

LAKE AGASSIZ WATER AUTHORITY**BOARD OF DIRECTORS**

**Ramada Plaza & Suites
Fargo, North Dakota
April 15, 2016**

A meeting of the Lake Agassiz Water Authority (LAWA) board of directors was held at the Ramada Plaza & Suites, Fargo, North Dakota, on April 15, 2016. The meeting was called to order by Chair Mahoney at 10:30 a.m.

MEMBERS PRESENT

Chair Timothy Mahoney
Vice Chair Ken Vein
Director LaVonne Althoff
Director Rick Bigwood
Director Clark Cronquist
Director Mark Johnson
Director Ralf Mehnert-Meland
Director Carol Siegert
Director Bob Werkhoven
Director Rick Bigwood
Secretary Duane DeKrey

MEMBERS ABSENT

Director Keith Nilson

OTHERS PRESENT

Staff members of the Garrison Diversion Conservancy District were present along with others. A copy of the registration sheet is attached to these minutes as Annex I.

The meeting was recorded to assist with compilation of the minutes.

APPROVAL OF AGENDA

Motion by Director Ralf Mehnert-Meland to approve the board meeting agenda. Second by Director Johnson. Upon voice vote, motion carried.

CONSIDERATION OF THE MINUTES

Motion by Director Vein to dispense with a reading of the February 26, 2016, board minutes and approve them as distributed. Second by Director Althoff. Upon voice vote, motion carried.

OFFICER AND COMMITTEE REPORTS

Al Grasser, Chair, Technical Advisory Committee, reported that the committee met on March 30 at AE2S in Fargo. At that time, they were provided presentations on the Conceptual Design Report and Implementation Plan Task Order, water treatment plant objectives and alternatives and the Baldhill Creek analysis.

RED RIVER VALLEY WATER SUPPLY PROJECT (RRVWSP) UPDATE

Presentation - - Kip Kovar, Deputy Program Manager, Engineering, RRVWSP, provided a PowerPoint presentation, including an update on task orders and costs to date, technical summary and the implementation plan based on segmenting. A copy of the presentation is attached to these minutes as Annex II.

Status Report - - Mr. Kovar commented that the engineering update is included in the meeting materials for the board's information. A copy of the update is attached to these minutes as Annex III.

National Legal Counsel Update - - Tami Norgard, Vogel Law Firm, reported on the discussions that have been held with the national legal counsel regarding the project and options for proceeding with the permitting process.

A more significant legal review is expected for the next LAWA board meeting.

Implementation Plan Task Order - - Mr. Kovar distributed and reviewed the Implementation Plan Task Order.

Mr. Kovar said project implementation depends on: 1) whether the federal government will allow the use of the McClusky Canal, 2) proper permits being obtained on the Missouri River, 3) what are the requirements for water treatment, 4) what is the feasibility of using Baldhill Creek, 5) user commitments and 6) how much funding is available.

The implementation plan is an approach that adds flexibility and cost savings. It looks at how and why portions of the project get built, what decisions, either from the user or a regulatory standpoint, play into it, and what the capital costs and operational costs will be. It basically provides the stakeholders with a road map for the implementation and decision-making process.

Mr. Kovar stated that the implementation plan was presented to the LAWA Technical Advisory Committee on March 30, and they recommend that the task order move forward.

Questions from the board members regarding the implementation plan were addressed by Duane DeKrey, Secretary, and Mr. Kovar.

Motion by Director Siegert to approve the Implementation Work Plan Task Order. Second by Director Werkhoven. Upon roll call vote, the following directors voted aye: Althoff, Bigwood, Cronquist, Johnson, Mahoney, Mehnert-Meland, Siegert, Vein and Werkhoven. Those voting nay: none. Absent and not voting: Nilson. Motion carried.

Work Plan Task Orders - - Mr. Kovar referred to and reviewed the table listing the work plan task order recommendations. This shows the engineering work and next steps. The current cost estimates are \$1 million for the Missouri River Conventional Intake/NW12

Permit and \$2.8 million for Pipeline Alignment McClusky Canal-Split to Central North Dakota and Land Services. A copy of the table is attached to these minutes as Annex IV.

Merri Mooridian, Deputy Program Manager, Administration, RRVWSP, commented that there is a scope of work for the financial modeling. The estimated cost for that is \$362,000.

Mr. Kovar distributed copies of and reviewed the task orders for the Missouri River Conventional Intake and the Pipeline Alignment.

Motion by Director Cronquist to approve the following work plan task orders totaling \$4,162,000: 1) Missouri River Conventional Intake/NW12 Permit, 2) Pipeline Alignment McClusky-Split to Central North Dakota and Land Services and 3) Financial Modeling. Second by Director Vein. Upon roll call vote, the following directors voted aye: Althoff, Bigwood, Cronquist, Johnson, Mahoney, Mehnert-Meland, Siegert, Vein and Werkhoven. Those voting nay: none. Absent and not voting: Nilson. Motion carried.

Planning Level Budget & Schedule - - Ms. Mooridian referred to the planning level budget for this biennium and reviewed the current cost estimates for each task order. The revised total is \$14.2 million. LAWA's cost share is \$1.4 million.

Ms. Mooridian reminded the board that the state legislature appropriated \$12.359 million for the project. It is highly likely that the project will not be awarded anymore funds in this biennium. The budget will be revised in order not to exceed the appropriated amount. Approximately \$3.3 million have been spent to date.

A copy of the planning level budget and schedule is attached to these minutes as Annex V.

Development Agreement - - Ms. Mooridian referred to the final Development Agreement, which includes the change from 80 cfs to 100 cfs. The agreement is valid and enforceable only if LAWA obtains at least 100 cfs collectively for nominations from the members. A copy of the agreement is attached to these minutes as Annex VI.

Ms. Mooridian stated that meetings have been taking place, starting with the larger systems. The deadline to sign up for the project is October 1 in order to avoid a latecomer penalty.

Ms. Mooridian added that meetings are going well, and she is in the process of scheduling five more meetings. She has indicated to the systems when meeting that it would be very helpful to know their nominations by June or July.

FINANCIAL REPORT

2016 Budget Analysis Statement - - Ms. Mooridian referred to the Budget Analysis statement for the period of January 1, 2016, to March 31, 2016. Total income received through March 31 is \$15. Expenses are \$1,016. The total bank balance is \$591,095. a copy which is attached to these minutes as Annex VII.

Motion by Director Johnson to accept the budget analysis statement for the period of January 1, 2016, to March 31, 2016. Second by Director Siegert. Upon roll call vote, the following directors voted aye: Althoff, Bigwood, Cronquist, Johnson, Mahoney, Menhert-Meland, Siegert, Vein and Werkhoven. Those voting nay: none. Absent and not voting: Nilson. Motion carried.

Bills Paid - - Ms. Mooridian reviewed bills paid since the last board meeting, which included dues to the Water Coalition for \$1,000.

2016 Membership Dues - - Ms. Mooridian reported that the 2016 dues statements were mailed out recently, and as of today, approximately \$23,000 have been received.

UNFINISHED BUSINESS

None

NEW BUSINESS

ND Insurance Reserve - - Secretary DeKrey referred to the annual meeting notice of the ND Insurance Reserve Fund. The purpose of the meeting is to elect representatives to the board of directors in the cities and counties categories. He will be attending the meeting and can vote on LAWA's behalf with the approval of the board.

Motion by Director Althoff to authorize Duane DeKrey to cast votes on behalf of the Lake Agassiz Water Authority at the ND Insurance Reserve Fund's annual meeting and election on May 11. Second by Director Siegert. Upon roll call vote, the following directors voted aye: Althoff, Bigwood, Cronquist, Johnson, Mahoney, Menhert-Meland, Siegert, Vein and Werkhoven. Those voting nay: none. Absent and not voting: Nilson. Motion carried.

Stutsman County Potential Membership - - Ms. Mooridian reported that Jamestown and the Jamestown Stutsman Development Corporation previously requested to become a part of LAWA. At that point, the federal government stated that the RRVWSP consisted of only the 13 eastern counties of North Dakota. Meetings have been held in the region, and there is continued interest in becoming members. This would require a change in the ND Century Code, and it will be up to the board as to whether they would like to expand its membership to include Stutsman County.

Ms. Mooridian said this is currently a work in process, and more information will be brought to the board at a later date.

OTHER

Next Meeting Date - - The next meeting will be held in June with the date, time and place to be determined.

There being no further business to come before the committee, the meeting adjourned at 11:45 a.m.

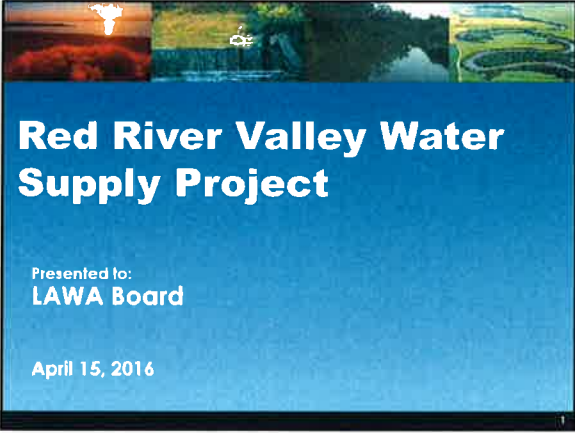
Timothy Mahoney, Chair

Duane DeKrey, Secretary

REGISTRATION

LAWA Board Meeting
 Fargo, North Dakota
 April 15, 2016

NAME	ADDRESS
Steve L. Burken	AE2S Grand Forks
Baruce Grubb	City of Fargo
Dennis Miranowski	City of WAMPETON
Al Grasser	City of Grand Forks
Randy Rymz	City of EAST GRAND forks
Kristofer J. Knutson	Moorthead Public Service
Steve Hansen	southeast water user
Dave Plepko	City of Fargo
Brian Reilly	Walsh Rural Water Dist
Jay Paul Anderson	Leavitt Diversion
Geneva Kaiser	GDCD - Stutman Co.
Mike Tweed	GDCD Eddy Co.
Steve Metzger	GDCD Foster Co.
CRAIG DOEDEN	AMERICAN SPINALWELD PIPE Co.
Dana Bohn	ND Water Coalition
KEN ROSE	GDCD - Burleigh Co.
Neal Kelemen	Northwest Pipe Company
Angi Norgard	Vogel Law Firm
Bill B...	Northwest Regr Water
Keith Van	GDCD / City of G.F.
RMP MENNERT-MENARD	MOORTHEAD PUBLIC SERVICE
Marionne Althoff	SEW
Carol M Siegett	City of Heuster LADHA
Mark Johnson	CRWA + LAWA
Lisa Schaper	Leavitt Diversion
By Kou	GDCD



Red River Valley Water Supply Project

Presented to:
LAWA Board

April 15, 2016

Today's Agenda

1. Review Task Orders & Costs to date
2. Technical Summary
3. Implementation Plan Based on Segmenting Approach

1) Review Task Orders and Costs to Date

Review of Conceptual Engineering Status

- May 2015 – Approved \$4 million for:
 - Missouri River Intake Investigation
 - Baldhill Creek Discharge Study
 - Horizontal Alignment
 - Hydraulic and Pump Analysis
 - Horizontal Collector Well
- October 2015 – Approved \$620,000 for:
 - Needs Assessment
 - Land Services
- December 2015 – Approved up to \$600,000 for:
 - Water Treatment Plant Analysis

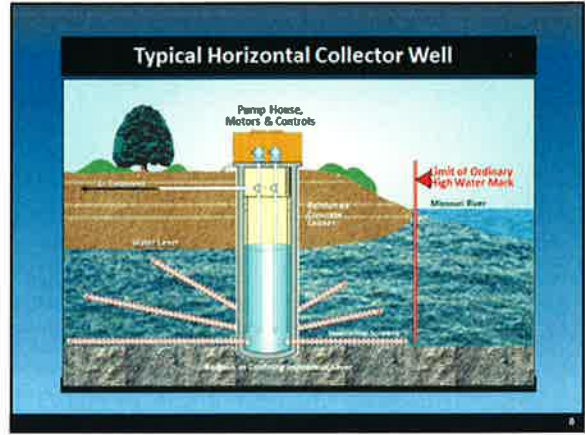
Conceptual Design Technical Memoranda

- Missouri River Intake Investigation - complete
- Horizontal Pipeline Alignment – draft complete
- Hydraulics and Pump Station – draft complete
- Baldhill Creek Discharge – draft complete
- Horizontal Collector Wells – Anticipated draft in April
- Water Treatment Plant – draft complete
- Needs Assessment – On going
- Land Services– On going

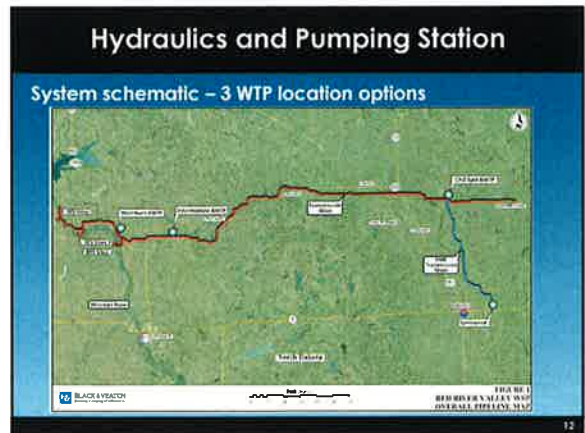
Conceptual Engineering Status

Conceptual Engineering (July 2015 - June 2016)	% Complete	Current Estimate	Actual July - March 2016
Missouri River Intake Investigation	95%	\$1,306,790	\$1,100,000
Horizontal Collector Well	51%	\$400,000	\$205,755
Hydraulic and Pump System	69%	\$481,081	\$330,086
Pipeline Alignment	85%	\$940,000	\$820,120
Discharge System (Baldhill Creek)	54%	\$806,000	\$450,373
Land Services	9%	\$470,000	\$44,190
Needs Assessment	62%	\$150,000	\$93,153
Water Treatment Plant Analysis	55%	\$438,731	\$239,719
Implementation Plan (not approved)	draft	\$190,000	
Sub-Total	63%	\$5,202,602	\$3,283,398

2) Technical Summary



- ### Pipeline Alignment Considerations
- Avoid all federally owned public lands
 - Avoid all federal easements for grasslands or waterfowl protection
 - Minimize crossing of parcels where the USFWS has a wetland easement
 - Avoid all Jurisdictional wetlands/waters of the U.S. under existing regulatory interpretation (avoidance can include boring under the wetland/waters)
 - Maximize use of existing easements optioned by GDCD for the original alignment
 - Maximize use of section and quarter-section lines for new easements
 - Maximize the amount of pipeline easily assessable from public roads





Water Treatment Plant Surface Water Treatment Rule

- 1) EPA under the SWTR developed a concept of log removal treatment credit for control of human pathogens. Processes are given credit for removal or inactivation.
- 2) Biota Removal / Inactivation
 - 1) 1 log removal = 90% removal
 - 2) 2 log removal = 99% removal
 - 3) 3 log removal = 99.9% removal
 - 4) 4 log removal = 99.99% removal

14

WTP - Source Water Concerns for "Biota" (from TM-2)

Biota	Treatment
Aquatic Vascular Plants	<ul style="list-style-type: none"> Removed by BFS or other physical separation
Algae	<ul style="list-style-type: none"> Removed by BFS or other physical separation and chemical oxidation
Disease-Causing Micro-Organisms	<ul style="list-style-type: none"> Removed by BFS or other physical separation and chemical oxidation
Aquatic Invertebrates	<ul style="list-style-type: none"> Removed by BFS or other physical separation and chemical oxidation
Aquatic Vertebrates	<ul style="list-style-type: none"> Removed by BFS or other physical separation and chemical oxidation

15

WTP – Desired Log Removal (from TM-2)

PARAMETER	UNITS	GOAL ⁽¹⁾
Giardia	Log-Removal/Inactivation	3
Viruses ⁽²⁾	Log-Removal/Inactivation	4
Cryptosporidium	Log-Removal/Inactivation	3 ⁽³⁾
Turbidity, 95 th Percentile	NTU	1
Turbidity, Maximum	NTU	5

⁽¹⁾Goals are not regulatory standards but values intended to minimize the potential spread of invasive aquatic species through interbasin water transfers.
⁽²⁾"Viruses" means viruses of fecal origin which are infectious to humans by waterborne transmission.
⁽³⁾Based on LT2 ESWTR Bin 1 assignment for the Missouri River at Bismarck, ND and Mandan, ND in initial Cryptosporidium monitoring.

16

WTP - Source Water Concerns for Pollutants (from TM-1)

Constituent	Issues
Low Dissolved Oxygen	<ul style="list-style-type: none"> Promotes high dissolved Fe/Mn Oxygenation precipitate Fe/Mn Anaerobic pipeline conditions
High Dissolved Iron/Manganese	<ul style="list-style-type: none"> Nuisance precipitation in plant Creates turbidity Impedes UV Disinfection Avoid end-of-pipe red streak
High Alkalinity	<ul style="list-style-type: none"> More acid/base to adjust pH Mineral scaling potential
High Ammonia	<ul style="list-style-type: none"> More chlorine demand (breakpoint chlorinate) & contact time
High Organic Carbon	<ul style="list-style-type: none"> More chlorine required Higher coagulant demand

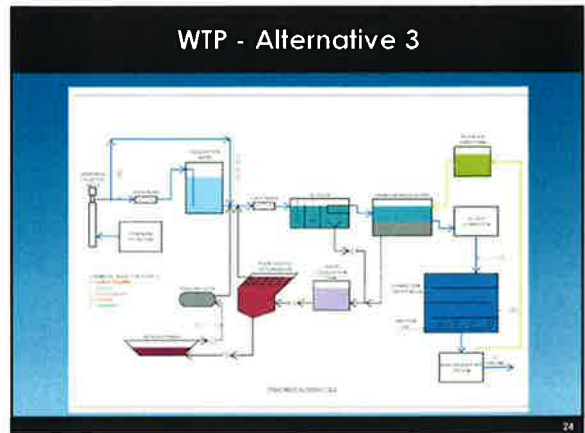
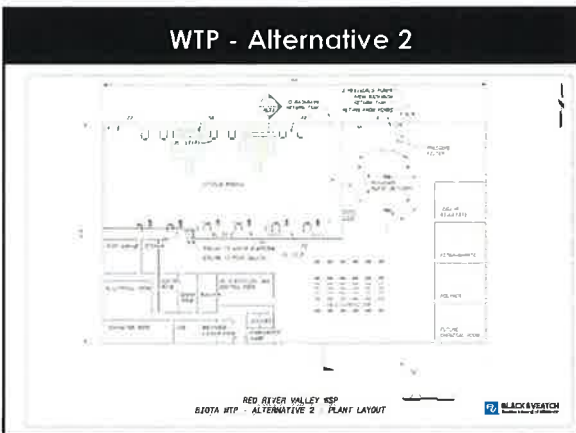
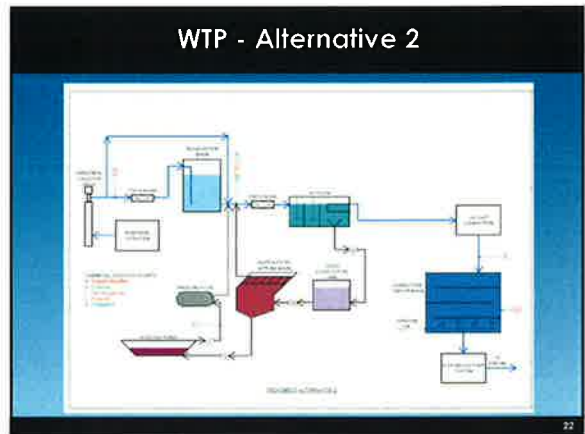
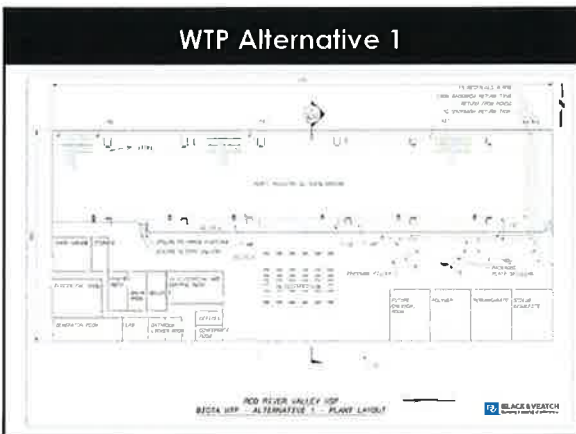
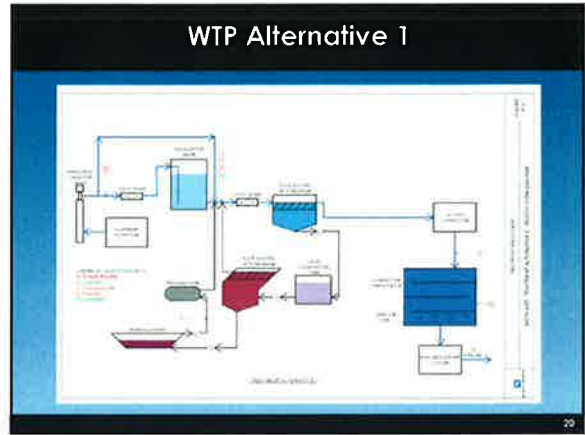
17

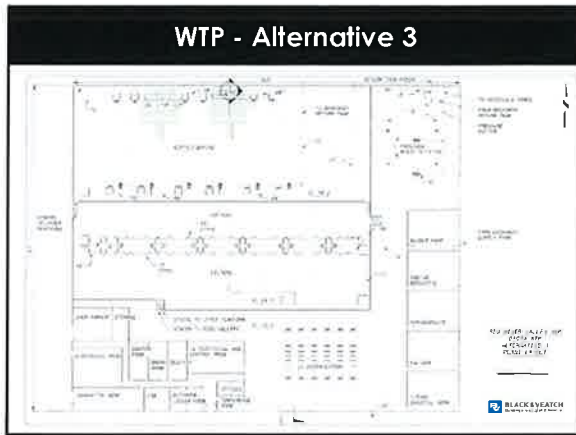
- ### Water Treatment Plant Flows and Operations
- 4 cfs up to 180 cfs
 - HCW's on / off – varied durations, seasons
 - Variations in water quality expected
 - Low flow = less river connectivity = poorer quality water
 - Periodically cycle HCW and plant facilities
- 18

WTP – Alternatives

FEATURE	TREATMENT ALTERNATIVE		
	1	2	3
MAIN PROCESS			
Inverbank Filtration	•	•	•
Equalization Basin	•	•	•
Chemical Feed System ¹	•	•	•
Plate-Assisted Settling Basins	•	•	•
High-rate Solids Clarification ²	•	•	•
Granular Media Filters	•	•	•
Backwash Supply Tank for Granular Media Filters	•	•	•
UV Light Disinfection	•	•	•
Disinfection Contact Basin	•	•	•
Aeration Polishing	•	•	•
RESIDUALS			
Solids Equalization Tank	•	•	•
Plate-Assisted Settling Basin	•	•	•
Pressure Filter	•	•	•
Residual Ponds	•	•	•

¹ Chemical system may include sodium bisulfite, chlorine, azo-bis-isobutyronitrile, polymer, coagulants.
² Includes Triplex ACOFIL or comparable technology.



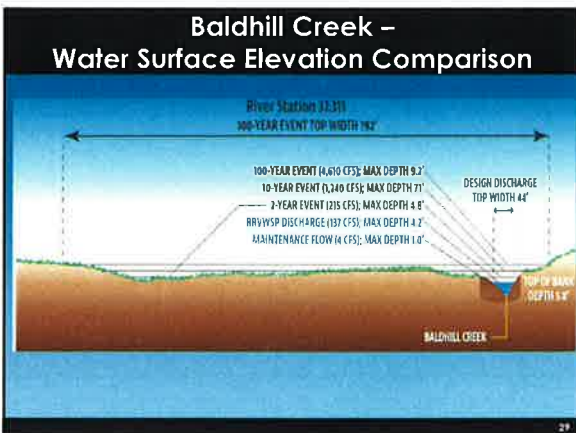
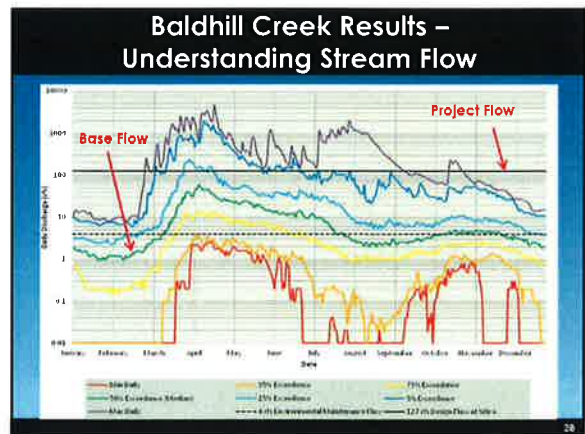
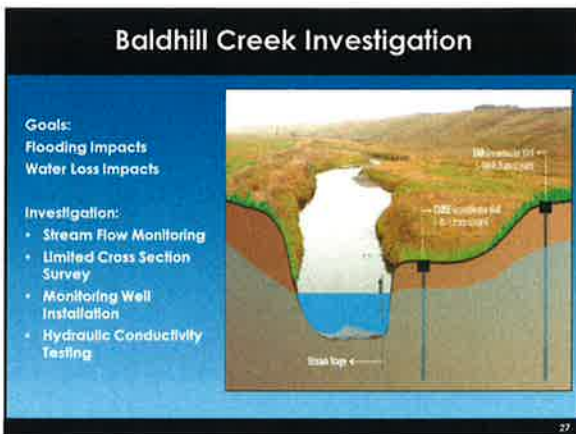


WTP Process Credit

Table 4: Top Inactivation / Removal Credits

TREATMENT ELEMENT	TREATMENT ELEMENT	LOG INACTIVATION / REMOVAL CREDIT					TOTAL
		DISINFECTION	COAGULATION & FLOCCULATION	FILTRATION	SEDIMENTATION	ADSORPTION	
1	Disinfection	2	0.5	---	0.5	2.4	7
	Filtration	1	0.5	---	3.5	0.5	5.5
	Cryptosporidium	2	0.5	---	0	2.4	6.5
2	Disinfection	2	0.5	---	0.5	2.4	7
	Filtration	1	0.5	---	3.5	0.5	5.5
	Cryptosporidium	2	0.5	---	0	2.4	6.5
3	Disinfection	2	---	2.5	0.5	2.4	9
	Filtration	1	---	2	3.5	0.5	7
	Cryptosporidium	2	---	3	0	2.4	9

(1) Based on Rating 8 with Minimum Free Chlorine Residual of 1.0 mg/L, Minimum pH of 7.5, and Minimum Temperature of 50°F (6.1°C).
 (2) Credits based on Appendix A.9 of FFG (Estimation, 2007).
 (3) Filtration includes coagulation and sedimentation process.
 (4) Based on dosage of 40 mg/L min.




- ### Baldhill Creek Results – Impacts on Stream Flow
- Base Flow Increases from 3-6 cfs to 122 cfs.
 - The 122 cfs Flow Stays in Bank – Limited Flooding
 - Water Surface Elevations will Rise During Wet Events – Unless RRWVSP is Turned Off/Down
 - Additional Risks for Bank Erosion, Sediment Loss, Localized Flooding with Ice.

Baldhill Creek Results – Impacts on Project

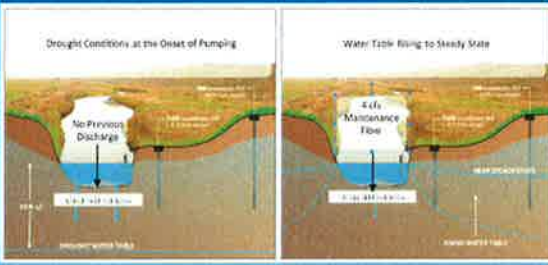
Water Loss: May Lose Approximately 15 cfs to Seepage, Evapo-transpiration

- Need to Increase Sizing of Rest of Project Assets to Compensate
- Need 4 cfs Maintenance Flows to Maintain Groundwater Level



31

Baldhill Creek Results – Drought Condition Impacts



32

Baldhill Creek – Cost/Benefit

<p>Benefits</p> <ul style="list-style-type: none"> • Save \$40-\$45 million in pipeline costs 	<p>Costs/Risks</p> <ul style="list-style-type: none"> • Added Capital and O&M Costs for Increased Pumping • Need for Ongoing Stream Monitoring • GDCD Assumes Risk of Future Stream Erosion, Ice Dams, Landowner Concerns • Potential Need for Flood Easements • Discharge Permit May be More Difficult Due to Ecological Impacts on Creek
---	--

33

3) Implementation Plan

34


Implementation Plan

Project Implementation Depends on:

- Federal Government Willingness to Use or Transfer its McClusky Canal Assets
- Obtaining Section 404 Permit on the Missouri River
- Ultimate Requirements for Water Treatment
- Feasibility of Using Baldhill Creek as a Discharge
- Final User Commitments

35

Implementation Plan – Key Decisions



36

Implementation Plan

What is an Implementation Plan?

An Approach that Adds Flexibility and Cost Savings Based on:

- 1) Available Construction Funding
- 2) Future Regulatory Decisions
- 3) Final User Participation and Water Demands

37



Implementation Option -
McClusky Canal is Supply Source for Both RRV and CND

38



Implementation Option -
Co-Mingled Supply Source
CND – McClusky Canal
RRV – Missouri River with Conventional Intake

39



Implementation Option -
Co-Mingled Supply Source
CND – McClusky Canal
RRV – Missouri River with Bank Filtration System

40



Implementation Option -
CND – Missouri River with Bank Filtration System
RRV – Missouri River with Bank Filtration System

41

Implementation Task Order

- Task Order Approval for the following:
- Combine all Concept task orders reports into one Report
 - Estimate Project & OM Costs
 - Construction Timeline
 - Identify segments that can and should be done first
 - Recommendations moving forward
 - Regulatory review

42

RRVWSP Engineering Update April 7, 2016

Goal

Spring 2016	Complete Conceptual Design and Cost Estimate
Winter 2016	Complete Preliminary Design and Cost Estimate for pipeline and pump station(s).
2017 - 2018	Complete Final Design and Cost Estimate
2019 - 2024	Phased Bidding and Construction

Total draft budget to complete Conceptual, Preliminary and Final designs is \$66 million. ND legislature appropriated \$12.3 million for the RRVWSP this past session.

Conceptual Design

1) Missouri River Intake Investigation Task Order – A Missouri River bank filtration intake near Washburn is proposed to reduce the amount of federal permits for the RRVWSP. Results of two previous studies indicated only the Washburn area may support 122 cfs and recommended further study of up to four sites. Work includes well pumping tests to determine yield of horizontal collector wells at the sites and the recommended number and spacing of the horizontal collector wells at each site. The previous work was contracted through the SWC and CH2M Hill. The proposed work in this task order is contracted through GDCD and CH2M Hill. Cost of the work is \$1,306,790.

Status – All field work has been completed. The final report is complete and was presented to the LAWA Technical Advisory Committee on January 22. Results suggest that the desired RRVWSP intake capacity of 122 cfs may be achievable through bank filtration intakes at multiple sites. Nine to fourteen collector wells spread across four sites would be required.

2) Discharge System (Baldhill Creek Investigation) Task Order – Utilizing the Baldhill Creek as a water conveyance to Lake Ashtabula could eliminate the need for 13 miles of pipeline and provide a savings of \$40 million. Studies include creek capacity and the interaction of Baldhill Creek with groundwater aquifers and impacts, if any, to adjacent lands. Estimated cost is \$806,000.

Status – Of the 27 hydraulic structures, 22 have been granted access, 49 of 96 channel cross sections have been granted access, and surveys have been completed. Seven monitoring sites were active last fall. Monitoring equipment has been installed for year 2016. A draft report was provided in early April. The draft report documented that the creek can contain the additional flow, but some water would be lost to infiltration and evaporation.

3) Pipeline Alignment Task Order - The original RRVWSP alignment went from the McClusky Canal to Lake Ashtabula; however, the intake will now be moved to the Missouri River near Washburn. An alignment needs to be established from Washburn to Highway 200 connecting to the original alignment. Also, the original alignment needs to be refined to minimize permitting. Estimated cost is \$960,000.

Status – A draft report with a proposed alignment and cost estimate was released in early March. The alignment has been reviewed by GDCD and LAWA and was submitted to the USCOE for jurisdictional determination.

4) Hydraulic and Pump System Task Order – The intake site has moved from the McClusky Canal to the Missouri River near Washburn, including a new segment of pipeline connecting the two. This task order will build on existing data and expand and refine the hydraulic operational characteristics of the pump stations and control facilities required to successfully operate the RRWSP. The specific goals will be to provide an updated hydraulic analysis of the entire project, a conceptual layout of pumping facilities and a conceptual level cost estimate of those pumping facilities. Estimated cost is \$480,000.

Status –The team discussed a range of pumping flows, placement of a water treatment plant, closed system versus open system using break tank, and hydraulic differences with each option. The draft report showing a conceptual design for the hydraulic structures and a cost estimate for the hydraulic structures was released in April.

5) Horizontal Collector Well Conceptual Design Task Order – The information collected from the Missouri River intake studies will be used to develop conceptual design and cost estimates. Estimated cost is \$400,000.

Status – Four sites have been identified with potential hydrogeology. It is estimated that 9 to 14 collector wells would be required to achieve the desired capacity spread across the four sites. An additional 30 miles of pipe will be required to manifold the collector well sites together. Efforts have started to develop a conceptual design for each of the collector wells. The horizontal alignment for the piping to each collector well has been established, as have the initial pump sizes for each collector well. A draft report will be released in mid-April. No further work is recommended at this time related to the collector wells.

Continued work under this task order will be moving forward with a conventional intake conceptual design as recommended by the draft implementation plan.

6) Land Services Task Order – The original RRWSP alignment went from the McClusky Canal to Lake Ashtabula; however, the intake will now be moved to the Missouri River near Washburn. An alignment needs to be established from Washburn to Highway 200 connecting to the original alignment. This task order will prepare ROW data and documents for acquiring new easements. Estimated cost is \$470,000.

Status – The task order is being revised to reflect the implementation plan and work is currently starting.

7) Needs Assessment Task Order – The original capacity of the RRWSP was 122 cfs. Staff will begin updating users of the current State proposed project. Water users in the LAWA service area will be asked to review their needs to determine if 122 cfs is an appropriate size. Furthermore, systems along the pipeline routes in Central North Dakota will be canvassed to see if there is a need to service those systems from the State project. The task order will assist GDCD staff in this effort. Estimated cost is \$150,000.

Status – A list of potential users has been generated. Letters to the systems and informational pieces are in draft form. The mailings will update potential users of the project status and will request meetings with the systems. The mailings, which started in early January, will go out in phases. Phone calls and system visits will follow. System visits completed are; Grand Forks, Cass Rural Water, East Grand Forks, Jamestown and West Fargo.

8) Water Treatment Plant Analysis Task Order – The federally proposed WTP used pre-treatment, filtration and disinfection processes located near the McClusky Canal. The State project will be using Missouri River water through a horizontal collector well near Washburn. The location and level of treatment needs to be reviewed. A range of treatment processes will be developed to complement the RRWSP Concept design and estimate. Estimated cost is \$438,000.

Status –The Bismarck collector well data and the results from the bank filtration study are being used to establish expected conditions in the source water. Overall treatment goals have been drafted that are consistent with the Boundary Waters Treaty for a biota water treatment plant. Three alternative treatment processes have been developed. A report showing three conceptual water treatment plant alternatives that could each meet the treatment requirements and a cost estimate was released in April.

9) Implementation Plan – The report will include project costs, operation and maintenance costs, construction schedule, review regulatory issues, and discuss how to implement the project in phases.

Status – This task order is currently being drafted. Estimated cost is \$190,000.

Preliminary Design

The conceptual design is nearly complete and is anticipated to be released in May. Engineering teams are ready to start the preliminary design phase. It is estimated to cost \$10 million to complete the Preliminary design on the entire project. Moving forward with limited funds, it is cost effective to start project phasing. The Implementation Plan will provide a road map to move forward with items that have to be completed first, which include permit phasing, design phasing and construction phasing.

Status – Task orders are being developed in coordination with Implementation Plan. The following Preliminary design task orders are being recommended; 1) additional user commitment assistance, 2) Missouri River conventional intake preliminary design, 3) Preliminary pipeline design McClusky to the split between Spiritwood and Baldhill Creek, 4) Land Services, including field work and 5) Financial modelling.

Work Plan Task Order Recommendations	To LAWA/GDCD	Current Estimate
User Commitment	April	\$ 150,000
Missouri River Conventional Intake / 404 permit	April	\$ 1,000,000
Pipeline Alignment McClusky-Split to CND & Land Services (ROE)	April	\$ 2,800,000
Financial Modelling	April	\$ 350,000
Pipeline Alignment Washburn-McClusky & Land Services (ROE)	June	\$ 600,000
Pipeline from Split to Baldhill Creek (RRV) Land Services (ROE)	June	\$ 450,000
Baldhill Creek Analysis Phase II	June	\$ 400,000
Land Services (Aerial)	June	\$ 200,000
Main Pump Station and Break Tank	June	\$ 1,000,000
Financial Advisor	June	\$ 125,000
Total		\$ 7,075,000

Red River Valley Water Supply Project Planning Level Budget 8-Apr-16						
July 2015 through June 2017						
Conceptual Engineering (July 2015 - June 2016)	% Complete	Current Estimate	Actual			Jan.-June 2017
			July -March 2016	April-June 2016	July -Dec 2016	
Missouri River Intake Investigation	84%	\$ 1,306,790	\$ 1,100,000	\$ 206,790	\$ -	\$ -
Horizontal Collector Well	51%	\$ 400,000	\$ 205,755	\$ 194,245	\$ -	\$ -
Hydraulic and Pump System	69%	\$ 481,081	\$ 330,088	\$ 150,993	\$ -	\$ -
Pipeline Alignment	85%	\$ 960,000	\$ 820,120	\$ 139,880	\$ -	\$ -
Discharge System (Baldhill Creek)	56%	\$ 806,000	\$ 450,373	\$ 355,627	\$ -	\$ -
Land Services	9%	\$ 470,000	\$ 44,190	\$ 425,810	\$ -	\$ -
Needs Assessment	65%	\$ 142,727	\$ 93,153	\$ 49,574	\$ -	\$ -
Water Treatment Plant Analysis	55%	\$ 438,731	\$ 239,719	\$ 199,012	\$ -	\$ -
Implementation Plan (not approved)	April	\$ 190,000	\$ -	\$ 190,000	\$ -	\$ -
Sub-Total	63%	\$ 5,195,329	\$ 3,283,398	\$ 1,911,931	\$ -	\$ -
Preliminary Engineering (July 2016 - June 2017)						
User Commitment		\$ 150,000				
Missouri River Conventional Intake Design		\$ 1,000,000				
Pipeline Alignment McClusky to Split & Land Services (ROE)		\$ 2,800,000				
Pipeline Alignment Washburn-McClusky & Land Services (ROE)		\$ 600,000				
Pipeline from Split to Baldhill Creek (RRV) Land Services (ROE)		\$ 450,000				
Baldhill Creek Analysis Phase II		\$ 400,000				
Land Services (Aerial)		\$ 200,000				
Main Pump Station and Break Tank		\$ 1,000,000				
Pipeline to CND		\$ 310,000				
McClusky Canal Intake		\$ 500,000				
Discharge Design (Sheyenne/Baldhill)		\$ 100,000				
Water Treatment Plant , does not include pilot		\$ 300,000				
Sub-Total		\$ 7,810,000	\$ -	\$ -	\$ -	\$ -
Administration, Legal and Financial						
Administration (cost & schedule, communications, LAWA)		\$ 180,000	\$ -	\$ 60,000	\$ 60,000	\$ 60,000
Legal	8%	\$ 564,170	\$ 43,279	\$ 200,000	\$ 175,000	\$ 175,000
Financial Planning		\$ 350,000	\$ -	\$ 125,000	\$ 100,000	\$ 75,000
Financial Advisor		\$ 125,000				
Sub-Total		\$ 1,219,170	\$ 43,279	\$ 385,000	\$ 335,000	\$ 310,000
Total		\$ 14,224,499	\$ 3,326,677	\$ 2,296,931	\$ 335,000	\$ 310,000
90% State Cost Share		\$ 12,802,049	\$ 2,994,009	\$ 2,067,238	\$ 301,500	\$ 279,000
10% LAWA Cost Share		\$ 1,422,450	\$ 332,668	\$ 229,693	\$ 33,500	\$ 31,000

* 2015-/2017 state appropriation \$12,359,000

RRVWSP PROJECT DEVELOPMENT AGREEMENT

THIS RED RIVER VALLEY WATER SUPPLY PROJECT DEVELOPMENT AGREEMENT (this “Agreement”), dated _____, 2016 (the “Effective Date”), is by and between the Lake Agassiz Water Authority (“LAWA”), a political subdivision of the State of North Dakota, and _____, a [city, water district or other water distribution system] (the “Member”).

Recitals

A. LAWA was established as a political subdivision of the State of North Dakota with an authorized purpose of assisting in the development of a reliable, high quality water supply for eastern North Dakota for various purposes, including domestic, rural water, municipal and industrial uses. LAWA may include interested cities, water districts and other rural water distribution systems in central North Dakota as part of its service area as well.

B. The foregoing shall be accomplished by the bulk purchase of water by LAWA from the Garrison Diversion Conservancy District (“GDCCD”) delivered by the features contemplated as part of a state and locally funded Red River valley water supply project (the “Project”).

C. It is imperative to identify as accurately as possible those Members that will contract with LAWA to purchase water in order to identify the necessary capacity of the system, to develop a sufficiently detailed and accurate preliminary design for the Project, and to generate a commitment to cover the necessary local funds for cost share participation as the Project moves forward. To that end, LAWA and the Member enter into this Agreement to set forth certain terms and conditions relating to Member’s participation in the concept planning and preliminary design of the Project, which is underway and currently being funded by existing LAWA funds. The parties understand that the current funds held by LAWA will be insufficient to meet the local cost share requirements for the concept planning and preliminary design of the Project. This Agreement and contemporaneous agreements with other member entities commit the Member(s) to an assessment for their equitable share of the additional concept planning and preliminary design costs (“Project Development Costs”). To date, the state of North Dakota has been providing 90% of the cost share funding with 10% being paid locally. While this cost share ratio may change if required by the state, it is anticipated that this same cost share ratio will continue through preliminary design.

Agreement

In consideration of the foregoing and the covenants and agreements set forth herein, the parties agree as follows:

1. Member has reviewed and understands the proposed “Red River Valley Water Supply Project Planning Level Budget” (“Budget”) that is attached hereto as Exhibit A. The

Budget is solely LAWA's best estimate to date of Project Development Costs through June 2017, which at this time are estimated to be \$16,218,041. These estimates are not intended to create a financial limit on contributions, but are presented merely to identify the categories of expenses contemplated by this Agreement and the total Project Development Costs anticipated at this point. LAWA, through Member contributions, is responsible to pay the ten percent local share of the total estimated cost, or \$1,621,804.

2. Member has conducted a meaningful review of its anticipated future water needs and has had the opportunity to consult with engineers and legal professionals regarding Member's anticipated future need and the obligations under this Agreement. The water nomination provided by the Member in this Agreement is Member's best estimate of Member's future water supply needs and represents the capacity the Member intends to contract for, so long as the Member deems the costs to be reasonable. For the limited purposes of the obligations of this Agreement, in furtherance of designing and securing capacity in the Project, Member hereby identifies its future water needs from the Project at ____ acre feet per calendar year, with a peak instantaneous peak flow rate of ____ cubic feet per second (cfs) if the Project is constructed. Of this amount, Member anticipates that its nomination would include ____ acre feet annually for domestic needs and ____ acre feet annually for industrial needs. LAWA commits to reserve and protect sufficient water capacity in the Project to sell this nominated allocation to Member on terms that will obligate Member to pay for capital costs, operation and maintenance costs and payment for a water supply.
3. Member would later expect to negotiate and enter into a LAWA Participation Agreement and a Water Supply Agreement once the Project costs are known, modeled and the Operating Plan is complete. The Participation Agreement and Water Supply Agreement will set forth the terms, conditions and proposed payment structure that will be expected of Member once the Project moves into construction and thereafter into operation and maintenance.
4. This Agreement solely addresses the Member's responsibility for its share of the initial costs associated with and limited to the specific categories identified in Exhibit A, through the later of (1) June 30, 2017 if budgeted funds are expended by that date, or (2) thereafter if the completion of the concept planning and preliminary design extends beyond that date and so long as there are budgeted funds available to complete the concept planning and preliminary design. Member hereby agrees to pay its equitable share of the local share of the Project Development Costs. Member's equitable share is determined as a percentage of the Member's nomination over the total sum of nominations.
5. Member agrees that the funds they pay per this Agreement are non-refundable in any and all cases including, without limitation, if the Project is discontinued or terminated or if Member decides not to further participate in the Project.

6. Member acknowledges and agrees that there are a number of risks, any or all of which could occur, that could have the effect of increasing the cost of the Project and/or delaying and/or terminating the Project, including by way of illustration and not limitation, the following: (i) litigation; (ii) court order; (iii) changes in legislation affecting the Project, LAWA and/or the GDCD; (iv) different environmental risks than those previously identified; (v) increased labor costs or costs of materials; (vi) the need to obtain Federal approval or a Federal permit; (vii) the Federal Government's decision to support the Project; (viii) a change in the State of North Dakota's financial ability to fund its portion of the Project; (ix) climate change and variability; and (x) political interference at the local, state or Federal level. Any increase in the identified budgeted costs would require approval of the LAWA Board.
7. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.
8. This Agreement (and any interest herein or hereunder) may not be assigned, transferred, pledged, hypothecated or encumbered without the prior written consent of the other party; provided, however, that LAWA may assign this Agreement to GDCD without Member's consent.
9. This Agreement shall be governed by the laws of the State of North Dakota, without giving effect to its choice of laws principles. Venue of any proceedings shall be in the state courts located in Cass County, North Dakota.
10. Members who execute an Agreement for participation in Project Development on or after October 1, 2016 will be considered "latecomers" and will pay those amounts set forth in the LAWA Latecomers Policy attached hereto as Exhibit B, which includes additional contribution required as a risk penalty. Any financial contributions made by latecomers that are not needed to facilitate the addition of the latecomer to the system or otherwise needed for planning, will be considered by the LAWA Board, in its discretion, for reimbursement to entities like this Member who entered agreements to cover development costs on or before October 1, 2016.
11. Contingency: This Agreement is valid and enforceable only if LAWA obtains similar Agreements from other members that represent nominations of at least 100 cfs in the aggregate. If LAWA is unable to secure agreements amounting to 100 cfs to share the costs of this Agreement, this Agreement is null and void and without further effect.

WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

LAKE AGASSIZ WATER AUTHORITY

By:_____

By:_____

Name:_____

Name:_____

Title:_____

Its:_____

EXHIBIT A

**Red River Valley Water Supply Project
Planning Level Budget**

Red River Valley Water Supply Project Planning Level Budget 4-Feb-16						
July 2015 through June 2017						
	% Complete	Current Estimate	Actual			
			July-Dec 2015	Jan.-June 2016	July-Dec 2016	Jan.-June 2017
Conceptual Engineering (July 2015 - June 2016)						
Missouri River Intake Investigation	80%	\$ 1,306,790	\$ 1,046,664	\$ 260,126	\$ -	\$ -
Horizontal Collector Well	initiated	\$ 400,000	\$ -	\$ 400,000	\$ -	\$ -
Hydraulic and Pump System	initiated	\$ 481,081	\$ -	\$ 481,081	\$ -	\$ -
Pipeline Alignment	47%	\$ 960,000	\$ 453,550	\$ 506,450	\$ -	\$ -
Discharge System (Baldhill Creek)	30%	\$ 806,000	\$ 238,612	\$ 567,388	\$ -	\$ -
Land Services		\$ 470,000	\$ -	\$ 470,000	\$ -	\$ -
Needs Assessment		\$ 150,000	\$ -	\$ 150,000	\$ -	\$ -
Water Treatment Plant Analysis		\$ 600,000	\$ -	\$ 600,000	\$ -	\$ -
Sub-Total		\$ 5,173,871	\$ 1,738,826	\$ 3,435,045	\$ -	\$ -
Preliminary Engineering (July 2016 - June 2017)						
Horizontal Collector Well		\$ 1,600,000	\$ -	\$ -	\$ 800,000	\$ 800,000
Hydraulic and Pump System		\$ 1,200,000	\$ -	\$ -	\$ 600,000	\$ 600,000
Pipeline Alignment		\$ 3,600,000	\$ -	\$ -	\$ 1,600,000	\$ 2,000,000
Discharge System (Baldhill Creek)		\$ 700,000	\$ -	\$ -	\$ 350,000	\$ 350,000
Land Services (Survey)		\$ 900,000	\$ -	\$ -	\$ 450,000	\$ 450,000
Land Services (Easement Options)		\$ 600,000	\$ -	\$ -	\$ 300,000	\$ 300,000
Water Treatment Plant, does not include pilot		\$ 1,400,000	\$ -	\$ -	\$ 700,000	\$ 700,000
Sub-Total		\$ 10,000,000	\$ -	\$ -	\$ 4,800,000	\$ 5,200,000
Administration, Legal and Financial						
Administration (cost & schedule, communications, LAWA)		\$ 180,000	\$ -	\$ 60,000	\$ 60,000	\$ 60,000
Legal	3%	\$ 564,170	\$ 14,170	\$ 200,000	\$ 175,000	\$ 175,000
Financial		\$ 300,000	\$ -	\$ 125,000	\$ 100,000	\$ 75,000
Sub-Total		\$ 1,044,170	\$ 14,170	\$ 385,000	\$ 335,000	\$ 310,000
Total		\$ 16,218,041	\$ 1,752,996	\$ 3,820,045	\$ 5,135,000	\$ 5,510,000
90% State Cost Share		\$ 14,596,237	\$ 1,577,696	\$ 3,438,041	\$ 4,621,500	\$ 4,959,000
10% LAWA Cost Share		\$ 1,621,804	\$ 175,300	\$ 382,005	\$ 513,500	\$ 551,000

* 2015-/2017 state appropriation \$12,359,000

EXHIBIT B

LAKE AGASSIZ WATER AUTHORITY

LATECOMER POLICY

WHEREAS, there have been, and will continue to be, substantial initial costs for concept planning and preliminary design, as well as other costs including, without limitation, real estate acquisition, design and construction costs (collectively, “Project Costs”) relating to the state and locally-funded Red River valley water supply project, as well as its predecessor project studied under the Dakota Water Resources Act (collectively, the “Project”).

WHEREAS, Garrison Diversion Conservancy District (“Garrison Diversion”) and Lake Agassiz Water Authority (“LAWA”), through its individual stakeholders including Fargo and other cities and water districts (“Initial Members”), paid the local share of the Project Costs to date. The Initial Members’ payments were made with some expectation of partial reimbursement by entities that later seek water supplies from the Project but who did not contribute their share of initial Project Costs.

WHEREAS, N.D.C.C. § 61-39-05 grants the Lake Agassiz Water Authority (“LAWA”) the authority to accept funds for the purpose of aiding and promoting the construction, maintenance, and operation of the Project and to enter into contracts to supply water and provide for payments that may be used to fund Garrison Diversion’s costs of acquiring, constructing or reconstructing the Project, whether such acquisition, construction or reconstruction of the Project is actually completed and whether any water is actually delivered.

WHEREAS, as new cities, water districts or other water distribution systems desire to purchase water and enter into agreements with LAWA, these entities seeking a water supply from LAWA after October 1, 2016 (each such entity, a “Latecomer” and collectively, the “Latecomers”) will need to contribute their pro rata share of the Project Costs that were incurred after July 1, 2015 (such amount, “Project Contribution Payment”).

WHEREAS, in order to best plan and budget for the Project, it is best that all interested cities, water districts and other water distribution systems sign a RRVWSP Project Development Agreement as soon as possible. In order to discourage any delay in signing such an agreement, LAWA will assess any Latecomer an additional risk penalty beyond the Latecomer’s Project Contribution Payment (such amount, the “Late Fee”).

NOW, THEREFORE, it is hereby resolved that the Latecomers Policy be:

1. Any Latecomer will be required to pay a Project Contribution Payment. The amount of such Project Contribution Payment will be the entity's pro rata share of the local share (currently 10%) of the Project Costs incurred after July 1, 2015. The pro rata share will be a percentage of the Latecomer's water nomination as compared to the entire amount nominated by the Latecomer and other entities signing as of that date.
2. Any Latecomer will be assessed a Late Fee, calculated in an amount of 20% of the Member's Project Contribution Payment. Such Late Fee shall be payable at such time that the Latecomer enters into a Development Agreement, Water Supply Agreement or Project Participation Agreement with LAWA.
3. The Project Contribution Payment and Late Fee are in addition to any and all amounts due under the Latecomer's Water Supply Agreement and any other Project Participation Agreement with LAWA, including a commitment to pay a pro rata share of other costs being incurred.
4. To the extent LAWA deems appropriate and to true up past payments made by Initial Members to better equate to their proportionate nomination for water, the Project Contribution Payment and Late Fee may be used by LAWA to reimburse Initial Members for the Project Costs. Any amounts not used to so reimburse, may be used by LAWA for ongoing Project Costs.
5. This Latecomers Policy was adopted by the LAWA Board on February 26, 2016.



2016 Budget Analysis
For the period of January 1, 2016 - March 31, 2016

Income	2016 Budget	Actual as 3/31/16	Balance of Budget
Dues Income	\$ 27,000.00	\$ -	\$ 27,000.00
Interest Income	\$ 30.00	\$ 15.02	\$ 14.98
Miscellaneous	\$ 50.00	\$ -	\$ 50.00
Cost Share/Development Agr.	\$ 500,000.00	\$ -	\$ 500,000.00
Total Income	\$ 527,080.00	\$ 15.02	\$ 527,064.98

Expenses

Dues Expenses	\$ 1,250.00	\$ 1,000.00	\$ 250.00
Accounting	\$ 5,500.00	\$ -	\$ 5,500.00
Directors Expense	\$ -	\$ -	\$ -
Insurance	\$ 482.00	\$ -	\$ 482.00
Service Fees	\$ 66.00	\$ 16.50	\$ 49.50
Water Quality Sampling	\$ 5,000.00	\$ -	\$ 5,000.00
Engineering	\$ 823,505.00	\$ -	\$ 823,505.00
Adm/Legal/Financial	\$ 72,000.00	\$ -	\$ 72,000.00
Total Expenses	\$ 907,803.00	\$ 1,016.50	\$ 906,786.50

Account Activity

Beg. Bank Balance 1-1-16		\$ 592,096.98
Income Received		\$ 15.02
Total Funds Available		\$ 592,112.00
Service Fees	\$ 16.50	
#1119 Water Coalition	\$ 1,000.00	

Total Expenses	\$ 1,016.50	
Ending Bank Balance		\$ 591,095.50