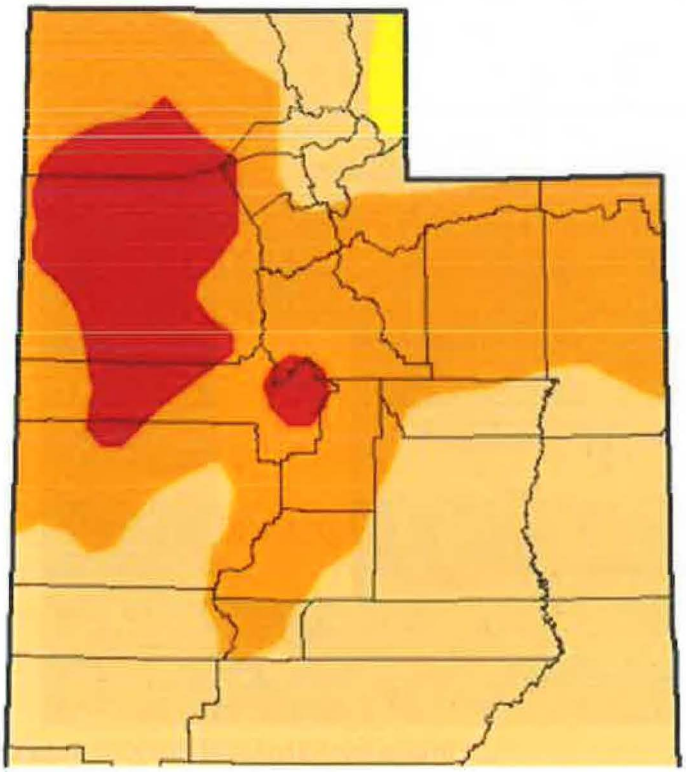
Heavy rains soaked the northern Wasatch Front over the weekend, but forecasters and water managers caution the water relief is only temporary.

Last Thursday, data from the U.S. Drought Monitor showed western Weber and Davis counties, as well as most of Box Elder County, in a state of severe drought. The weekend brought abundant above-average rainfall (http://www.wrh.noaa.gov/total_forecast/getprod.php?wfo=slc&sid=SLC&pil=PNS) to the parched state, with over 2.6 falling in Ogden and a whopping 3.5 inches falling in Pleasant View by Sunday morning.



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.19	45.74	9.99	0.00
Last Week	0.00	100.00	99.19	45.74	9.99	0.00
3 Months Ago	4.39	95.61	60.85	12.54	0.00	0.00
Start of Calendar Year	18.93	81.07	58.99	12.98	0.00	0.00
Start of Water Year	18.89	81.11	58.30	12.98	0.00	0.00
One Year Ago	9.04	90.96	72.34	21.87	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

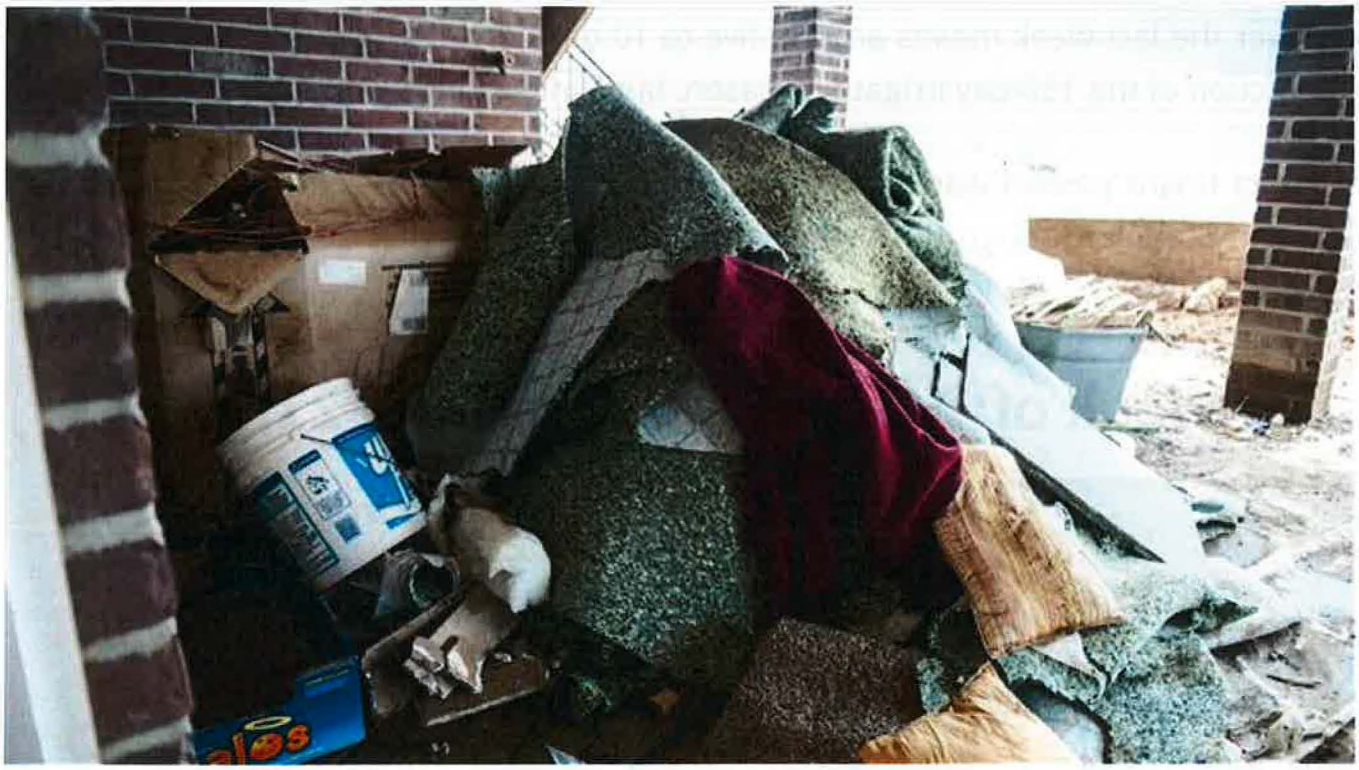
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Mark Svoboda
National Drought Mitigation Center

That makes recent storms significant, according to Mark Struthwolf, a meteorologist with the National Weather Service office in Salt Lake City.

PHOTO GALLERIES

Weber flooding (/gallery/Weber-flooding)



(/gallery/Weber-flooding)

"We've received 3.04 inches in Salt Lake City for the month to date," he said. "Normally we'd have 1.14 inches through the mid part of May, so we're doing very well."

Still, Struthwolf said, Utahns need to put recent precipitation into perspective. Lower than average snowfall combined with the state's warmest winter on records means sparse snow stored in the mountains that steadily flows into reservoirs over the summer.

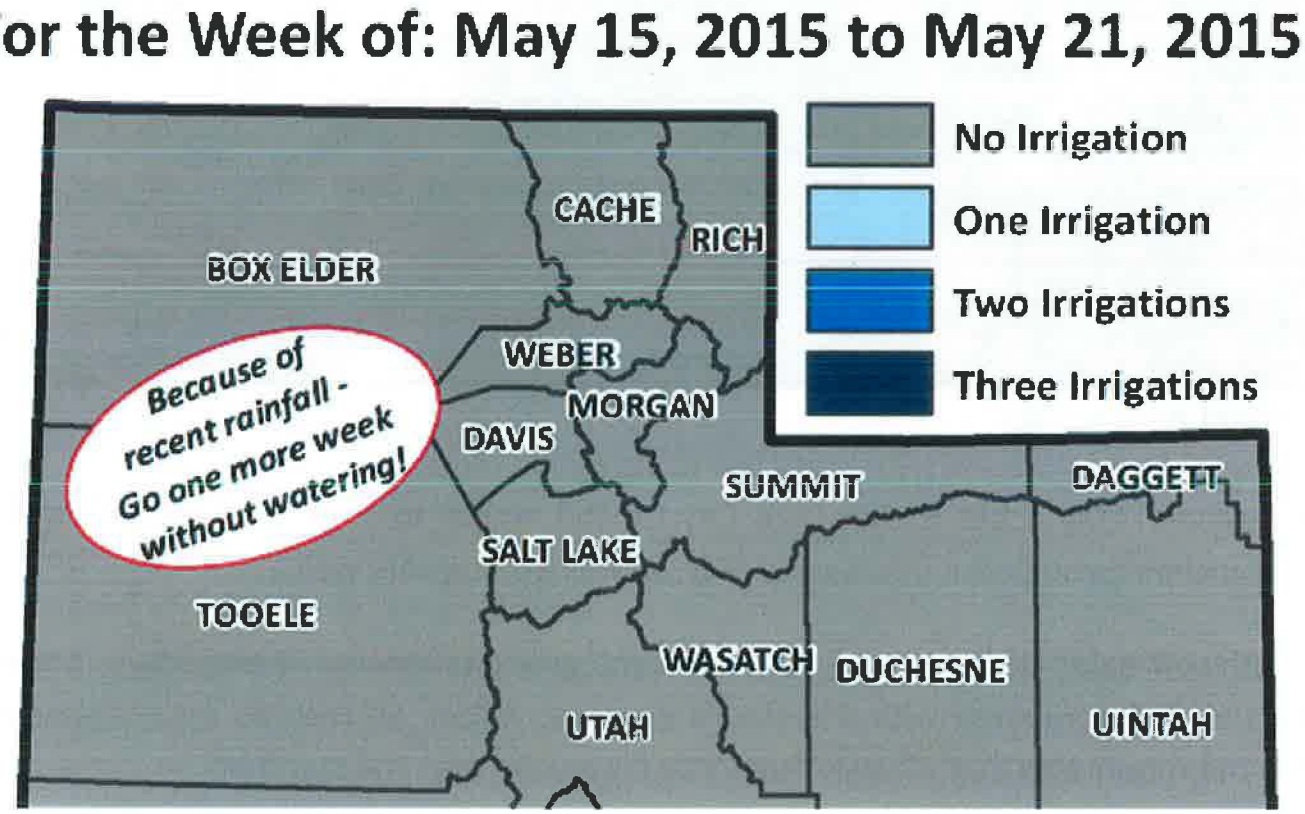
"Typically this time of year we're getting an inch to an inch and a half of runoff," Struthwolf said. "We were so dry over the winter and have such a small snowpack, this has done very little as far as the long term goes."

Tage Flint, general manager of the Weber Basin Water Conservancy District, said recent rainfall won't do much to fill northern Utah reservoirs. Rivers might surge for a few days, but most of the moisture percolates into the ground. The spring rain does, however, boost early season conservation efforts.

"The benefit for us is really the lack of demand," Flint said. "Weeks like this, our users don't use nearly as much and that allow us to release less from those same reservoirs."

Precipitation over the last week means around five to 10 days of extra water supply, Flint said. That's only a fraction of the 150-day irrigation season, but Flint said this year, every drop counts.

The water district board passed watering restrictions late last week, effective until Oct. 1. But May storms mean Utah households throughout the state haven't needed to switch on sprinkling systems to date.



According to the Utah Division of Water Resources, Utah households throughout the state can continue giving their hoses a break through the week, and there's more rain ahead.

"Looks like this wet pattern is going to continue right through this week and weekend," Struthwolf said. "It doesn't look like it going to change in the next 10 days."

See Also: Colorado next for Northern Utah storm (/News/2015/05/18/Storm-causes-minor-flooding-in-Utah-Colorado-due-next.html)

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Colorado River drying up would cause economic disaster

SATURDAY , MAY 09, 2015 - 9:08 AM

Image by: THE WASHINGTON POST

Undeveloped land contrasts with the lush landscape of the Plantation Golf Club in Indio, Calif., in April. The Coachella Valley is one of the state's largest crop-growing regions and relies on water from the Colorado River for the irrigation of farms and numerous golf courses. Illustrates DROUGHT (category a) by Jim Tankersley (c) 2015, The Washington Post. Moved Saturday, May 9, 2015 (MUST CREDIT: Washington Post photo by Bonnie Jo Mount).

Jim Tankersley

The Washington Post

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It is a tantalizing question facing the future of the American West: What would happen if the Colorado River dried up?

The scenario, though unlikely anytime soon, is a stark way to consider the growing effects of climate change and drought on the region. And when researchers at Arizona State looked into it this year, they found a story of economic disaster.

The seven states that rely on the Colorado for at least some of their water supply — from Wyoming down to Southern California — would lose 16 million jobs, many in health care, high technology and arts and recreation. The fewest job losses would come in agriculture.

Nonetheless, in the West, it's agriculture that still gets the lion's share of the water.

That's the great tension for Western states — and the U.S. economy — as global temperatures rise and drought intensifies in coming years. This region of the country has powered the recovery from recession, leading in job growth and the development of cutting-edge industries that drive innovation and deliver higher-than-average pay for all sorts of workers. But continuing that growth, economists and regional experts say, requires additional access to the dwindling supply of water that farmers are asserting a legal and historic right to.

In that sense, the drought is not just raising questions about how America can keep soil fertile and food plentiful, but about the future of jobs, cities and technology.

"American cities, particularly in the West, are generating well over 97 percent" of the region's economic activity, said Ben Alexander, associate director of the consulting firm Headwaters Economics. "And they can't get the water they need to grow and expand."

The tension will pit some of the nation's fastest-growing urban economies against some of its most troubled rural ones, where unemployment and poverty rates remain high. The struggle will be complicated by the West's often-byzantine laws for allocating water. And it raises questions about whether the region and the country can afford to use so much of water for agricultural purposes.

"It's a complete mess as far as how to make it work," said Timothy James, an economist at the L. William Seidman Research Institute in Phoenix, who was one of the authors of the Colorado River study.

Along with Los Angelinos who are showering and watering their lawns less under restrictions from the governor, struggling growers of nuts, produce and other crops have received most of the attention as California's monster drought has stretched into its fourth year. But other parts of the West are baking, too, and their industries are thirsty. Climate models suggest the entire region will be facing longer and harsher droughts in the decades to come, stoking increased competition for the West's most precious resource.

Telecom companies need water to cool their network centers in New Mexico. Semiconductor fabrication plants in Arizona need it, and so will the new Tesla Motors factory outside Reno, Nev.

The snow center of Park City, Utah, has secured additional water supplies to prepare for more winters like the past one, when almost no snow fell on its slopes, forcing ski resorts to draw water to make their own.

"It's a major concern," said Jack Thomas, Park City's mayor and a lifelong skiier. "Our ability to bring water into the community is a constraint on growth."

Tech giants such as Google and Facebook draw relatively little water to support their headquarters in the San Francisco Bay area but use large amounts to maintain their cloud data-storage centers in places such as Oregon's Columbia River Gorge. Silicon Valley relies heavily on the Sacramento-San Joaquin Delta, one of the nation's most strapped water sources, for residential and commercial flows.

"I don't know that I have a date and time for you when it will become a tipping point," said John Schulz, associate vice president of sustainability operations at AT&T, which has offices and network centers across the region and is searching for ways to conserve water. "We're feeling the urgency."

Farmers feel it, too, but they warn that reducing water supplies for farms could devastate rural communities, hurt the U.S. economy and risk causing food shortages in an increasingly hungry world.

"We're not doing a lot right now to keep farmers in business," said Dan Keppen, executive director of the Family Farm Alliance, an advocacy group based in Southern Oregon. "Once you start taking out blocks of production, food prices are going to go up, and that's going to have a ripple effect on consumer spending in this country."

Farming declined as a share of Western state economies throughout the last decades of the 20th century, then enjoyed a mild uptick during and after the Great Recession. Today it represents a small fraction of the region's economy and is expected to shrink further.

Only about 1.4 percent of the economic output in the Far West, the Rocky Mountain West and the Southwest came from agriculture in 2012, according to Commerce Department statistics. Information services made up 5.5 percent of those regions' economies. Private services overall were about 64 percent.

In each region, both the information and overall service industries grew faster than farming from 1997 to 2012.

The new, fast-growing industries — and the cities that house them — have learned to use water more efficiently, virtually doubling how much they can do with a drop of water, according to calculations by Ellen Hanak, director of the Water Policy Center at the nonpartisan Public Policy Institute of California. Her work was based on government data.

In most states, however, farmers have made much smaller gains in efficiency. Agriculture continues to command most of the available water not set aside for environmental protection or power generation — more than 80 percent, on average, in Western states.

Some of that water grows high-returning crops, such as California almonds and pistachios, but not all of it does. Robert Glennon, a law professor and water expert at the University of Arizona, calculated last year that an acre-foot of water used for farming can yield $1,000 worth of alfalfa or $6,000 of lettuce. The same amount of water could produce $13 million worth of semiconductors.

Economists say there should be a simple solution to that problem: Industries that could put water to better use would pay farmers for their water rights. "People get super scared about this prospect of water moving from one sector to another," Hanak said, but "you don't have to move much to make a difference."

The West's often dysfunctional water markets can make even small moves difficult, however. Colorado has long struggled with the outcry in rural communities when growing suburbs pay farmers to divert their water. In California, coastal cities have grown rapidly in the past few years, while many farming counties across the Central Valley still struggle with double-digit unemployment.

Even rural communities that have developed more vibrant economies — particularly from the growing recreation and tourism sector — are worried about water shortages to come. Mountain cities are worried that drought could stall their ski industries and maroon their river rafting guides, said Diana Madson, executive director of the Mountain Pact, a nonprofit group that works with cities on conservation and adaptation measures. "In every town right now," she said, "they're thinking about how to increase new tech opportunities."

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Feds: Lake Mead below trigger in 2017

By KEN RITTER, Associated Press | Posted: Tuesday, May 19, 2015 8:45 am

LAS VEGAS — Federal water managers released a report Monday projecting that Lake Mead's water levels will fall below a point in January 2017 that would force supply cuts to Arizona and Nevada.

The effects could be serious. Arizona's allocation of Colorado River water could be cut 11.4 percent, or by an amount normally used by more than 600,000 homes. Nevada's share could be reduced 4.3 percent. Think 26,000 homes.

Lake Mead

Water intake pipes that were once underwater sit above the water line along Lake Mead in the Lake Mead National Recreation Area, Monday near Boulder City, Nev. Federal water managers are projecting Lake Mead will drop to levels in January 2017 that could force supply cuts to Arizona and Nevada.

But officials heading water agencies in the two states and California took a wait-and-see approach to the projections posted by the U.S. Bureau of Reclamation.

They pointed to fluctuations in precipitation levels just since January. They added that more will be known in August when the bureau knows how much runoff in the upper-basin states of Colorado, New Mexico, Utah and Wyoming reaches the Lake Powell reservoir.

That will determine how much water the agency controlling a Colorado River water system crucial to about 40 million residents in seven Southwest U.S. states will release from Lake Powell through the Grand Canyon to Lake Mead near Las Vegas.

"A lot is going to depend on precipitation and flows from the tributaries," said David Modeer, general manager of the Central Arizona Project, the main water agency in the lower-basin state that would be affected the most.

"We don't think it means a whole lot right now because we have another couple of months to determine the release out of Lake Powell," he said.

The so-called interim guidelines issued Monday by the Bureau of Reclamation predict water levels will be just 2 feet above a key trigger point next January on Lake Mead, the reservoir behind Hoover Dam.

The lake was 37 percent full on Monday, said Dan Bunk, the Bureau of Reclamation's water operations manager. Its water surface level of 1,077 above sea level was 2 feet above the crucial 1,075-foot line.

The so-called interim guidelines chart a wobbly series of historically low water levels at Lake Mead — dropping to as much as 1,054 feet next summer and 1,052 feet in April 2017. But it would be about 1,077 this coming January, the point in time when a declaration of water shortage for 2016 would be made.

Lake Powell, behind the Glen Canyon Dam straddling the Utah-Arizona border, was 45 percent full on Monday. Bunk said that if Powell remains above its own trigger point, water releases to Lake Mead could remain robust and Lake Mead could remain above 1,070 feet through 2016.

"We haven't made any shortage projection. That would be done in August 2016," Bunk said.

Lake Mead reached its high-water capacity in 1983 at 1,225 feet. It reaches so-called "dead pool" at just under 900 feet, meaning nothing would flow downstream from Hoover Dam.

Las Vegas and its 2 million residents and 40 million tourists a year get almost all their drinking water from Lake Mead.

John Entsminger, general manager of the regional Southern Nevada Water Authority, said he believed conservation efforts like those now being adopted in California have put Las Vegas in a position to handle any initial shortage reductions "without significant impact."

"There is no doubt that this drought is serious," he said, "and the projections from the Bureau of Reclamation continue to reaffirm that reality."

William Hasencamp, Colorado River resources chief for the Metropolitan Water District of Southern California, said he saw reason to prepare, not panic.

Drought-stricken California will continue to be able to draw its 4.4 million acre-foot allocation of Colorado River water even if Arizona and Nevada are affected.

"But we lose flexibility, which is a pretty big deal because we serve just under 19 million people," Hasencamp said. "We know a shortage is coming at some point."

Holladay homeowner left without city support, after irrigation line floods basement

Ali Monsen (http://www.good4utah.com/story/d/story/ali-monsen/34923/KD9V5X03BkWscQKhsglq1A)

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HOLLADAY, Utah (ABC 4 Utah) - The recent wet weather has controversy rippling through the city, Tuesday.

Authorities say an irrigation line overflowed into a neighborhood, causing some flooding. The problem is that homeowners say they foresaw the incoming flow and could not convince help to respond.

Gary Nielson now has a lot of draining to do. He woke up to the soggy situation he claims could have been prevented.

"My wife left early this morning and called and said, 'There's a flood in the road – it looks like it's running into our house.' That was about six o'clock. When I went out, there was about four inches on the lawn," Nielson explained.

Unfortunately, Nielson later learned the lawn is the least of his problems. Several inches of irrigation water are drowning his basement.

"I've got quite a mess," he remarked, showing Good 4 Utah the damage.

"We sent a fire response to support this incident – make sure the property was taken care of..." said Capt. Wade Watkins, with Unified Fire Authority.

Crews showed up shortly after the horrified homeowner called 911, Tuesday morning. Then, Nielson and his neighbors started talking.

"The thing is, we had an opportunity last night to prevent a problem, but nobody really stepped up or gave us the right numbers to get that done..." explained Harold Wolley, Nielson's neighbor. "We started noticing quite a bit of water coming from the neighbor's [driveway]," he said.

Wolley and another neighbor, Mark Matley, say they tried calling Holladay City with their concerns but could not convince the public works representative to send help because the situation was happening after hours.

"I don't know if they didn't realize the seriousness of it or if they were literally just uninterested..." Matley recalled. "So, I called the public works guy again, and he said, 'Well, sorry. That's Mother Nature.' [He] didn't seem concerned at all, and I said 'Well, you do realize you guys are probably going to be responsible for this...'" Matley said.

City officials are now attributing the rushing water flow to an irrigation gate several blocks away. They say it is up to nearby homeowners to keep the gate closed and that somebody failed to do so.

"Throughout the City of Holladay, we still have canals that people use to water their gardens and their lawns with that have gone back into late 1800's, and people have authority to use those..." said Randy Fitts, City Manager for Holladay. "They're assigned how much water they can have, when they can have it, and they're responsible for doing

that," he explained.

"So, you're saying it all falls back on these homeowners, basically...?" asked Good 4 Utah's Ali Monsen.

"Right," Fitts responded.

So, for now, no one is taking on the responsibility. Meanwhile, Nielson is left wondering what to do next.

"We just barely finished the basement two weeks ago. This is just actually pretty upsetting," Nielson said.

Authorities are also now reminding people the emergency response system is in place for a reason. They say it is always a good idea to call 911, instead of trying to track down specific people, like Nielson's neighbors did.

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USDA to expand investment in water conservation

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WASHINGTON - Agriculture Secretary Tom Vilsack today, May 18, announced that the Natural Resources Conservation Service (NRCS) will invest approximately $21 million in additional Farm Bill dollars to help farmers and ranchers apply science-based solutions to mitigate the short and long term effects of drought.

These investments will focus financial and technical assistance in the most severely drought-stricken areas in eight states to help crop and livestock producers apply conservation practices that increase irrigation efficiency, improve soil health and productivity, and ensure reliable water sources for livestock operations.

"Since the historic drought of 2012, dry conditions have persisted in many parts of the country, particularly in the West," Agriculture Secretary Tom Vilsack said. "Every day, NRCS conservationists work side-by-side with agricultural producers and help them conserve water and increase resilience in their operations. Today's investment will provide additional resources in drought-stricken areas to help farmers and ranchers implement solutions to mitigate the impacts of sustained drought."

Today's announcement expands on the substantial efforts already underway to help producers conserve water, improve soil health and build long term agricultural resilience into their operations.

Already this year, NRCS state offices have targeted significant portions of their fiscal year Environmental Quality Incentives Program (EQIP) allocations to address water conservation, soil health, and resilience. In California, for example, more than $27 million of fiscal year 2015 EQIP funding is directed towards beneficial drought management practices.

With today's announcement, NRCS will provide an additional $21 million in technical and financial assistance through EQIP to target areas that are experiencing either exceptional or extreme drought conditions as of the May 5, 2015 U.S. Drought Monitor, which includes parts of California, Kansas, Idaho, Nevada, Oklahoma, Oregon, Texas, and Utah.

The EQIP funding will allow NRCS to help producers apply selected conservation practices to better deal with the effects of drought in their operations, including prescribed grazing, livestock watering facilities, cover crops, nutrient management, irrigation systems, and other water conservation practices. On average, farmers and ranchers contribute half the cost of implementing conservation practices.

Between 2012 and 2014, NRCS invested more than $1.5 billion in financial and technical assistance to help producers implement conservation practices that improve water use efficiency and build long term health of working crop, pasture, and range lands.

These practices include building soil health by using cover crops and no-till, which allow the soil to hold water longer and buffer roots from higher temperatures; improving the efficiency of irrigation systems; and implementing prescribed grazing to relieve pressure on stressed vegetation.

NRCS is also leveraging partner investments through the new Regional Conservation Partnership Program (RCPP) to put further resources toward projects that foster water conservation and resilience.

In the first round of RCPP funding last year, NRCS committed more than $84 million in 35 projects that address water conservation and soil health. These funds will be matched dollar-for-dollar by our partners, resulting in a total investment of nearly $190 million in water conservation and resilience across the country.

In May, Vilsack announced a second round of RCPP funding availability that will make up to $235 million available for targeted conservation, highlighting drought and water conservation as a resource concern for potential projects.

Earlier this month, NRCS announced $6.5 million in additional drought-related funding through the Ogallala Aquifer Initiative.

This investment will support targeted, local efforts to protect the quality and extend the availability of water from the Ogallala Aquifer, which underlies about 225,000 square miles of the Great Plains and supports nearly one-fifth of the wheat, corn, cotton and cattle produced in the United States.

Through the creation of the National Drought Resilience Partnership, launched as part of the President's Climate Action Plan, federal agencies are working closely with states, tribes and local governments to develop a coordinated response to drought.

For information on USDA's drought efforts, visit USDA Disaster and Drought Information. And to learn more about how NRCS is helping private landowners deal with drought, visit the NRCS' drought resources. View information by state.

Producers and landowners are encouraged to visit the NRCS website or stop by their local NRCS office to find out if they are eligible for

Producers and landowners are encouraged to visit the NRCS website or stop by their local NRCS office to find out if they are eligible for this new funding. Learn more about and EQIP and other NRCS programs.

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