



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
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
Steven K. Earley
Gregg A. Galecki
Jennifer Grant
Michael D. Luers
Alan Matheson
Walter L. Baker
Executive Secretary

Utah Water Quality Board Meeting
DEQ Building Board Room 1015
195 N 1950 W
Salt Lake City, UT 84116
December 7, 2015

Work Meeting Begins @ 8:30 a.m.

Independent Scientific Review Erica Gaddis

Board Meeting Begins @ 9:30 a.m.
AGENDA

- A. **Water Quality Board Meeting – Roll Call**
- B. (Tab 1) **Minutes:**
Approval of Minutes for September 23, 2015 WQ Board Meeting Myron Bateman
Sudweeks Award Walt Baker
- C. **Executive Secretary’s Report** Walt Baker
- D. (Tab 2) **Funding Requests:**
1. Financial Report Emily Cantón
2. Ammonia Request for Proposal: *Hardship Grant Authorization* Chris Bittner
3. Eagle Mountain White Hills SSD: *Loan Reauthorization* Lisa Nelson
- E. (Tab 3) **Rulemaking:**
1. Technology Based Phosphorus R317-1: *Request for Rulemaking* John Mackey
2. Onsite Wastewater Systems R317-4: *Request to Adopt Rule* John Kennington
- F. (Tab 4) **Other Business:**
1. Budget Update FY2016-FY2017 Emily Cantón
2. FY2017 Funding Needs Erica Gaddis
3. Ninemile Creek Temperature TMDL Sandy Wingert

Next Meeting January 27, 2016
DEQ Building Board Room 1015
195 North 1950 West
Salt Lake City, Utah 84116

Revised 12/01/2015

In compliance with the American Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Ashley Nelsen, Office of Human Resources, at (801) 903-3978, TDD (801) 903-3978, at least five working prior to the scheduled meeting

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MINUTES

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
UTAH WATER QUALITY BOARD
Coalville Council Chambers
60 N Main
Coalville, UT 84017
September 23, 2015

UTAH WATER QUALITY BOARD MEMBERS PRESENT

Clyde Bunker	Jennifer Grant
Steven Earley	Scott Baird
Gregg Galecki	Michael Luers
Myron Bateman	Shane Pace

DIVISION OF WATER QUALITY STAFF MEMBERS PRESENT

Walt Baker, Leah Ann Lamb, Erica Gaddis, Jenny Potter, Marsha Case, Ally Gagon, Jeff Studenka, Harry Campbell, Kari Lundeen, Carl Adams, John Mackey, Jennifer Robinson, Kim Shelley, Chris Bittner.

OTHERS PRESENT

<u>Name</u>	<u>Organization Representing</u>
Jay Olsen	UDAF
Craig McKnight	NRCS

Myron Bateman called the Board meeting to order at 1:02 PM and took roll call for the members of the Board and audience.

APPROVAL OF MINUTES FOR THE JUNE 24, 2015 MEETING

Motion: It was moved by Mr. Pace to approve the minutes for June 2015 Board meeting. Mr. Luers seconded the motion. The motion was unanimously passed.

EXECUTIVE SECRETARY REPORT

- Hugo Rodier has resigned from the board to focus on his medical practice. We will recognize him for his service on the Board when he is available to attend the Board Meeting
- Gold King Mine release will be discussed in detail by Erica Gaddis later in our meeting.
- Waters of the US Rule has been issued by the EPA and appealed to three District Courts. However, the rule remains in effect within Utah. This case should make its way back to the Supreme Court and the Board will be updated on the court rulings that may take place.
- Tomorrow there will be a meeting with the Tax Revenue Commission to discuss the funding the DWQ loan program receives from sales tax revenue. This funding is used to match the federal dollars DWQ receives for that ultimately capitalizes the loan/grant programs. The commission's desire is that all sales tax monies be put into the general fund rather than allocated to the divisions that benefit from these funds. DWQ currently receives \$3.8 million dollars per year in sales tax funding. Mr. Baker will update the board next month on the details of this meeting and what can be expected moving forward.
- Emily Cantón has accepted the position as Administrative Services Manager with DWQ. She has been handling the Board's loan/grant programs for several years.
- In the 2016 Legislative Session there likely will be a bill sponsored by POTW's that will require any DWQ initiative that exceeds \$10 million to be approved by the legislature. Once the bill is presented, Mr. Baker will keep the Board aware of the events surrounding it.

RULEMAKING

R317 - Permission to Initiate Rule Making R317-4: Mr. Mackey requested authorization to initiate rulemaking to implement various miscellaneous changes to Rule R317-4, as detailed in the Board packet, pages 6-68.

Motion: Following a discussion, Mr. Pace made the motion to initiate rulemaking. Ms. Grant seconded the motion. The motion unanimously passed.

R317-2 – Request for a Change in Proposed Rule 317-2: Mr. Bittner requested the adoption of changes to Rule 317-2 Standards of Quality for Waters of the State, with an effective date of November 30, 2015. This was detailed in the Board packet, pages 69-335.

Motion: Following a discussion, Mr. Bunker made the motion to adopt the requested changes to Rule 317-2. Mr. Earley seconded the motion. The motion unanimously passed.

R317-101- Request to Adopt Amendment to Rule 317-101: Mr. Mackey requested the adoption of the amendment to Rule 317-101, Utah Wastewater Project Assistance Program, as detailed in the Board Packet, pages 336-346.

Motion: Following a discussion, Mr. Luers made the motion to adopt requested changes to Rule 317-101. Mr. Galecki seconded the motion. The motion unanimously passed.

OTHER BUSINESS

Gold King Mine Release: Dr. Gaddis addressed the Board with the timeline and events of the Gold King Mine Release in Colorado, the impact so far and the ongoing sampling for the impacted waterways in Utah. More information regarding these updates and ongoing measures can be found at: <http://www.deq.utah.gov/Topics/Water/goldkingmine/>.

303(d) Vision Update: Mr. Adams addressed the Board by covering the updated 303(d) Vision, a strategy that implements the responsibilities of Utah's water quality goals and priorities. Information on this program can be found at: <http://www.deq.utah.gov/ProgramsServices/programs/water/wqmanagement/assessment/index.htm>

**Next Meeting – October 28, 2015
DEQ Building Board Room 1015
195 North 195 West
Salt Lake City, UT 84116**

Myron Bateman, Chair
Utah Water Quality Board

**LOAN FUNDS
FINANCIAL PROJECTIONS**

	2nd Qtr FY 2016	3rd Qtr FY 2016	4th Qtr FY 2016	1st Qtr FY 2017	2nd Qtr FY 2017	3rd Qtr FY 2017	4th Qtr FY 2017	1st Qtr FY 2018	2nd Qtr FY 2018	3rd Qtr FY 2018	4th Qtr FY 2018	1st Qtr FY 2019
STATE REVOLVING FUND (SRF)	Oct - Dec 2015	Jan - Mar 2016	Apr - June 2016	July - Sept 2016	Oct - Dec 2016	Jan - Mar 2017	Apr - June 2017	July - Sept 2017	Oct - Dec 2017	Jan - Mar 2018	Apr - June 2018	July - Sept 2018
Funds Available												
SRF - 1st Round (LOC) 2014 Cap Grant	2,849,381	-	-	-	-	-	-	-	-	-	-	-
Less: 2014 Principal Forgiveness Amount	(600,934)	-	-	-	-	-	-	-	-	-	-	-
SRF - 1st Round (LOC) 2015 Cap Grant	6,924,000	-	-	-	-	-	-	-	-	-	-	-
State Match	1,465,154	-	-	-	-	-	-	-	-	-	-	-
SRF - 2nd Round	83,129,002	93,891,297	77,295,447	70,466,579	60,509,038	52,207,077	46,958,192	40,745,110	31,823,296	23,058,407	17,798,419	21,637,710
Interest Earnings at 0.6%	124,694	117,364	96,619	88,083	75,636	65,259	58,698	50,931	39,779	28,823	22,248	27,047
Loan Repayments	-	4,724,786	3,571,513	1,954,376	1,622,402	4,685,856	3,728,221	1,977,254	1,195,332	4,711,189	3,817,043	2,000,965
Total Funds Available	93,891,297	98,733,447	80,963,579	72,509,038	62,207,077	56,958,192	50,745,110	42,773,296	33,058,407	27,798,419	21,637,710	23,665,722
Project Obligations												
Eureka City	-	(400,000)	-	-	-	-	-	-	-	-	-	-
Francis City	-	(1,138,000)	-	-	-	-	-	-	-	-	-	-
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	-	-	(10,497,000)	-	-	-	-	-	-	-	-	-
Payson City	-	(6,900,000)	-	-	-	-	-	-	-	-	-	-
Salem City	-	(13,000,000)	-	-	-	-	-	-	-	-	-	-
Wellington City	-	-	-	-	-	-	-	(950,000)	-	-	-	-
Total Obligations	-	(21,438,000)	(10,497,000)	(12,000,000)	(10,000,000)	(10,000,000)	(10,000,000)	(10,950,000)	(10,000,000)	(10,000,000)	-	(37,024,500)
SRF Unobligated Funds	\$ 93,891,297	\$ 77,295,447	\$ 70,466,579	\$ 60,509,038	\$ 52,207,077	\$ 46,958,192	\$ 40,745,110	\$ 31,823,296	\$ 23,058,407	\$ 17,798,419	\$ 21,637,710	\$ 13,358,722

	2nd Qtr FY 2016	3rd Qtr FY 2016	4th Qtr FY 2016	1st Qtr FY 2017	2nd Qtr FY 2017	3rd Qtr FY 2017	4th Qtr FY 2017	1st Qtr FY 2018	2nd Qtr FY 2018	3rd Qtr FY 2018	4th Qtr FY 2018	1st Qtr FY 2019
UTAH WASTEWATER LOAN FUND (UWLF)	Oct - Dec 2015	Jan - Mar 2016	Apr - June 2016	July - Sept 2016	Oct - Dec 2016	Jan - Mar 2017	Apr - June 2017	July - Sept 2017	Oct - Dec 2017	Jan - Mar 2018	Apr - June 2018	July - Sept 2018
Funds Available												
UWLF	\$ 15,270,771	\$ 11,199,092	\$ 12,055,827	\$ 13,887,190	\$ 14,913,873	\$ 15,897,223	\$ 17,190,653	\$ 19,022,015	\$ 20,048,698	\$ 21,032,048	\$ 22,325,478	\$ 24,156,840
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	-	789,385	1,274,012	469,333	426,000	736,080	1,274,012	469,333	426,000	736,080	1,274,012	469,333
Total Funds Available	15,270,771	12,885,352	14,226,715	15,253,398	16,236,748	17,530,178	19,361,540	20,388,223	21,371,573	22,665,003	24,496,365	25,523,048
General Obligations												
State Match Transfer	(1,465,154)	-	-	-	-	-	-	-	-	-	-	-
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												
Helper City	(1,157,000)	-	-	-	-	-	-	-	-	-	-	-
Eagle Mountain City - White Hills	-	(490,000)	-	-	-	-	-	-	-	-	-	-
Planned Projects												
None at this time	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligations	(4,071,679)	(829,525)	(339,525)									
UWLF Unobligated Funds	\$ 11,199,092	\$ 12,055,827	\$ 13,887,190	\$ 14,913,873	\$ 15,897,223	\$ 17,190,653	\$ 19,022,015	\$ 20,048,698	\$ 21,032,048	\$ 22,325,478	\$ 24,156,840	\$ 25,183,523

**HARDSHIP GRANT FUNDS
FINANCIAL PROJECTIONS**

HARDSHIP GRANT FUNDS (HGF)	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	4th Qtr FY 2018 Apr - June 2018	1st Qtr FY 2019 July - Sept 2018
Funds Available												
Beginning Balance	\$ -	\$ 4,611,462	\$ 3,562,733	\$ 2,853,873	\$ 2,330,336	\$ 2,460,210	\$ 2,738,189	\$ 3,667,042	\$ 3,128,192	\$ 3,265,482	\$ 3,529,535	\$ 4,392,162
Federal HGF Beginning Balance	5,661,366	-	-	-	-	-	-	-	-	-	-	-
State HGF Beginning Balance	476,792	-	-	-	-	-	-	-	-	-	-	-
2014 Principal Forgiveness Amount	600,934	-	-	-	-	-	-	-	-	-	-	-
Interest Earnings at 0.6%	9,207	5,764	4,453	3,567	2,913	3,075	3,423	4,584	3,910	4,082	4,412	5,490
UWLF Interest Earnings at 0.6%	22,906	13,999	15,070	17,359	18,642	19,872	21,488	23,778	25,061	26,290	27,907	30,196
Hardship Grant Assessments	-	104,451	930,197	402,201	-	201,698	860,685	379,454	-	180,346	787,051	356,178
Interest Payments	-	53,057	216,420	53,335	108,319	53,335	43,257	53,335	108,319	53,335	43,257	53,335
Advance Repayments	1,613,500	-	-	-	-	-	-	-	-	-	-	-
Total Funds Available	8,384,705	4,788,733	4,728,873	3,330,336	2,460,210	2,738,189	3,667,042	4,128,192	3,265,482	3,529,535	4,392,162	4,837,361
Project Obligations												
Blanding City - Planning Advance	(39,900)	-	-	-	-	-	-	-	-	-	-	-
DWQ-Central Utah Pulic Health Dept - Planning Grant	(50,000)	-	-	-	-	-	-	-	-	-	-	-
Eagle Mountain City - White Hills - Construction Grant	-	(580,000)	-	-	-	-	-	-	-	-	-	-
Eureka City - Construction Grant	-	(646,000)	-	-	-	-	-	-	-	-	-	-
Emigration Sewer Imp Dist - Planning Grant	(60,000)	-	-	-	-	-	-	-	-	-	-	-
Francis City - Construction Grant	-	-	(1,875,000)	-	-	-	-	-	-	-	-	-
TriCounty Health Dept. - Planning Grant	(45,000)	-	-	-	-	-	-	-	-	-	-	-
Wellington - Planning Advance	(32,000)	-	-	-	-	-	-	-	-	-	-	-
Planned Projects												
None at this time												
Non-Point Source Project Obligations												
(FY11) Gunnison Irrigation Company	(48,587)	-	-	-	-	-	-	-	-	-	-	-
(FY11) DEQ - Willard Spur Study	(210,559)	-	-	-	-	-	-	-	-	-	-	-
(FY12) UDAF	(798,519)	-	-	-	-	-	-	-	-	-	-	-
(FY13) DEQ - Great Salt Lake Advisory Council	(339,418)	-	-	-	-	-	-	-	-	-	-	-
(FY14) UACD	(47,394)	-	-	-	-	-	-	-	-	-	-	-
(FY15) DEQ - Nitrogen Transformation Study	(150,000)	-	-	-	-	-	-	-	-	-	-	-
FY 2011 - Remaining Payments	(3,800)	-	-	-	-	-	-	-	-	-	-	-
FY 2012 - Remaining Payments	(59,540)	-	-	-	-	-	-	-	-	-	-	-
FY 2013 - Remaining Payments	(89,293)	-	-	-	-	-	-	-	-	-	-	-
FY 2014 - Remaining Payments	(299,672)	-	-	-	-	-	-	-	-	-	-	-
FY 2015 - Remaining Payments	(530,659)	-	-	-	-	-	-	-	-	-	-	-
FY 2016 Allocation	(893,902)	-	-	-	-	-	-	-	-	-	-	-
FY 2017 Allocation	-	-	-	(1,000,000)	-	-	-	-	-	-	-	-
FY 2018 Allocation	-	-	-	-	-	-	-	(1,000,000)	-	-	-	-
FY 2019 Allocation	-	-	-	-	-	-	-	-	-	-	-	(1,000,000)
Non-Point Source Projects in Planning												
*Ammonia Standard Study	(75,000)	-	-	-	-	-	-	-	-	-	-	-
Total Obligations	(3,773,244)	(1,226,000)	(1,875,000)	(1,000,000)	-	-	-	(1,000,000)	-	-	-	(1,000,000)
HGF Unobligated Funds	\$ 4,611,462	\$ 3,562,733	\$ 2,853,873	\$ 2,330,336	\$ 2,460,210	\$ 2,738,189	\$ 3,667,042	\$ 3,128,192	\$ 3,265,482	\$ 3,529,535	\$ 4,392,162	\$ 3,837,361



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MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker P.E. 

FROM: Chris Bittner, Water Quality Standards Coordinator

DATE: October 19, 2015

SUBJECT: Request for the Water Quality Board to approve a hardship grant for a maximum of \$75,000 to conduct studies in support of the 2013 USEPA ammonia criteria for Utah waters.

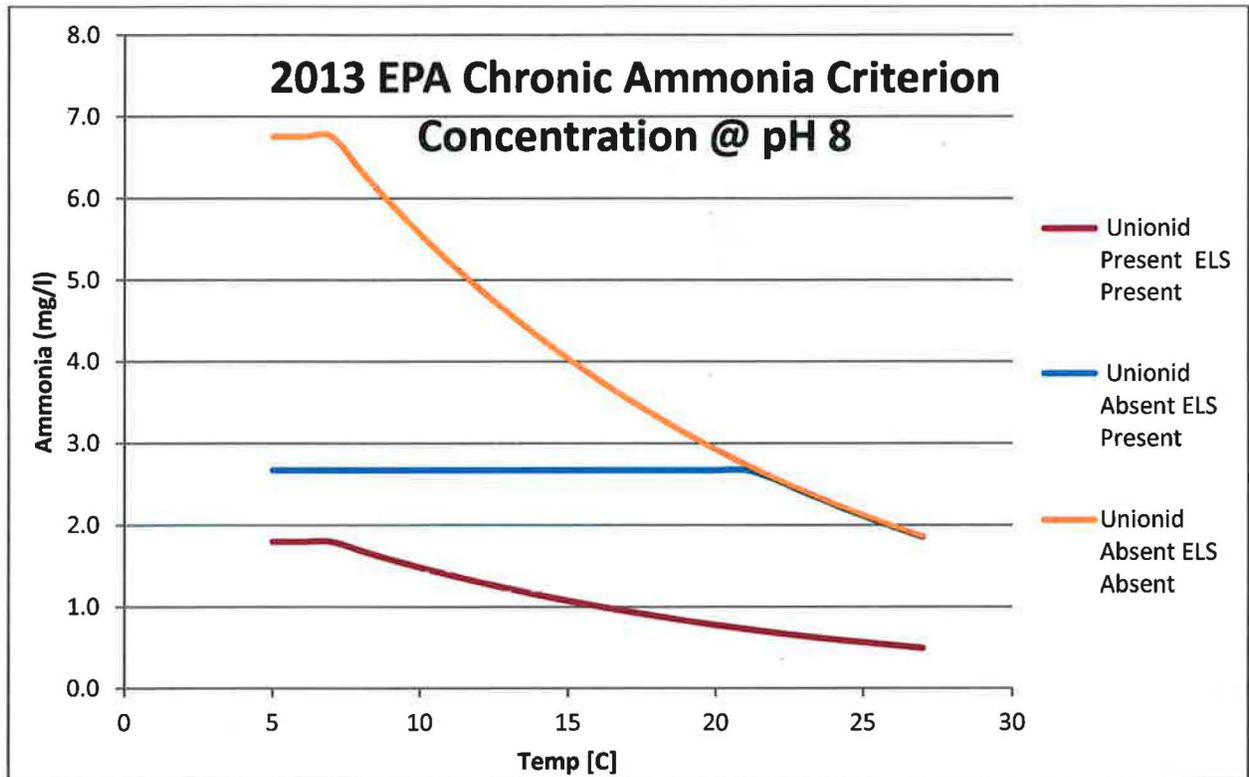
In 2013, EPA published new recommended water quality criteria for ammonia that are significantly more stringent than the existing criteria if certain freshwater unionid mussels and non-pulmonate snails (sensitive species) are present (see Figure below). The more stringent criteria will have costly implications for facilities that discharge ammonia which includes all publically-owned treatment works. However, if the sensitive species are not present in the receiving waters, the resulting ammonia criteria that would be protective may be less stringent than Utah's current criteria.

As the first phase towards adoption of appropriate new ammonia criteria for Utah waters, staff recommends that the historical presence of the sensitive species be determined. This information will be used to determine which Utah waters warrant additional, and more costly, field surveys to determine the current presence or absence of the sensitive species. Staff will return to the Board with a future request if this additional work is warranted. The first phase of this work will be performed jointly with the State of Colorado.

Staff are evaluating competitive proposals to conduct this work after initiating a request for proposals (RFP) with the State Division of Purchasing. These evaluations are currently confidential as required by State purchasing rules. If the Board approves this request, staff will be able to initiate a contract with the contractor providing the most value to the State as selected through the RFP process.

Staff anticipates that the cost for the first phase will be less than \$75,000. The remaining funds will be used for additional related work such as developing a method and making determinations of when early life stages (ELS) of fish are present. The presence or absence of early life stages also significantly influences the ammonia criteria (see Figure below).

Staff requests that the Board approve a Hardship Grant for the Division of Water Quality, up to a maximum of \$75,000 to enter into a contract or contracts for these important studies.





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MEMORANDUM

TO: Utah Water Quality Board
THROUGH: Walter L. Baker, P.E. *WLB*
FROM: Lisa Nelson, P.E. *LN*
Project Manager
DATE: December 7, 2015
SUBJECT: Clarification of the Eagle Mountain-White Hills funding authorization

The purpose of this memo is notify the Water Quality Board (the Board) of errors in the June 25, 2014 Feasibility Report Authorization for Eagle Mountain City and to recommend the Board clarify their intentions, by either amending the minutes or by directing staff to amend the terms of the authorization.

On June 25, 2014 the Board authorized funding to Eagle Mountain City for the construction of a new lift station, pipeline and repair of collection lines to replace the failing lagoon system currently serving the White Hills Subdivision, which was annexed into Eagle Mountain City. As part of the annexation agreement, Eagle Mountain City will not accept responsibility for maintaining this system until such time as it is brought up to the City's requirements.

The estimated project cost was \$1,088,000 and staff recommended a combination of loan and grant. However, on pages 2.4 and 2.8 of the Board's packet, the requested grant and loan amounts were transposed and this error was later incorporated into the approved meeting minutes. The cost model and staff's verbal request was for a \$590,000 grant and a loan of \$498,000 at 0%. The Board decided to attach a 1% interest rate on the loan amount because of the history of deferred maintenance, but the motion did not specify the exact loan and grant amount, thereby creating this discrepancy.

Staff is recommending that the Board amend the June 25, 2014 minutes to reflect authorized funding of a design advance of \$54,000, a grant of \$598,000 and a loan of \$490,000 at 1% with all other conditions remaining in effect.

Enclosures: Feasibility Report from June 25, 2014
New Cost Model

Eagle Mountain - White Hills Collection System Improvement/Replacement Project

Project Costs		Sewer Project	
Engineering-Planning	\$	6,000	
Engineering - Design	\$	54,000	
Engineering - CMS	\$	20,000	
DWQ Loan Fees	\$	5,000	
Legal/Bonding	\$	40,000	
Construction - pump station and force main	\$	713,000	
Construction - repair of collection	\$	74,000	
Repay Planning Advance	\$	18,000	
Contingency	\$	158,000	
Total Project Cost:	\$	1,088,000	

Project Funding			
WQB Loan Amount	\$	490,000	
WQB Grant Amount	\$	598,000	
Total Project Funding:	\$	1,088,000	

Current Expenses			
Total O&M expenses Collection only	\$	8,000	
Existing Debt Service	\$	-	
Wastewater Treatment Annual Expense*	\$	38,295	

Funding Conditions			
Loan Repayment Term (years)		20	
Reserve Funding Period		6	

Current Customer Base & User Charges			
Residential Customers (ERU)		115	
Commercial Customers (ERU)			
Commercial Customers (ERU) ¹		115	
Monthly User Fee (ERU) Treatment Fee	\$	27.75	
Monthly User Fee (ERU) Debt Service	\$	27.99	
Total Monthly User (ERU)	\$	55.74	
Average MAGI for 2011 (Cedar Fort)	\$	47,386	

ESTIMATED COST OF SEWER SERVICE

	WQB Loan Amount	Grant Amount	WQB Interest Rate	WQB Loan Debt Service	WQB Loan Reserve	Total Annual Collection O&M Cost	Total Annual Sewer Collection Cost	Total Monthly Sewer Collection Equivalent Cost/ERU	Total Monthly Eagle Mountain Treatment Cost	Total Monthly Equivalent Cost/ERU	Sewer Cost as a % of MAGI
	\$490,000	\$ 598,000	0.00%	\$24,500	\$6,125	\$8,000	\$38,625	\$27.99	\$27.75	\$55.74	1.41%
¹	\$490,000	\$ 598,000	1.00%	\$27,154	\$6,788	\$8,000	\$41,942	\$30.39	\$27.75	\$58.14	1.47%
	\$490,000	\$ 598,000	2.00%	\$29,967	\$7,492	\$8,000	\$45,458	\$32.94	\$27.75	\$60.69	1.54%
²	\$543,000	\$ 545,000	0.00%	\$27,150	\$6,788	\$8,000	\$41,938	\$30.39	\$27.75	\$58.14	1.47%
	\$598,000	\$ 490,000	0.00%	\$29,900	\$7,475	\$8,000	\$45,375	\$32.88	\$27.75	\$60.63	1.54%
	\$598,000	\$ 490,000	1.00%	\$33,138	\$8,285	\$8,000	\$49,423	\$35.81	\$27.75	\$63.56	1.61%
	\$598,000	\$ 490,000	2.00%	\$36,572	\$9,143	\$8,000	\$53,715	\$38.92	\$27.75	\$66.67	1.69%

¹ Staff's recommendation

² The equivalent grant/loan combination of (1) using a 0% loan by decreasing the grant amount and increasing loan amount.



State of Utah

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Governor

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Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

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MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker, P.E. 

FROM: John Mackey, P.E.
Manager, Engineering Section

DATE: November 24, 2015

SUBJECT: Request to Initiate Rulemaking on Rule R317-1-3.3 Technology-Based Limits for Controlling Phosphorus Pollution (Amendment)

The purpose of this memorandum is to request authorization from the Utah Water Quality Board to initiate rulemaking to amend R317-1-3, *Requirements for Waste Discharges*. The proposed amendment would modify the subject rule to address comments received from POTWs regarding rule implementation. The proposed amendment also incorporates a voluntary wastewater treatment optimization element designed to encourage nitrogen pollution reductions. Additionally, the proposed amendment provides clarification to the phosphorus discharge cap basis, its implementation schedule, and to the requirements for manual collection of composite samples. Minor formatting changes to the rule have also been included with the amendment.

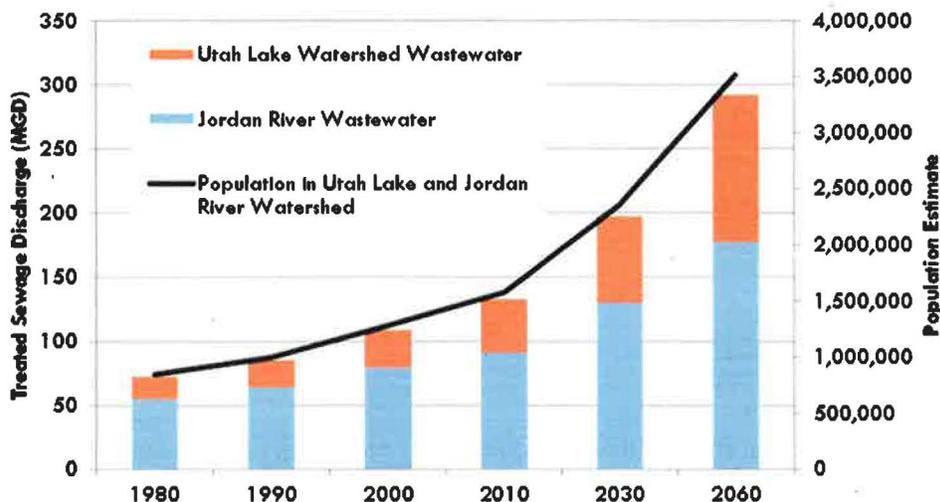
Background

On July 1, 2015, Rule R317-1-3.3 Technology-Based Limits for Controlling Phosphorus Pollution began taking effect with the initiation of self-implementing nutrient monitoring in the wastewaters of all discharging treatment works in the state. The next regulatory milestone of the rule will be January 1, 2018 when all variances to the rule will need to have been submitted for consideration by the Division. After that date, all discharging wastewater treatment works without variances will be required to comply with the technology-based phosphorus effluent limit (TBPEL) or the phosphorus loading cap as is applicable, by January 1, 2020.

Rule R317-1-3.3 institutes a technology-based effluent limit of 1 mg/L total phosphorus, applicable to all non-lagoon wastewater discharges into surface waters of the state. When implemented, the water quality

benefits of the rule will be to reduce the aggregate total phosphorus loadings into Utah's waters by more than 985 tons per year, which equates to a 66% reduction in treatment plant phosphorus discharges, and reduce receiving stream phosphorus concentrations on average by about 50 percent. Although the precise ecological benefits of this loading reduction are difficult to predict and it may take years before impacts are observable, several outcomes of the rule can be stated:

1. Current scientific understanding of the relationship between phosphorus loading and ecological response would predict a beneficial outcome.
2. The mass of phosphorus removed each year will no longer be available to accumulate in storage sinks such as lake and river sediments. By reducing these storage amounts, potential for long-term problems associated with episodic releases and internal cycling are diminished.
3. TBPEL of 1 mg/L total phosphorus is the consensus value among all other U.S. states that have opted to implement technology-based limits as part of their nutrient reduction strategies. In other words, the 1 mg/L TBPEL is recognized as achievable using current technologies employed in wastewater treatment in the U.S.
4. The 2010 "Statewide Nutrient Removal Cost Impact Study", performed in collaboration with the POTW community, substantiated the cost-effectiveness of establishing a 1 mg/L effluent limit for phosphorous.
5. The near-term implementation of the TBPEL will significantly reduce phosphorus loadings to Utah's waters until waterbody-by-waterbody phosphorus standards can be developed.
6. Developing nutrient criteria for each waterbody statewide will take many years if not decades. Implementing the 1 mg/L TBPEL is an interim and adaptive step to help hold the line on nutrient pollution until scientifically defensible criteria can be developed.
7. Without the TBPEL, the phosphorus load to Utah's waters is expected to increase in proportion to population growth. Utah has not changed secondary treatment standards since the 1970s, despite considerable population growth over that time. Population is expected to double state-wide by 2050. In the most densely populated areas of the state (e.g., Summit County and Utah County), population is expected to double within 30 years. The graph below summarizes the expected population growth in the Utah Lake and Jordan River watersheds and associated projected increases in treated sewage discharge.



Proposed Amendments to Rule: R317-1-3.3.C.1.e “Due Diligence” Variance

In addition to the required monitoring, many discharging treatment works throughout the state have begun conducting technical and financial studies that are directed toward implementing the rule. Two of the largest plants in the state have presented study results to the Division that indicate biological phosphorus removal technology is the preferred long-term nutrient control approach instead of chemical treatment.

Staff has reviewed the studies and cost estimates and has met with staff from the Salt Lake City and Central Valley Water Reclamation Facilities to discuss their challenges in cost-effectively implementing the current rule. Staff is supportive of the long-term plans of these plants to update and upgrade their wastewater treatment technology.

Staff believes that where facilities intend to implement extensive infrastructure upgrades to economically meet not only the TBPEL but to also meet long-term facility needs, additional time should be allowed for compliance with the TBPEL so long as those facilities are working diligently toward accomplishing these upgrades.

The proposed Amendment to R317-1-3.3 offers a variance for up to 5 years, until January 1, 2025, for facilities that are diligently pursuing implementation of the TBPEL but, in spite of their diligence, would be unable to achieve the effluent limit of 1.0 mg/L total phosphorus by January 1, 2020.

Proposed Amendments to Rule: R317-1-3.3.D “Nitrogen Optimization” Waiver

Nitrogen is recognized as an important nutrient that contributes to nutrient-related water quality problems and use impairments. Its interactions in the aquatic environment are more complex than those of phosphorus and hence, many regulatory authorities have tended to focus on controlling phosphorus as their primary means of reducing the effects of eutrophication. Nonetheless, nitrogen removal from wastewater discharges is an important part of many state water quality protection programs.

Utah's approach to implementing water quality protections has been to use an adaptive approach. The adaptive approach involves taking reasonable incremental steps to improve water quality followed by: (1) a performance review period to evaluate the benefits of these steps; (2) an assessment to determine their effectiveness; and (3) from new information produced, a consideration of the need for and magnitude of further steps required to permanently protect water quality-based uses.

Under our adaptive approach to nutrient control, Utah has proceeded with implementing technology-based phosphorus effluent limits as its first step. The adaptive approach specifies that the effectiveness of the TBPEL be assessed prior to implementing further nutrient regulation. In an effort to encourage a more proactive approach to protecting against nutrient pollution problems, DWQ is proposing a companion "nitrogen optimization" rule that incentivizes early adoption of nitrogen controls. The proposed amendment offers up to ten years of relief from future nitrogen regulation to dischargers who voluntarily reduce nitrogen discharges to agreeable levels prior to January 1, 2020. The goal of this waiver is to effect early, significant nitrogen reductions in discharges by facilities capable of doing so economically. In exchange, facilities that anticipate more stringent nitrogen requirements within their current construction planning period may be able to defer major construction improvements and costs by adopting minor improvements and costs sooner. Where this waiver is employed, there should be a long-term benefit to both the receiving water quality and to the pollution control facility.

Other Proposed Amendments to Rule: R317-1-3.3

Several minor modifications to R317-1-3.3 are incorporated with this amendment. Principally, the proposed amendment provides clarification to the phosphorus discharge cap basis and its implementation schedule, which had not been specified in the original Rule. The intent of these changes is to clarify that annual averaging over the first three years of phosphorus self-implementing monitoring will be used to establish effluent mass loading (in pounds per day) caps for discharging lagoon facilities.

A minor modification to the requirements for manual composite sample collection and preparation is proposed as a clarification. Minor formatting changes to the Rule have also been included with the amendment.

Staff Recommendation

Staff recommends that the Water Quality Board authorize initiation rulemaking to amend R317-1-3, *Requirements for Waste Discharges*. The proposed amendment is attached.

R317. Environmental Quality, Water Quality.

R317-1. Definitions and General Requirements.

R317-1-1. Definitions.

"Assimilative Capacity" means the difference between the numeric criteria and the concentration in the waterbody of interest where the concentration is less than the criterion.

"Biological assessment" means an evaluation of the biological condition of a water body using biological surveys and other direct measurements of composition or condition of the resident living organisms.

"Biological criteria" means numeric values or narrative descriptions that are established to protect the biological condition of the aquatic life inhabiting waters that have been given a certain designated aquatic life use.

"Board" means the Utah Water Quality Board.

"BOD" means 5-day, 20 degrees C. biochemical oxygen demand.

"Body Politic" means the State or its agencies or any political subdivision of the State to include a county, city, town, improvement district, taxing district or any other governmental subdivision or public corporation of the State.

"Building sewer" means the pipe which carries wastewater from the building drain to a public sewer, a wastewater disposal system or other point of disposal. It is synonymous with "house sewer".

"CBOD" means 5-day, 20 degrees C., carbonaceous biochemical oxygen demand.

"COD" means chemical oxygen demand.

"Deep well" means a drinking water supply source which complies with all the applicable provisions of the State of Utah Public Drinking Water rules.

"Digested sludge" means sludge in which the volatile solids content has been reduced to about 50% by a suitable biological treatment process.

"Director" means the Director of the Division of Water Quality.

"Division" means the Utah State Division of Water Quality.

"Domestic wastewater" means a combination of the liquid or water-carried wastes from residences, business buildings, institutions, and other establishments with installed plumbing facilities, together with those from industrial establishments, and with such ground water, surface water, and storm water as may be present. It is synonymous with the term "sewage".

"Effluent" means the liquid discharge from any unit of a wastewater treatment works, including a septic tank.

"Existing Uses" means those uses actually attained in a water body on or after November 28, 1975, whether or not they are included in the water quality standards.

"Human-induced stressor" means perturbations directly or indirectly caused by humans that alter the components, patterns, and/or processes of an ecosystem.

"Human pathogens" means specific causative agents of disease in humans such as bacteria or viruses.

"Industrial wastes" means the liquid wastes from industrial processes as distinct from wastes derived principally from dwellings, business buildings, institutions and the like. It is synonymous with the term "industrial wastewater".

"Influent" means the total wastewater flow entering a wastewater treatment works.

"Great Salt Lake impounded wetland" means wetland ponds which have been formed by dikes or berms to control and retain the flow of freshwater sources in the immediate proximity of Great Salt Lake.

"Large underground wastewater disposal system" means the same type of device as an onsite wastewater system except that it is designed to handle more than 5,000 gallons per day of domestic wastewater, or wastewater that originates in multiple dwellings, commercial establishments, recreational facilities, schools, or any other underground wastewater disposal system not covered under the definition of an onsite wastewater system. The Division controls the installation of such systems.

"Onsite wastewater system" means an underground wastewater disposal system for domestic wastewater which is designed for a capacity of 5,000 gallons per day or less and is not designed to serve multiple dwelling units which are owned by separate owners except condominiums and twin homes. It usually consists of a building sewer, a septic tank and an absorption system.

"Operating Permit" is a State issued permit issued to any wastewater treatment works covered under Rules R317-3 or R317-5 with the following exceptions:

A. Any wastewater treatment permitted under Ground Water Quality Protection R317-6.

B. Any wastewater treatment permitted under Underground Injection Control (UIC) Program R317-7.

C. Any wastewater treatment permitted under Utah Pollutant Discharge Elimination System (UPDES) R317-8.

D. Any wastewater treatment permitted under Approvals and Permits for a Water Reuse Project R317-13.

E. Any wastewater treatment permitted by a Local Health Department under Onsite Wastewater Systems R317-4.

"Person" means any individual, corporation, partnership, association, company, or body politic, including any agency or instrumentality of the United States government (Section 19-1-103).

"Point source" means any discernible, confined and discrete conveyance including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flow from irrigated agriculture.

"Pollution" means such contamination, or other alteration of the physical, chemical, or biological properties of any waters of the state, or such discharge of any liquid, gaseous or solid substance into any waters of the state as will create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

"Sewage" is synonymous with the term "domestic wastewater".

"Shallow well" means a well providing a source of drinking water which does not meet the requirements of a "deep well".

"Sludge" means the accumulation of solids which have settled from wastewater. As initially accumulated, and prior to treatment,

it is known as "raw sludge".

"SS" means suspended solids.

Total Maximum Daily Load (TMDL) means the maximum amount of a particular pollutant that a waterbody can receive and still meet state water quality standards, and an allocation of that amount to the pollutant's sources.

"Treatment works" means any plant, disposal field, lagoon, dam, pumping station, incinerator, or other works used for the purpose of treating, stabilizing or holding wastes. (Section 19-5-102).

"TSS" means total suspended solids.

"Underground Wastewater Disposal System" means a system for underground disposal of domestic wastewater. It includes onsite wastewater systems and large underground wastewater disposal systems.

"Use Attainability Analysis" means a structured scientific assessment of the factors affecting the attainment of the uses specified in R317-2-6. The factors to be considered in such an analysis include the physical, chemical, biological, and economic use removal criteria as described in 40 CFR 131.10(g) (1-6).

"Wastes" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. (Section 19-5-102).

"Wastewater" means sewage, industrial waste or other liquid substances which might cause pollution of waters of the state. Intercepted ground water which is uncontaminated by wastes is not included.

"Waters of the state" means all streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, except that bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state" under this definition (Section 19-5-102).

R317-1-2. General Requirements.

2.1 Water Pollution Prohibited. No person shall discharge wastewater or deposit wastes or other substances in violation of the requirements of these rules.

2.2 Construction Permit. No person shall make or construct any device for treatment or discharge of wastewater (including storm sewers) without first receiving a permit to do so from the Director or its authorized representative, except as provided herein.

A. Body Politic Required. A permit for construction of a new treatment works or a sewerage system, or modifications to an existing treatment works or sewerage system for multiple units under separate ownership will be issued only if the treatment works or sewerage system are under the sponsorship of a body politic as defined in R317-1-1.

B. Submission of Plans. Any person desiring a permit shall submit complete plans, specifications, and other pertinent documents

covering the proposed construction to the Director for review. Liquid waste storage facilities at animal feeding operations must be designed and constructed in accordance with Table 2a - Criteria for Siting, Investigation, and Design of Liquid Waste Storage Facilities with a water depth greater than 2 feet; Table 2b - Criteria for Siting, Investigation, and Design of Liquid Waste Storage Facilities with a water depth of 2 feet or less; and Table 2c - Criteria for runoff ponds with a water depth of 2 feet or less and a storage period less than 90 days annually, contained in the U.S.D.A. Natural Resource Conservation Service (NRCS) Conservation Practice Standard, Waste Storage Facility, Code 313, dated August 2006. This rule incorporates by reference Tables 2a, 2b, and 2c in the August 2006 U.S.D.A. NRCS Conservation Practice Standard, Waste Storage Facility, Code 313.

C. Review of Plans. The Division shall review said plans and specifications as to their adequacy of design for the intended purpose and shall require such changes as are found necessary to assure compliance with pertinent parts of these rules.

D. Approval of Plans. Issuance of a construction permit shall be construed as approval of plans for the purposes of authorizing release of federal or state funds allocated for planning or construction purposes.

E. Permit Expiration. Construction permits shall expire one year after date of issuance unless substantial and continuous construction is under way. Upon application, construction permits may be extended on an individual basis provided application for such extension is made prior to the permit expiration date.

F. Exceptions.

1. Wastewater facilities that discharge to an existing sewer system and serve only units that are under single ownership, or serve multiple units under separate ownership where the wastewater facilities are under the sponsorship of the public sewer system to which they discharge. This exception does not apply to pumping stations having the installed capacity in excess of 1 million gallons per day (3,785 cubic meters per day).

2. Onsite Wastewater Disposal Systems. Construction plans and specifications for onsite wastewater disposal systems shall be submitted to the local health authority having jurisdiction and need not be submitted to the Division. Such devices, in any case, shall be constructed in accordance with rules for onsite wastewater disposal systems adopted by the Water Quality Board. Compliance with the rules shall be determined by an on-site inspection by the appropriate health authority.

3. Small Animal Waste (Manure) Lagoons and Runoff Ponds. Construction plans and specifications for small animal waste lagoons as defined in R317-6 (permitted by rule for ground water permits) need not be submitted to the Division if the design is prepared or certified by the U.S.D.A. Natural Resources Conservation Service (NRCS) in accordance with criteria provided for in the Memorandum of Agreement between the Division and the NRCS, and the construction is inspected by the NRCS. Compliance with these rules shall be determined by on-site inspection by the NRCS.

2.3 Compliance with Water Quality Standards. No person shall discharge wastes into waters of the state except in compliance with these rules and under circumstances which assure compliance with water

quality standards in R317-2.

2.4 Operation of Wastewater Treatment Works. Wastewater treatment works shall be so operated at all times as to produce effluents meeting all requirements of these rules and otherwise in a manner consistent with adequate protection of public health and welfare. Complete daily records shall be kept of the operation of wastewater treatment works covered under R317-3 on forms approved by the Division and a copy of such records shall be forwarded to the Division at monthly intervals.

R317-1-3. Requirements for Waste Discharges.

3.1 Compliance With Water Quality Standards.

All persons discharging wastes into any of the waters of the State shall provide the degree of wastewater treatment determined necessary to insure compliance with the requirements of Rule R317-2 Water Quality Standards, except that the Director may waive compliance with these requirements for specific criteria listed in Rule R317-2 where it is determined that the designated use is not being impaired or significant use improvement would not occur or where there is a reasonable question as to the validity of a specific criterion or for other valid reasons as determined by the Director.

3.2 Compliance With Secondary Treatment Requirements.

All persons discharging wastes from point sources into any of the waters of the State shall provide treatment processes which will produce secondary effluent meeting or exceeding the following effluent quality standards.

A. The arithmetic mean of BOD values determined on effluent samples collected during any 30-day period shall not exceed 25 ~~[mg/l]~~ mg/L, nor shall the arithmetic mean exceed 35 ~~[mg/l]~~ mg/L during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the BOD values of effluent samples shall not be greater than 15% of the BOD values of influent samples collected in the same time period. As an alternative, if agreed to by the person discharging wastes, the following effluent quality standard may be established as a requirement of the discharge permit and must be met: The arithmetic mean of CBOD values determined on effluent samples collected during any 30-day period shall not exceed 20 ~~[mg/l]~~ mg/L, nor shall the arithmetic mean exceed 30 ~~[mg/l]~~ mg/L during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the CBOD values of effluent samples shall not be greater than 15% of the CBOD values of influent samples collected in the same time period.

B. The arithmetic mean of SS values determined on effluent samples collected during any 30-day period shall not exceed 25 ~~[mg/l]~~ mg/L, nor shall the arithmetic mean exceed 35 ~~[mg/l]~~ mg/L during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the SS values of effluent samples shall not be greater than 15% of the SS values of influent samples collected in the same time period.

C. The geometric mean of total coliform and fecal coliform bacteria in effluent samples collected during any 30-day period shall not exceed either 2000 per 100 ~~[mL]~~ mL or 200 per 100 ~~[mL]~~ mL, respectively, nor shall the geometric mean exceed 2500 per 100 ~~[mL]~~ mL or 250 per 100 ~~[mL]~~ mL respectively, during any 7-day period; or, the

geometric mean of E. coli bacteria in effluent samples collected during any 30-day period shall not exceed 126 per 100 [mL] mL nor shall the geometric mean exceed 158 per 100 [mL] mL respectively during any 7-day period. Exceptions to this requirement may be allowed by the Director where domestic wastewater is not a part of the effluent and where water quality standards are not violated.

D. The effluent values for pH shall be maintained within the limits of 6.5 and 9.0.

E. Exceptions to the 85% removal requirements may be allowed where infiltration makes such removal requirements infeasible and where water quality standards are not violated.

F. The Director may allow exceptions to the requirements of Subsections R317-1-3.2.A, R317-1-3.2.B, and R317-1-3.2.D where the discharge will be of short duration and where there will be no significant detrimental effect on receiving water quality or downstream beneficial uses.

G. The Director may allow that the BOD5 and TSS effluent concentrations for discharging domestic wastewater lagoons shall not exceed 45 [mg/L] mg/L for a monthly average nor 65 [mg/L] mg/L for a weekly average provided the following criteria are met:

1. the lagoon system is operating within the organic and hydraulic design capacity established by Rule R317-3;

2. the lagoon system is being properly operated and maintained;

3. the treatment system is meeting all other permit limits;

4. there are no significant or categorical industrial users (IU) defined by 40 CFR Part 403, unless it is demonstrated to the satisfaction of the Director that the IU is not contributing constituents in concentrations or quantities likely to significantly affect the treatment works; and

5. a Waste Load Allocation (WLA) indicates that the increased permit limits would not impair beneficial uses of the receiving stream.

3.3 Technology-based Limits for Controlling Phosphorus Pollution.

A. Technology-based Phosphorus Effluent Limits (TBPEL)

1. All non-lagoon treatment works discharging wastewater to surface waters of the state shall provide treatment processes which will produce effluent less than or equal to an annual mean of 1.0 mg/L for total phosphorus.

2. The TBPEL shall be achieved by January 1, 2020, or no later than January 1, 2025, after a variance has been granted under Subsection R317-1-3.3.C.1.e.

B. Discharging Lagoons -Phosphorus Loading Cap

1. No TBPEL will be instituted for discharging treatment lagoons. Instead, each discharging lagoon will be evaluated to determine the current annual average total phosphorus load measured in pounds per year based on monthly average flow[s] rates and concentrations. Absent field data to determine these loads, and in case of intermittent discharging lagoons, [they] the phosphorus load cap will be estimated by the [Division] Director.

2. A cap of 125% [times] of the current [average] annual total phosphorus load will be established and referred to as phosphorus loading cap. Once the lagoon's phosphorus loading cap has been reached, the owner of the facility will have five years to construct treatment processes or implement treatment alternatives to prevent the total

phosphorus loading cap from being exceeded.

3. The load cap shall become effective July 1, 2018.

C. Variances for TBPEL and Phosphorus Loading Caps

1. The Director may authorize a variance to the TBPEL or phosphorus loading cap under any of the following conditions:

a. Where an existing TMDL has allocated a total phosphorus wasteload to a treatment works, no TBPEL or phosphorus loading cap, as applicable, will be applied.

b. If the owner of a discharging treatment works can demonstrate that imposing the TBPEL or phosphorus loading cap would result in an economic hardship, an alternative TBPEL or phosphorus loading cap that would not cause economic hardship may be applied. "Economic hardship" for a publicly owned treatment works is defined as sewer service costs that, as a result of implementing a TBPEL or phosphorus loading cap, would be greater than 1.4% of the median adjusted gross household income of the service area based on the latest information compiled by the Utah State Tax Commission, after inclusion of grants, loans, or other funding made available by the Utah Water Quality Board or other sources. The Director will consider other demonstrations of economic hardship on a case-by-case basis.

c. If the owner of a discharging treatment works can demonstrate that the TBPEL or phosphorus loading cap are clearly unnecessary to protect waters downstream from the point of discharge, no TBPEL or phosphorus loading cap will be applied.

d. If the owner of the discharging treatment works can demonstrate that a commensurate phosphorus reduction can be achieved in receiving waters using innovative alternative approaches such as water quality trading, seasonal offsets, effluent reuse, or land application.

e. Where the owner of a non-lagoon discharging treatment works demonstrates due diligence toward construction of a treatment facility designed to meet the TBPEL, the compliance date shall be no later than January 1, 2025.

2. All variances to TBPEL and phosphorus loading caps shall be revisited [periodically]no more frequently than every five years or when a substantive change in facility operations or a substantive facility upgrade occurs to determine if the rationale used to justify the conditions in Subsection R317-1-3.3.C remains applicable.

3. For treatment works required to implement TBPEL or a phosphorus loading cap, the demonstration under Subsection R317-1-3.3.C must be made by January 1, 2018. Unless this demonstration is made, the owner of the discharging treatment works must proceed to implement the TBPEL or phosphorus loading cap, as applicable, in accordance with, respectively, Subsections R317-1-3.3.A and R317-1-3.3.B.

D. Facility Optimization to Remove Total Inorganic Nitrogen

1. If the owner of a discharging treatment works agrees to optimize the owner's facility, either through operational changes, a capital construction project, or both, to reduce effluent total inorganic nitrogen concentrations to a level agreeable to the Director, a waiver of up to ten years from meeting either water quality-based effluent limits or technology-based effluent limits for total inorganic nitrogen will be granted. This includes meeting any total inorganic nitrogen limit that may result from a TMDL or

other water quality study that is specific to the receiving water of the treatment works.

2. The waiver period under this section would begin upon implementation of the optimization improvements or another date agreed to by the owner of the treatment works and the Director.

3. The elements of the waiver under this section will be identified in a compliance agreement that will be incorporated into the facility's UPDES permit.

4. The waiver identified under this section must be granted before January 1, 2020. Thereafter, no such waiver will be considered or granted.

[D]E. Monitoring

1. All discharging treatment works are required to implement, at a minimum, monthly monitoring of:

a. influent for total phosphorus (as P) and total Kjeldahl nitrogen (as N) concentrations; and

b. effluent for total phosphorus and orthophosphate (as P), and ammonia, nitrate-nitrite, and total Kjeldahl nitrogen (as N).

2. The Director may authorize a variance to the monitoring requirements identified in Subsection R317-1-3.3.D.1.

3. All monitoring under Subsection R317-1-3.3.D shall be based on 24-hour composite samples by use of an automatic sampler or by combining a minimum of four grab samples collected ~~[a minimum of]~~ at least two hours apart within a 24-hour period.

4. These monitoring requirements shall be self-implementing beginning July 1, 2015.

3.4 Pollutants In Diverted Water Returned To Stream.

A user of surface water diverted from waters of the State will not be required to remove any pollutants which such user has not added before returning the diverted flow to the original watercourse, provided there is no increase in concentration of pollutants in the diverted water. Should the pollutant constituent concentration of the intake surface waters to a facility exceed the effluent limitations for such facility under a federal National Pollutant Discharge Elimination System permit or a permit issued pursuant to State authority, then the effluent limitations shall become equal to the constituent concentrations in the intake surface waters of such facility. This section does not apply to irrigation return flow.

R317-1-4. Utilization and Isolation of Domestic Wastewater Treatment Works Effluent.

4.1 Untreated Domestic Wastewater. Untreated domestic wastewater or effluent not meeting secondary treatment standards as defined by these rules shall be isolated from all public contact until suitably treated. Land disposal or land treatment of such wastewater or effluent may be accomplished by use of an approved total containment lagoon as defined in R317-3 or by such other treatment approved by the Director as being feasible and equally protective of human health and the environment.

4.2 Use of Secondary Effluent at Plant Site. Secondary effluent may be used at the treatment plant site in the following manner provided there is no cross-connection with a potable water system:

A. Chlorinator injector water for wastewater chlorination

facilities, provided all pipes and outlets carrying the effluent are suitably labeled.

B. Water for hosing down wastewater clarifiers, filters and related units, provided all pipes and outlets carrying the effluent are suitably labeled.

C. Irrigation of landscaped areas around the treatment plant from which the public is excluded.

R317-1-5. Use of Industrial Wastewaters.

5.1 Use of industrial wastewaters (not containing human pathogens) shall be considered for approval by the Director based on a case-specific analysis of human health and environmental concerns.

R317-1-6. Disposal of Domestic Wastewater Treatment Works Sludge.

6.1 General. No person shall use, dispose, or otherwise manage sewage sludge through any practice for which pollutant limits, management practices, and operational standards for pathogens and vector attraction reduction requirements are established in 40 CFR 503, July 1, 1994, except in accordance with such requirements.

6.2 Permit. All treatment works producing, treating and disposing of sewage sludge must comply with applicable permit requirements at R317-3, 6 and 8.

6.3 Septic Tank Contents. The dumping or spreading of septic tank contents is prohibited except in conformance with 40 CFR 503 and R317-550-7.

6.4 Effective Date. Notwithstanding the effective date for incorporation by reference of 40 CFR 503 provided in R317-8-1.10(9), those portions of 40 CFR 503 specified in R317-1-6.1 and 6.3 are effective immediately.

R317-1-7. TMDLs.

The following TMDLs are approved by the Board and hereby incorporated by reference into these rules:

- 7.1 Middle Bear River -- February 23, 2010
- 7.2 Chalk Creek -- December 23, 1997
- 7.3 Otter Creek -- December 23, 1997
- 7.4 Little Bear River -- May 23, 2000
- 7.5 Mantua Reservoir -- May 23, 2000
- 7.6 East Canyon Creek -- September 14, 2010
- 7.7 East Canyon Reservoir -- September 14, 2010
- 7.8 Kents Lake -- September 1, 2000
- 7.9 LaBaron Reservoir -- September 1, 2000
- 7.10 Minersville Reservoir -- September 1, 2000
- 7.11 Puffer Lake -- September 1, 2000
- 7.12 Scofield Reservoir -- September 1, 2000
- 7.13 Onion Creek (near Moab) -- July 25, 2002
- 7.14 Cottonwood Wash -- September 9, 2002
- 7.15 Deer Creek Reservoir -- September 9, 2002
- 7.16 Hyrum Reservoir -- September 9, 2002
- 7.17 Little Cottonwood Creek -- September 9, 2002
- 7.18 Lower Bear River -- September 9, 2002
- 7.19 Malad River -- September 9, 2002
- 7.20 Mill Creek (near Moab) -- September 9, 2002

- 7.21 Spring Creek -- September 9, 2002
- 7.22 Forsyth Reservoir -- September 27, 2002
- 7.23 Johnson Valley Reservoir -- September 27, 2002
- 7.24 Lower Fremont River -- September 27, 2002
- 7.25 Mill Meadow Reservoir -- September 27, 2002
- 7.26 UM Creek -- September 27, 2002
- 7.27 Upper Fremont River -- September 27, 2002
- 7.28 Deep Creek -- October 9, 2002
- 7.29 Uinta River -- October 9, 2002
- 7.30 Pineview Reservoir -- December 9, 2002
- 7.31 Browne Lake -- February 19, 2003
- 7.32 San Pitch River -- November 18, 2003
- 7.33 Newton Creek -- June 24, 2004
- 7.34 Panguitch Lake -- June 24, 2004
- 7.35 West Colorado -- August 4, 2004
- 7.36 Silver Creek -- August 4, 2004
- 7.37 Upper Sevier River -- August 4, 2004
- 7.38 Lower and Middle Sevier River -- August 17, 2004
- 7.39 Lower Colorado River -- September 20, 2004
- 7.40 Upper Bear River -- August 4, 2006
- 7.41 Echo Creek -- August 4, 2006
- 7.42 Soldier Creek -- August 4, 2006
- 7.43 East Fork Sevier River -- August 4, 2006
- 7.44 Koosharem Reservoir -- August 4, 2006
- 7.45 Lower Box Creek Reservoir -- August 4, 2006
- 7.46 Otter Creek Reservoir -- August 4, 2006
- 7.47 Thistle Creek -- July 9, 2007
- 7.48 Strawberry Reservoir -- July 9, 2007
- 7.49 Matt Warner Reservoir -- July 9, 2007
- 7.50 Calder Reservoir -- July 9, 2007
- 7.51 Lower Duchesne River -- July 9, 2007
- 7.52 Lake Fork River -- July 9, 2007
- 7.53 Brough Reservoir -- August 22, 2008
- 7.54 Steinaker Reservoir -- August 22, 2008
- 7.55 Red Fleet Reservoir -- August 22, 2008
- 7.56 Newcastle Reservoir -- August 22, 2008
- 7.57 Cutler Reservoir -- February 23, 2010
- 7.58 Pariette Draw -- September 28, 2010
- 7.59 Emigration Creek -- September 1, 2011
- 7.60 Jordan River -- June 27, 2012
- 7.61 Colorado River -- December 5, 2013
- 7.62 Echo Reservoir -- March 26, 2014
- 7.63 Rockport Reservoir -- March 26, 2014

R317-1-8. Penalty Criteria for Civil Settlement Negotiations.

8.1 Introduction. Section 19-5-115 of the Water Quality Act provides for penalties of up to \$10,000 per day for violations of the act or any permit, rule, or order adopted under it and up to \$25,000 per day for willful violations. Because the law does not provide for assessment of administrative penalties, the Attorney General initiates legal proceedings to recover penalties where appropriate.

8.2 Purpose And Applicability. These criteria outline the principles used by the State in civil settlement negotiations with water pollution sources for violations of the UWPCA and/or any permit,

rule or order adopted under it. It is designed to be used as a logical basis to determine a reasonable and appropriate penalty for all types of violations to promote a more swift resolution of environmental problems and enforcement actions.

To guide settlement negotiations on the penalty issue, the following principles apply: (1) penalties should be based on the nature and extent of the violation; (2) penalties should at a minimum, recover the economic benefit of noncompliance; (3) penalties should be large enough to deter noncompliance; and (4) penalties should be consistent in an effort to provide fair and equitable treatment of the regulated community.

In determining whether a civil penalty should be sought, the State will consider the magnitude of the violations; the degree of actual environmental harm or the potential for such harm created by the violation(s); response and/or investigative costs incurred by the State or others; any economic advantage the violator may have gained through noncompliance; recidivism of the violator; good faith efforts of the violator; ability of the violator to pay; and the possible deterrent effect of a penalty to prevent future violations.

8.3 Penalty Calculation Methodology. The statutory maximum penalty should first be calculated, for comparison purposes, to determine the potential maximum penalty liability of the violator.

The penalty which the State seeks in settlement may not exceed this statutory maximum amount.

The civil penalty figure for settlement purposes should then be calculated based on the following formula: CIVIL PENALTY = PENALTY + ADJUSTMENTS - ECONOMIC AND LEGAL CONSIDERATIONS

PENALTY: Violations are grouped into four main penalty categories based upon the nature and severity of the violation. A penalty range is associated with each category. The following factors will be taken into account to determine where the penalty amount will fall within each range:

A. History of compliance or noncompliance. History of noncompliance includes consideration of previous violations and degree of recidivism.

B. Degree of willfulness and/or negligence. Factors to be considered include how much control the violator had over and the foreseeability of the events constituting the violation, whether the violator made or could have made reasonable efforts to prevent the violation, whether the violator knew of the legal requirements which were violated, and degree of recalcitrance.

C. Good faith efforts to comply. Good faith takes into account the openness in dealing with the violations, promptness in correction of problems, and the degree of cooperation with the State.

Category A - \$7,000 to \$10,000 per day. Violations with high impact on public health and the environment to include:

1. Discharges which result in documented public health effects and/or significant environmental damage.

2. Any type of violation not mentioned above severe enough to warrant a penalty assessment under category A.

Category B - \$2,000 to \$7,000 per day. Major violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Discharges which likely caused or potentially would cause

(undocumented) public health effects or significant environmental damage.

2. Creation of a serious hazard to public health or the environment.

3. Illegal discharges containing significant quantities or concentrations of toxic or hazardous materials.

4. Any type of violation not mentioned previously which warrants a penalty assessment under Category B.

Category C - \$500 to \$2,000 per day. Violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Significant excursion of permit effluent limits.

2. Substantial non-compliance with the requirements of a compliance schedule.

3. Substantial non-compliance with monitoring and reporting requirements.

4. Illegal discharge containing significant quantities or concentrations of non toxic or non hazardous materials.

5. Any type of violation not mentioned previously which warrants a penalty assessment under Category C.

Category D - up to \$500 per day. Minor violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Minor excursion of permit effluent limits.

2. Minor violations of compliance schedule requirements.

3. Minor violations of reporting requirements.

4. Illegal discharges not covered in Categories A, B and C.

5. Any type of violations not mentioned previously which warrants a penalty assessment under category D.

ADJUSTMENTS: The civil penalty shall be calculated by adding the following adjustments to the penalty amount determined above: 1) economic benefit gained as a result of non-compliance; 2) investigative costs incurred by the State and/or other governmental levels; 3) documented monetary costs associated with environmental damage.

ECONOMIC AND LEGAL CONSIDERATIONS: An adjustment downward may be made or a delayed payment schedule may be used based on a documented inability of the violator to pay. Also, an adjustment downward may be made in consideration of the potential for protracted litigation, an attempt to ascertain the maximum penalty the court is likely to award, and/or the strength of the case.

8.4 Mitigation Projects. In some exceptional cases, it may be appropriate to allow the reduction of the penalty assessment in recognition of the violator's good faith undertaking of an environmentally beneficial mitigation project. The following criteria should be used in determining the eligibility of such projects:

A. The project must be in addition to all regulatory compliance obligations;

B. The project preferably should closely address the environmental effects of the violation;

C. The actual cost to the violator, after consideration of tax benefits, must reflect a deterrent effect;

D. The project must primarily benefit the environment rather

than benefit the violator;

E. The project must be judicially enforceable;

F. The project must not generate positive public perception for violations of the law.

8.5 Intent Of Criteria/Information Requests. The criteria and procedures in this section are intended solely for the guidance of the State. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the State.

R317-1-9. Electronic Submissions and Electronic Signatures.

(a) Pursuant to the authority of Utah Code Ann. Subsection 46-4-501(a), the submission of Discharge Monitoring Reports and related information may be conducted electronically through the EPA's NetDMR program, provided the requirements of subsection (b) are met.

(b) A person may submit Discharge Monitoring Reports and related information only after (1) completion of a Subscriber Agreement in a form designated by the Director to ensure that all requirements of 40 CFR 3, EPA's Cross - Media Electronic Reporting Regulation (CROMERR) are met; and (2) completion of subsequent steps specified by EPA's CROMERR, including setting up a subscriber account.

(c) The Subscriber Agreement will continue until terminated by its own terms, until modified by mutual consent or until terminated with 60 days written notice by any party.

(d) Any person who submits a Discharge Monitoring Report or related information under the NetDMR program, and who electronically signs the report or related information, is, by providing an electronic signature, making the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

KEY: water pollution, waste disposal, nutrient limits, effluent standards

Date of Enactment or Last Substantive Amendment: January 1, 2015

Notice of Continuation: October 2, 2012

Authorizing, and Implemented or Interpreted Law: 19-5



State of Utah

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Alan Matheson
Executive Director

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

MEMORANDUM

TO: Utah Water Quality Board

THROUGH: Walter L. Baker, P.E. 

FROM: John R. Kennington, P.E.

DATE: November 19, 2015

SUBJECT: WQB Action Item: Request for Adoption of R317-4 Rule changes.

At its October 14, 2015 meeting, the Utah Water Quality Board authorized staff to initiate rulemaking for several changes to the subject rule. The public comment period was established as November 1, 2015 to November 30, 2015.

As of this point in time, no comments have been received regarding these proposed changes. If, by the end of the public comment period, no comments have been received; or no comments that are considered substantive enough to cause a revision of the proposed changes are received, staff will be requesting the Board to approve adoption of the proposed changes.

A summary of the proposed changes is attached.

Attachments: Summary of R317-4 Changes 9-17-15

Summary of R317-4 Proposed Changes

September 8, 2015

1.4 B: Wording changed to: "Issuing an operating permit, with a term not exceeding five years, with an inspection showing a satisfactory performance of the permitted system by the department's staff before renewal;"

2.49: To streamline the definition of "Ground Water table, perched" the second sentence of the definition was deleted.

5.1: Changed Numbering

6.10(D)(2): Added 'other design considerations approved by the regulatory authority that do not increase public health risks shall be installed.'

6.14(C)(4): Added 'A cleanout or other means of access from the surface shall be provided for these devices.'

6.14(E)(2)(c): Added 'The depth of cover may be reduced to no less than 6 inches, if approved by the regulatory authority, considering the protection of adsorption systems as required in 6.14 B. 2., and other activities, as determined by the authority.'

6.14(E)(2)(e): Added 'The depth of cover may be reduced to no less than 6 inches, if approved by the regulatory authority, considering the protection of adsorption systems as required in 6.14 B. 2., and other activities, as determined by the authority.'

6.14(e)(4): Added 'The setback to property line – 10 feet'

6.15(C): Moved the word 'trench' for clarification

Table 2 Note (c): added reference to rule R309-605.

Table 2 Note (e): The following was added after the first sentence: "A private or individual well is considered to be "grouted" if it meets the construction standards required in R655-4-11, which requires a minimum 30-foot deep grout surface seal. Private or individual wells not constructed to this minimum standard are considered to be "ungrouted".

Table 2 Note (j): Added 53 foot

Table 4: Remove references to 'Schedule 40', consolidated reference to PVC ASTM D 2729(d) pipe.

Table 5 Title: Changed Minimum to Maximum

Table 5 Headings: Changed gal/day/ft² to gal/ft²/day

Table 5 Note (a): Added 'In no case shall the loading rate be greater than 1.0'. Deleted 'For percolation rates faster than 1 minute per inch, 1 minute per inch shall be used in the formula.'

Table 5 Note (b): Added 'In no case shall the loading rate be greater than 0.5'. Deleted 'For percolation rates faster than 1 minute per inch, 1 minute per inch shall be used in the formula.'

Table 6 Title: Changed Minimum to Maximum

Appendix D 1.1(C)(9)(b): Deleted ‘...unless two successive water level drops do not vary more than 1/16 of an inch and indicate that an approximate stabilized rate has been obtained.’

Appendix D 1.1(C)(9)(b)i: Changed ‘15 minutes’ to ‘30 minutes’.

Appendix D 1.1(C)(9)(b)ii: Changed ‘30 minutes’ to ‘15 minutes’

Appendix D 1.1(C)(9)(b)iii: Added ‘Eight consecutive time intervals shall be recorded unless two successive water level drops do not vary more than 1/16 of an inch and indicate that an approximate stabilized rate has been obtained.’

Appendix D 1.1(C)(10)(b)ii: Added ‘Six consecutive time intervals shall be recorded unless two successive water level drops do not vary more than 1/16 of an inch and indicate that an approximate stabilized rate has been obtained.’



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Walter L. Baker
Executive Secretary

MEMORANDUM

TO: Water Quality Board

THROUGH: Walter L. Baker P.E. 

FROM: Emily Cantón

DATE: November 24, 2015

SUBJECT: Budget Update FY2016-FY2017

In October, the Division of Water Quality submitted its budget to be included with the Department of Environmental Quality's FY16/FY17 request. The budget included planned expenditures for the Division's base budget as well as proposed increases for additional activities necessary to improve and protect the water quality for the citizens of the State of Utah.

The Division estimates anticipated revenues for FY16 to be \$13.5 million. Revenue sources include general funds, federal funds, dedicated credits, and restricted funds. Revenues support the day-to-day operating expenses incurred by the Division to carry out state and federal mandates and responsibilities. Projected expenditures include labor and benefit costs for 78 FTEs, in-state and out-of-state travel, office space, supplies and equipment, sampling costs, legal fees, and contract services.

After the budget has been analyzed by the Governor's Office of Management and Budget, the Governor will make a final budget recommendation to the Legislature. Appropriations will then be outlined in a budget bill during the FY16 legislative session.



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MEMORANDUM

TO: Water Quality Board
THROUGH: Walter L. Baker P.E.
FROM: Erica Gaddis Ph.D.
DATE: November 23, 2015
SUBJECT: FY17 funding needs

The Division of Water Quality has identified three important financial needs for fiscal year 2017 to support the following new or expanded initiatives:

- **Spill Coordinator:** Fund a new FTE position for a person to lead spill response and coordinate closures. Since 2010, DWQ has responded to 458 spills of varying sizes, averaging 5 to 10 spills per month. Many spills currently remain unresolved due to resource constraints. DWQ estimates that appropriately responding to all spills and seeing them through to resolution would require 1.3 FTEs.
- **Wetland Program Support for Standards Development and Assessment:** Federal grants provided 6 years of seed funding for Utah’s wetland program tasked with protecting 420,000 acres of wetlands in the state. The past work will be used to fully develop and apply standards and assessment methods for wetlands.
- **Harmful Algal Bloom Early Warning System for Utah Lake:** Funding will be used for three continuous monitoring sondes deployed in Utah Lake to measure pigments found in harmful algae. Data will be available in real-time for the Division and the Utah County Health Department to use in issuing public health advisories. The data will also inform the Division’s Utah Lake water quality study.

The financial needs include one-time and ongoing funds summarized in the table below. DWQ submitted a building block request for the Spill Coordinator position to the Governor’s Office for consideration in the FY2017 budget. DWQ is evaluating funding mechanisms for the other two needs. A summary of each need is attached to this memo.

Summary of DWQ's Building Block Requests for FY17

Program Request	One-time Request FY17	On-going Request	DWQ On-going Match	Potential Funding Source
Spill Coordinator	\$0	\$120,900	N/A	General Funds (alternative Water Quality Security Subaccount)
Great Salt Lake Wetlands: Water Quality Standards and Assessment	\$122,788	\$68,000 (7 years)	\$40,596 one-time \$26,963 on-going	Unknown
Harmful Algal Bloom Early Warning System for Utah Lake	\$67,440	\$15,000	\$51,470 one-time \$26,000 on-going	Unknown



FY 16 / FY 17 MODEL BUSINESS CASE

Request Title: Harmful Algal Bloom Early Warning System for Utah Lake

Invited: Yes No

Amount Requested: \$67,440 + \$15,000

FTE Requested: 0

Duration of Funding: FY 2016 one-time FY 2017 one-time FY 2017 on-going
(check all that apply)

Background

What system or program is the focus of the request? (Provide a brief description of system or program to include overall goal, major functions, federal or state requirements, etc.) How does the request align with the agency's core mission? Why does this activity constitute a proper role of state government or what market failure justifies government intervention?

Utah Lake is a popular destination for thousands of recreationists every year. Boating, water skiing, fishing, and swimming are all popular activities during the summer months. The State of Utah recognizes the value of this important resource and has established and maintains Utah Lake State Park that averaged almost 300,000 annual visits from 2007-2011. In addition to the lake's benefits to recreationists, Utah Lake is home to a threatened endemic fish species (June Sucker) and provides vital habitat for many other species of wildlife. Management of the lake's physical and biological resources are held in trust by the State of Utah for its citizens, including the lake bed and shoreline by the Department of Natural Resources' Division of Forestry, Fire and State Lands (Utah Code 65A-1-4) and the prevention, control, and abatement of new or existing sources of pollution into waters of the State by the Department of Environmental Quality's Division of Water Quality (Utah Code 19-5-104).

Blue-green algae, which can produce toxins harmful to humans, livestock, and pets, threaten the recreational uses of Utah Lake. In October 2014, a toxic blue-green algal bloom resulted in the Utah County Health Department issuing a warning to recreational users of the lake. Because of the episodic nature of blue-green algal blooms, it is difficult to detect when a bloom is occurring. As a result, local health departments make decisions about whether warning signs should be posted at the lake based on visual observation. In August 2015, this resulted in a warning sign posted at Utah Lake when the algal bloom turned out not to be toxic. The proposed new program will provide for an early warning monitoring system for Utah Lake and funding to characterize the nature of blooms when they occur. This system will provide protection of public health without the need to unnecessarily post warnings based on visual observation alone. This should reduce public health warnings on the lake, preserving the economic benefit of the Utah Lake State Park to the community.

Legislative Changes: Agencies must coordinate all legislation through the Governor's general counsel. Please summarize any legislation needed in conjunction with this incremental budget change request.

X Check here if no legislative changes are required.

Justification: What are the presenting issues that funding is intended to address? *(mark yes/no for each)*

Add capacity to meet growing demand and/or improve quality for an existing system or program? Yes No
(If yes, please complete Option 1)

Invest in a new program, service, or activity? Yes No

(If yes, complete Option 2)

Other needs? Yes No

(If yes, complete Option 3)

Based on the choices selected above, fill out one or more of the justification options that follow. Any that are not utilized may be deleted. **For invited requests**, you do not need a detailed response to every question. Instead, you may provide a brief justification for the option(s) that best explain the need for the budget change. **For non-invited requests**, you must reply to ALL applicable questions in the question and answer format.

Option 2: New Program, Service or Activity

If identified, briefly describe the specific new program, service, or activity.

The new activity will be a Utah Lake Harmful Algal Bloom Early Warning System, composed of continuous monitoring stations that will be deployed at three separate locations within the lake. The Utah County Health Department, in coordination with the Division of Water Quality, will be able to notify the public of any precautions advised to protect their health. In the future, the sondes could also be deployed to other waters threatened with harmful algal blooms such as Pineview Reservoir, East Canyon Reservoir, Farmington Bay, or Scofield Reservoir.

What specific activities would this fund or support? How will these activities support the overall system, program, or activity?

One-time costs in the amount of \$67,440 will fund the purchase of: a) the monitoring buoy, which includes solar panels, battery, cellular modem and antennae kit for wirelessly sending measurements to an on-shore data station, b) data sonde, which includes sensors to measure turbidity, dissolved oxygen, pH, conductivity, temperature, and phycocyanin (measure of blue-green algae).

On-going costs in the amount of \$15,000 will fund the operation and maintenance of buoys and the cost of algal and toxin analysis in the event of a bloom. The annual operation and maintenance costs are based on the material costs to maintain the sondes, replace damaged sensors, calibration materials, and laboratory analyses for algal taxonomy and toxins.

Is the new program, service, or activity a legislative mandate? If so, please reference the mandate.

No.

What are the anticipated outcomes or results? How do the funded activities align with these results?

The primary outcome from this project will be early and accurate warning of blue-green algal blooms. This system will provide protection of public health without the need to unnecessarily post warnings based on visual observation alone.

The information from these monitoring stations, coupled with ongoing water sampling by the Division of Water Quality, will also be used to better understand the lake's nutrient dynamics that drive algae blooms and develop a predictive water quality model that will provide the information required to make scientifically based, long term management decisions.

Why is the new system, program, or activity needed? (May include data about current outcomes, new requirements, needs/gap assessment, audit or evaluation of findings, etc.)

While many efforts are currently underway to improve water quality conditions in Utah Lake, significant issues remain. The most concerning of these water quality issues are blue-green algae blooms during the late summer / early fall when the public's use of the lake is at its highest. Identifying when blooms are beginning to form through continuous monitoring stations deployed at three locations within the lake will provide an early warning to public health officials and to the public of appropriate precautions to take

to protect health.

Will the new system, program, or activity serve a population or meet a need already being served by another agency? How will agency resources and processes be leveraged to improve outcomes?

This activity does not serve a population or meet a need already being served by another agency.

The system will serve the recreation users of Utah Lake and the Utah County Health Department. The Division of Water Quality will match the one-time request with development of a Utah Lake Water Quality Model that will be used to develop appropriate nutrient targets for Utah Lake and will be calibrated partially with the data gathered by the proposed sondes. The cost of model development is \$51,470. DWQ will match the on-going requests with labor and laboratory analysis of water quality samples collected monthly in Utah Lake during the summer months and staff support in analyzing harmful algal bloom data. The cost of water quality samples collected in Utah Lake is \$26,000 per year.

Is the new system, program, or activity an evidenced-based practice or supported by research, data, evaluation, or professional/industry standards? If so, please describe. If not, please describe the logic model or professional/expert opinion.

This project will use reliable scientific data to inform public health decisions and water quality assessments in Utah Lake.

Have outcomes/results been achieved by the same or similar programs or services in Utah or elsewhere? If so, what are the results?

No. There is currently no funding available for local health departments or the Division of Water Quality to monitor and/or respond to harmful algal blooms. The response that has been provided by DWQ and the Utah County Health Department to harmful algal bloom events has been done on an as needed basis and with insufficient resources. Continuing in this manner could result in reduced services to other important waters to offset the costs of monitoring and analysis.

List the data measure(s) that will be used to track outcomes/results. Will evaluation planning take place? If so, what are those plans?

Number of public health decisions made based on reliable scientific information.



FY 16 / FY 17 MODEL BUSINESS CASE

Request Title: Great Salt Lake Wetlands: Water Quality Standards and Assessment

Invited: Yes No

Amount Requested: \$122,788 + \$68,000/yr for 7 years

FTE Requested: 1

Duration of Funding: FY 2016 one-time FY 2017 one-time FY 2017 on-going
(check all that apply)

Background

What system or program is the focus of the request? (Provide a brief description of system or program to include overall goal, major functions, federal or state requirements, etc.) How does the request align with the agency's core mission? Why does this activity constitute a proper role of state government or what market failure justifies government intervention?

The importance of wetlands around Great Salt Lake as a critical resource to the state is recognized by state and federal natural resource agencies. A total of 420,000 acres or 80% of Utah's wetlands reside along the lake and serve important functions such as flood control, retention of pollutants and as habitat for approximately 7.5 million birds that visit the lake each year. In an economic study supported by the Great Salt Lake Advisory, the Great Salt Lake wetlands are also vital to the State of Utah's economy, generating an estimated \$135.8 million dollars/year from recreation and waterfowl hunting. This project addresses a public concern that impounded and fringe wetlands may be deleteriously impacted by historic or contemporary pollutant loads. With one exception (selenium), Utah has no numeric water quality standards protecting the Great Salt Lake or its wetlands.

The State of Utah is authorized to develop and implement water quality standards as required by the federal Clean Water Act and the Utah Water Quality Act. The state has taken an inter-agency approach to wetland management by integrating water quality goals into a broad *Utah Wetland Program Plan* developed and supported by DEQ and DNR. A central goal is to "integrate wetlands into state water quality management and regulatory programs through the development of wetland water quality standards." This project builds on our success at managing wetland resources at the state-level, through a state-sponsored wetland program that bases the development of assessment protocols for these unique wetlands on scientific findings specific to the Great Salt Lake wetlands.

DWQ aims to maintain stakeholder interest and agency momentum through development of water quality standards for the major wetland classes associated with GSL and then application of other water quality program to ensure that wetlands are appropriately protected.

Legislative Changes: Agencies must coordinate all legislation through the Governor's general counsel. Please summarize any legislation needed in conjunction with this incremental budget change request.

X Check here if no legislative changes are required.

Justification: What are the presenting issues that funding is intended to address? (mark yes/no for each)

Add capacity to meet growing demand and/or improve quality for an existing system or program? Yes No
(If yes, please complete Option 1)

Invest in a new program, service, or activity? Yes No

(If yes, complete Option 2)

Other needs? Yes No

(If yes, complete Option 3)

Based on the choices selected above, fill out one or more of the justification options that follow. Any that are not utilized may be deleted. For invited requests, you do not need a detailed response to every question. Instead, you may provide a brief justification for the option(s) that best explain the need for the budget change. For non-invited requests, you must reply to ALL applicable questions in the question and answer format.

Option 2: New Program, Service or Activity

If identified, briefly describe the specific new program, service, or activity.

DWQ has developed a wetland program focused on Great Salt Lake for the past 6 years, using federal funding provided by the USEPA. The final funding package for USEPA will expire in 2016 and DWQ aims to continue the program as a state sponsored program. The primary purpose of the wetland program is to develop and apply standards that protect wetland water quality and support permit limits for regulated entities that discharge to wetlands or waters upstream of wetlands (e.g. Jordan River). Utah is required under the Clean Water Act to protect wetlands, as well as rivers, streams and lakes. The standards used to protect other waters are not applicable to wetlands. In many cases, water quality standards can be more flexible and less strict in wetlands than other waters. However, such standards need to be fully developed into rule to ensure protection of wetland systems and to issue defensible permits.

Thus, DWQ will build on the work completed under the EPA Wetland Program Development Grants to develop and apply a framework for wetland water quality standards that is scientifically-credible, in alignment with resource management goals across DNR and DEQ, integrated in scope, and generated through a transparent and participatory process with stakeholders and researchers. Significant progress has been made in development of water quality standards. The focus of the program moving forward will be to monitor and assess wetlands using the tools that have been developed over the past 6 years.

DWQ request these funds from the Sovereign Land Restricted Account which is largely funded by industries that rely on Great Salt.

What specific activities would this fund or support? How will these activities support the overall system, program, or activity?

The activities to be funded under the new state sponsored wetland program will focus on standards development, monitoring, and assessment of water quality in wetlands using tools that were developed with support from previous grants. We have requested one-time funds to finalize the water quality standards architecture and proceed with rule making and on-going funds for monitoring and assessment. Ongoing monitoring and assessment is critical to protecting valuable wetland habitat and in developing defensible permits for facilities that discharge to wetlands. In addition to the match shown below, DWQ will continue to leverage other funding available from the Water Quality Board and EPA in support of these efforts. To keep on-going costs at a reasonable level, DWQ proposes an alternating schedule of GSL wetlands monitoring.

One-time Costs

Task/Item	Unit Cost	Units	Requested from Sovereign Lands Restricted Fund	UDWQ Match*	Total Budget
Facilitated Workshops	\$10,000	Workshops	\$30,000	\$10,000	\$40,000
Development of Water Quality Standards Architecture	\$122,384	1	\$92,788	\$30,596	\$122,384

Total			\$122,788	\$40,596	\$162,384
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*UDWQ match will be accounted for by laboratory services (water chemistry) paid by direct state appropriation, matching watershed-based supporting funds, and direct in-kind cash match as appropriate.

On-going Costs (FY2017 – FY2023)

Task/Item	Unit Cost	Units	Requested from Sovereign Lands Restricted Fund	UDWQ Match	Total Budget
<i>Alternating Years – A</i>					
Reference site wetland (12 sites: 4 Fringe + 8 Impounded)	\$3,078	12	\$34,000	\$13,807	\$47,807
Impounded wetland monitoring (15 sites)	\$2,265	15	\$34,000	\$13,156	\$47,156
Year A Subtotal			\$68,000	\$26,963	\$94,963
<i>Alternating Years – B</i>					
Fringe wetland monitoring (17 sites)	\$4,753	17	\$68,000	\$34,172	\$102,172
Year B Subtotal			\$68,000	\$34,172	\$102,172

*Note monitoring costs include labor and laboratory costs for monitoring water chemistry (nutrients, metals, toxics, chlorophyll a), sediment metals and nutrients, vegetation metals and nutrients, and benthic macroinvertebrates.

Is the new program, service, or activity a legislative mandate? If so, please reference the mandate.

No.

What are the anticipated outcomes or results? How do the funded activities align with these results?

1. Defensible and protective water quality standards and assessment methods for Utah’s wetlands, recognizing the unique nature of the state’s wetlands. DWQ’s initial focus will continue to be wetlands surrounding Great Salt Lake that are highly valued by hunters as waterfowl and shorebird habitat.
2. Reporting on wetland health that informs management by multiple agencies and will help fulfill Utah’s requirement to report to EPA on the State of Utah’s waters.
3. The information from these monitoring stations, coupled with ongoing water sampling by the Division of Water Quality, will also be used to better understand the lake’s nutrient dynamics that drive algae blooms and develop a predictive water quality model that will provide the information required to make scientifically based, long term management decisions.

Why is the new system, program, or activity needed? (May include data about current outcomes, new requirements, needs/gap assessment, audit or evaluation of findings, etc.)

This project will result in adoption of newly defined designated use classes, desirable conditions, and standards appropriate to protect the dominant wetland types found in Utah, primarily around GSL. This effort will also result in establishment and adoption of narrative criteria that support wetland designated uses and antidegradation policies for wetlands consistent with R317-2-3. The initial work will be completed over the course of 2 years (2016 – 2018); on-going funds are requested for a total of 7 years to implement the assessment methods against newly derived water quality standards.

This task will also begin to formalize and implement assessment methods and predictive tools that evaluate the effects of programmatic decisions and site-specific projects on GSL wetlands, developed with support from the USEPA. Assessment methods will be used to characterize the degree to which beneficial uses of wetlands are attained, as required by the Clean Water Act and Utah Code R317-2-7.1. Tools include the impounded wetland multimetric index (MMI) and a MMI for fringe wetlands, as well as refinement of monitoring methods established in partnership with UGS that focus on the use of more efficient and accurate tools for wetland assessment.

Will the new system, program, or activity serve a population or meet a need already being served by another agency? How will agency resources and processes be leveraged to improve outcomes?

DWQ is uniquely authorized to protect water quality in wetlands. The population to be served by this program includes those that discharge to wetlands as well as the hunting community around Great Salt Lake.

Currently DWQ and the Department of Natural Resources, Utah Geological Survey are engaged in a joint partnership to characterize the states wetland resources. The partnership was formed in 2009 and the framework for our wetland activities are documented in the Utah's Wetland Program Plan. The Plan outlines our wetland goals and objectives in 5 year increments and is reviewed annually. As part of the plan DWQ's efforts are to develop wetland water quality standards and build scientific infrastructure to characterize wetland functions and ecological responses to disturbances. DWQ has successfully partnered with DNR on recent efforts to advance research, management, and planning of Great Salt Lake. Key among these efforts are the establishment and staff support of the *Great Salt Lake Advisory Council*, substantial revision to the *Great Salt Lake Comprehensive Management Plan*, establishment of *Utah's Wetland Program Plan*, and coordinated scientific research on the lake and adjacent wetlands through participation in the *Great Salt Lake Technical Team and the Great Salt Lake Ecosystem Program Technical Advisory Group*.

Is the new system, program, or activity an evidenced-based practice or supported by research, data, evaluation, or professional/industry standards? If so, please describe. If not, please describe the logic model or professional/expert opinion.

The tools used to devise defensible water quality standards and assess wetland health of these critical wetlands are built upon monitoring, research, data evaluation and analysis. These tools incorporate the scientific literature, best practices for biological assessment and analyses, quality assured data and a stakeholder engaged science review process. The resulting assessments are evidence based and any permit decisions would also be based on what is required to protect wetlands, using the best available science.

Have outcomes/results been achieved by the same or similar programs or services in Utah or elsewhere? If so, what are the results?

Yes. The approach proposed for the protection of wetlands is parallel to the approach that is currently in place for Utah's streams, rivers, and lakes. It includes establishment of beneficial uses, development of water quality standards specific to those uses, assessment against the standards using monitoring data, and interpretation of the standards into permits for discharges to wetlands.

List the data measure(s) that will be used to track outcomes/results. Will evaluation planning take place? If so, what are those plans?

Outcomes and results will be tracked in DWQ's biennial Integrated Report on the State of Utah's waters. Additionally, monitoring is tracked by the Utah State Laboratory and DWQ's data manager responsible for quality assurance. Standards development will require approval by the Water Quality Board and will be tracked through the rule making process.

DWQ's wetland goals and objectives are reviewed annually as part of Utah's Wetland Program Plan. Implementation, reporting and review are done in collaboration with state and local natural resource agencies and stakeholder groups such as the GSL Technical Team, Phragmites Committee, GSL Duck Clubs and the Jordan River Farmington Bay Water Quality Council.



FY 16 / FY 17 MODEL BUSINESS CASE

Request Title: Spill Coordinator

Invited: Yes No

Amount Requested: \$120,900

FTE Requested: 1

Duration of Funding: FY 2016 one-time FY 2017 one-time FY 2017 on-going
(check all that apply)

Background

What system or program is the focus of the request? (Provide a brief description of system or program to include overall goal, major functions, federal or state requirements, etc.) How does the request align with the agency's core mission? Why does this activity constitute a proper role of state government or what market failure justifies government intervention?

The Division of Water Quality's mission is to protect, maintain and enhance the quality of Utah's surface waters and groundwater to allow appropriate beneficial uses and protect public health. Unfortunately, pollutant spills into Utah's waters are a routine occurrence across the state and often threaten human health and water quality. On average, the Division responds to 5 to 10 spills per month of varying sizes. Response to spills often requires monitoring, investigation, and sometimes enforcement. The numbers of spills are expected to increase as our population increases.

The DWQ has historically managed the spill of pollutants to waters of the state by distributing the spill management duties over 6 staff that already carry full workloads. As a result, many spills have not been fully resolved and remain open in the environmental spill tracking database: <http://eqspillsp.deq.utah.gov/>. The DWQ recognized the need to manage spills more efficiently, and has recently created a new Spills Coordinator position and hired a FTE whose primary responsibility is to appropriately address spills, track, and close out the incidents. This FTE is currently funded with vacancy savings which cannot be sustained beyond FY16.

The DWQ has proposed a SUCCESS project which will demonstrate the efficiencies gained by the continued funding of the FTE as the Spill Coordinator. DWQ will establish the previous two years of baseline data which will identify the historic time to close a spill. Beginning in November 2015, DWQ will collect baseline data with the Spill Coordinator position in place. In the past 5 years, 279 spills have been reported to DWQ of which 84 have been closed. Since filling the Spill Coordinator position with a full FTE, DWQ has closed an additional 20 spills and effectively responded to the Gold King Mine incident. We are confident that we will see gains in shortened time to resolve spills with continued funding of this position.

Legislative Changes: Agencies must coordinate all legislation through the Governor's general counsel. Please summarize any legislation needed in conjunction with this incremental budget change request.

X Check here if no legislative changes are required.

Justification: What are the presenting issues that funding is intended to address? *(mark yes/no for each)*

Add capacity to meet growing demand and/or improve quality for an existing system or program? Yes No
(If yes, please complete Option 1)

Invest in a new program, service, or activity? Yes No
(If yes, complete Option 2)

Other needs? Yes No

(If yes, complete Option 3)

Based on the choices selected above, fill out one or more of the justification options that follow. Any that are not utilized may be deleted. **For invited requests**, you do not need a detailed response to every question. Instead, you may provide a brief justification for the option(s) that best explain the need for the budget change. **For non-invited requests**, you must reply to ALL applicable questions in the question and answer format.

OPTION 1: Capacity / Quality of Existing System

Is the system currently reporting in SMIS (SUCCESS Management Information System)? If yes, describe SMIS measures and trends. If no, skip to next question.

DWQ has proposed spill response as a SUCCESS project but it is not yet active in SMIS.

If the system is not currently reporting into the SMIS system or for non-cabinet agencies not participating in the SUCCESS initiative, please answer the following questions. (Your GOMB OE consultant is available to assist in answering the questions.)

- What is the goal of the system, program, or activity?

The DWQ Spill Coordinator is the over-arching lead on all spills that impact or have the potential to impact waters of the state. The position will work closely with staff from the Division of Environmental Response and Remediation that manage a broader set of incidents state-wide. The job duties include, receiving notice of incidents, coordinating activities and resources within DWQ or other agencies (e.g. monitoring crews, field investigations, enforcement, data analysis, etc.), working with other staff within DWQ to determine the appropriate response and clean-up activities, pursuing enforcement actions if appropriate, and ultimately closing out the spill in the DEQ Incident Database.

- What is the system, program, or activity throughput (volume of completed work the system produces)?

The throughput is the number of days it takes to close a spill that either requires enforcement or does not require enforcement.

- What are the quality measures(s) for the system, program, or activity?

The quality measure is the number of days it takes to make the decision whether to enforce or not, and the number of days it takes to close the spill in the Incident Database. DWQ's targets are to make an enforcement decision within 7 days, close spills that require enforcement within 60 days, and close spills that do not require enforcement within 30 days. For comparison, at the time we hired a full-time Spill Coordinator, there were 195 spills within the past 5 years that had not been closed.

- What is the most recent fiscal year budget or operating expenses for the system, program, or activity and does the figure include one-time funding?

The Spills Coordinator FTE is funded from vacancy savings for FY16 in the total amount of \$125,000. DWQ does not have any general fund money allocated to this position.

- Do the above measures have an existing baseline to track against future performance? If so, please provide.

DWQ will establish the previous two years of baseline data which will identify the historic time to close a spill. Beginning in November 2015, DWQ will collect baseline data with the Spill Coordinator position in place. We are confident that we will see gains in shortened time to resolve spills with continued funding of this.

What is the critical activity, position, or function the funding is targeting?

The funding will support the Spill Coordinator Position in DWQ beginning in FY17. Funding of this position will ensure that DWQ is able to continue to meet its core mission as it relates to spills, to efficiently manage spill events that impact waters of the state, complete more enforcement actions for which penalties are contributed to the general fund, and to be responsive to the public by closing out and adequately addressing spills.

What previous improvement efforts or strategies have been used to improve quality or throughput? (GOMB may ask for documentation.)

DWQ recognized that the historical management of the spill program by distributing the load across 6 staff members was not efficient or effective. As a result, a FTE was hired with the primary responsibility of managing the spills program. This position is funded with vacancy savings through FY16. Through a proposed SUCCESS project, DWQ anticipates demonstrating that the addition of the FTE is directly related to improved management of spills across the state by addressing and closing them out in a timely manner.

Is the volume or demand for services expected to increase? (As opposed to seasonal fluctuations or temporary backlogs)

As the population across the state rises, and the demand for petroleum products produced and refined in Utah grows, the volume of spills is expected to continue to increase.

Are there other areas of the organization that can help resolve the need for more capacity? (Redeployment of staff, etc.)

No. All of DWQ's existing staff resources are allocated. In 2013, as part of a continuous improvement evaluation, DWQ completed a Kaizen of the existing Spill Program. This evaluation was undertaken with stakeholders from the Division of Oil, Gas, and Mining, Tri-County Health Department, and other divisions within DEQ. The Kaizen identified that in order to improve management of spills, DWQ needed one individual as the overarching lead. Previously, DWQ had 6 staff members who in addition to sharing the responsibility of the spill program, collectively managed 290 permits and 7 Clean Water Act Programs for the state.

How will the potential funding be used to maximize capacity to meet growing demand and/or increase the quality of the service?

Spill events reported in Utah are expected to increase as our population and demand for petroleum products increases. By funding the spills coordinator position, whose primary responsibility is to address and close out spills that impact waters of the state, DWQ will be able to continue to operate the spills program efficiently. By continuing to fund a position that is primarily responsible for management of the spill program, it will allow existing staff to effectively manage the increasing number of UPDES permits and programs within DWQ.



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

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

Water Quality Board
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Clyde L. Bunker
Steven K. Earley
Gregg A. Galecki
Jennifer Grant
Michael D. Luers
Alan Matheson
Walter L. Baker
Executive Secretary

MEMORANDUM

TO: Water Quality Board
THROUGH: Walter L. Baker, P.E. *WLB*
FROM: Sandy Wingert
Watershed Protection Section
DATE: October 14, 2015
SUBJECT: Development of a Temperature Total Maximum Daily Load Study for Nine Mile Creek

The Division of Water Quality is developing a Total Maximum Daily Load (TMDL) Study for Nine Mile Creek and tributaries. This study is being conducted to address temperature exceedances which resulted in 303(d) listing of the creek.

Staff will present an overview of the TMDL development strategy, analyses completed to date, and a timeline for completion to the Water Quality Board during the meeting scheduled for October 28th, 2015.

Intensive monitoring efforts began in 2008 throughout the watershed in an effort to better understand extent of temperature exceedances and to help determine sources followed by two stakeholder meetings in 2014 and 2015 to share results.

Watershed Location

The Nine Mile Creek watershed is located in northeastern Utah in Duchesne and Carbon Counties and drains into the Green River. Elevation ranges from 5,000 ft at the confluence of Nine Mile Creek and the Green River to over 10,000 ft at the north-east border of Argyle Canyon and Antelope Canyon. Bureau of Land Management and private landowners manage the majority of the watershed at 63% and 25% respectively. Irrigation practices make up 50% of all the water-related land uses in the watershed.

Impairment

Nine Mile Creek, from the confluence of the Green River to headwaters, and all its tributaries are listed on Utah's 2000 Section 303(d) list of impaired waters for elevated water temperature and not being protective of its designated use of cold-water aquatic life (3A). Nine Mile Creek watershed is also listed on the 2014 303(d) list for failing to protect its cold-water aquatic life use due to exceedances in aluminum, copper, zinc, cadmium, and lead. This TMDL study, however, focuses solely on the temperature impairment.

Approach

Under the scope of the Federal Clean Water Act (CWA) states assess water quality and identify impaired waters (303(d) list). The purpose of developing TMDLs for these impaired waters is to develop a locally led strategy to restore, protect, and maintain the quality of waters of the state for their designated beneficial uses. It is the Division of Water Quality's policy to develop plans and strategies through a locally led, collaborative process with the Nine Mile Creek watershed stakeholders.

Management plans or TMDLs contain assessments pertinent to the defined beneficial uses, discussions of water quality standards associated with those beneficial uses, determinations of loading capacity of impaired waters, calculations of excess pollutant loads, designation of all significant sources of the pollutant and an allocation for reduction of excess pollutant loads. The load evaluation includes both point and nonpoint sources in addition to defining a margin of safety due to uncertainties related to the development of the TMDL.

The results of a GIS-based modeling effort support the development of a TMDL for the upper part of the watershed while a designated use change is warranted for the lower reaches. Lower sections of Nine Mile Creek regularly exceed the cold-water fisheries temperature standard of 20° C due to natural and uncontrollable conditions which is also supported by fish surveys that do not show any presence of cold water species such as trout. Staff recommends changing the lower reaches from a cold water fishery designated use to a warm water fishery use.

Following the water quality analysis, a project implementation plan will be prepared for the TMDL. The project implementation plan will outline a strategy to decrease water temperature where feasible, attain water quality standards, and restore the river to supporting status. It will include an evaluation of the existing BMPs and completed implementation projects in the watershed. The implementation plan, in conjunction with portions of the TMDL, will include the 9 key elements identified by the EPA that are considered critical for achieving improvements in water quality and obtaining 319 funds. These elements will help provide reasonable assurance that the non-point source load allocations identified in the TMDL will be achieved.

Schedule

The TMDL water quality study began in the 2008 with the first intensive monitoring effort. Nine Mile Creek stakeholders have met annually since 2014 to help determine the best path forward. Water quality data have been analyzed and modeled to determine the extent of the impairment. Watershed characterization and a model report are being developed. A draft TMDL Report and Implementation Plan will be completed and posted for public review by February 2016.

