

Timpanogos Special Service District  
Administrative Board  
Electronic Meeting Minutes  
6400 North 5050 West Utah County, Utah

APPROVED

April 13, 2023 6:00 p.m. Conference Room/Electronic Meeting

**Board Members:**

**Present:** Jay Meacham (Vice Chair) David Bunker\* Mark Christensen  
Chandler Goodwin Neal Winterton Joel Thompson  
Brian Braithwaite\*

**Electronic:** Mack Straw Chris Condie Blaine Thomas\*

**Excused:** Sullivan Love Lon Lott Richard Nielson

**District Staff:** Richard Mickelsen, District Manager Shannon Hansen, Administrative Manager  
David Barlow, District Engineer Danette Smith, Board Secretary  
Joe Martin, CPA (electronic)

**Others:** Mark Bell, Hayes Godfrey Bell Brandon Wyatt, Bowen Collins Associates  
Randy Zollinger, Carollo Engineers Wade Stinson, Aqua Engineering  
Jeff DenBleyker, Jacobs Engineering Robert Rice, Ray Quinney and Nebeker  
Kyle Greene, Squire & Co. (electronic) Dr. David Richards

**Call to Order**

Jay Meacham, Vice Chair, called the meeting to order. 6:07 p.m. Jay excused Chair Sullivan Love. Jay said there was a new board member and asked Joel Thompson to introduce himself. Joel said he replaced Craig White as General Manager at South Valley Sewer District. Joel said he has been with SVSD for about ten years and has a bachelor's degree from UVU and a master's degree from the U of U. He is excited to be a part of the TSSD Board and looks forward to working with everybody.

**1. Public Comment**

There was no public comment.

**Approval of Minutes**

**1. Approval of the March 16, 2023 Administrative Board Meeting Minutes**

David Bunker made a motion to approve the minutes of the March 16, 2023 Administrative Board Meeting as presented. Mack Straw seconded the motion. Those voting "Aye" – Jay Meacham, Mark Christensen, Mack Straw, Chris Condie, Blaine Thomas, David Bunker, Chandler Goodwin, Neal Winterton and Joel Thompson. The motion passed unanimously.

**Consent Calendar**

- 1. TSSD Check Register**
- 2. CL-N1: Sundt Pay Request No. 6**

Chandler Goodwin made a motion to approve all items on the Consent Calendar as presented. David Bunker seconded the motion. Those voting "Aye" – Jay Meacham, Mark Christensen, Mack Straw, Chris Condie, Blaine Thomas, David Bunker, Chandler Goodwin, Neal Winterton and Joel Thompson. The motion passed unanimously.

1       **\* Brian Braithwaite arrived. 6:13**

2  
3       **Finance**

4       **1. Financial Report**

5       The financials for January and February 2023 were in dropbox for the board to review.

6  
7       **Action Items**

8       **1. 2022 Financial Audit Approval**

9       Joe Martin, District CPA, said Kyle Greene, Squire & Company, will present the 2022 Audit. Kyle thanked staff for  
10 their help with the audit. The auditor's opinion was that the basic financial statements of the District present fairly, in all  
11 material respects, the respective financial position of the District as of December 31, 2022, and 2021. Kyle said the  
12 District's internal controls over financial reporting were in place and the District complied, in all material respects, with  
13 the state compliance requirements for the year ending December 31, 2022.

14  
15       **Blaine Thomas made a motion to accept the 2022 Audit Report for Timpanogos Special Service District dated**  
16 **April 13, 2023, prepared by Squire & Company. Brian Braithwaite seconded the motion. Those voting "Aye" –**  
17 **Jay Meacham, Mark Christensen, Mack Straw, Chris Condie, Blaine Thomas, Brian Braithwaite, David Bunker,**  
18 **Chandler Goodwin, Neal Winterton and Joel Thompson. The motion passed unanimously.**

19  
20       **2. TSSD Two-year Vegetation Study**

21       Rich introduced Jeff DenBleyker, Jacobs Engineering, and Dr. David Richards. Dr. Richards said he will give a  
22 presentation on the ecologically based restoration and research being done on Utah Lake. Dr. Richards said they are  
23 working in collaboration with BYU, TSSD, Dr. Theron Miller, WFWQC and others to look at what Utah Lake is  
24 capable of (re)becoming. The ecological health of Utah Lake is tied to the economic health of Utah Valley and Utah in  
25 general.

26       Dr. Richards said most nutrients (Total Phosphorus) come from sediments with the second biggest contributor being  
27 atmospheric deposition. Only 4% comes from wastewater treatment facilities and about 2% from storm water runoff.  
28 David Bunker asked if we remove 100% of the WWTP phosphorus (4%), would it change the state of the lake? Dr.  
29 Richards said that is the million-dollar question, but they do not think that it would. The way the Utah Lake ecosystem  
30 works is a combination of physical, chemical, and biological; we are focused on restoring biology and believe that will  
31 help the lake take care of itself.

32       There are five primary goals with restoring the lake; reduce sediment flux of nutrients into water column, increase  
33 light availability to sediments to grow benthic algae, increase the aquatic vegetation habitat back into the lake and  
34 reintroduce native mollusks and balance fisheries.

35       The limno corral study is an ongoing study, with large corrals and several treatments to examine ecological and  
36 chemical responses. They are good-sized corrals, with skirts that go all the way to the bottom of the lake which are  
37 impermeable to water coming in or out. One study looked at was light attenuation. The light penetration of the lake is  
38 about 25 cm because of the turbidity and algal blooms. One control corral blocked the waves and kept fish out and light  
39 penetration went to almost 80 cm to the bottom of the corral. When nutrients were added to another corral, algae grew,  
40 but the zooplankton bloomed and ate most of it; filamentous green algae grew in abundance and water clarity improved  
41 dramatically. Dr. Richards said we want to have bigger and more zooplankton (grazers). The restoration of native plants  
42 will function as natural wave breaks and zooplankton will have a place to live.

43       **\*Blaine Thomas left. 6:45 p.m.**

44       Dr. Richards said Utah Lake used to have a higher density of Mollusks than any other lake in the western U.S. Native  
45 clams and mussels would filter the whole lake in a short time when they were hungry. We want to restore these to the  
46 lake. It would be a huge effort, but this restoration of native bivalves and snails is being done all over the world right  
47 now, and they are taking care of the ecosystem.

48       Dr Richards said they are hoping to start this ecology-based restoration as soon as possible. They are not asking the  
49 District to keep funding this for twenty years, but it will be a long-term effort. It took over 150 years to turn Utah Lake  
50 into what it is now from what it used to be. Rich said we are trying to provide data for DWQ to show them that their

1 desire to go down to .1 mg/L phosphorus is not attainable for the lake. Rich thinks our data will push them to go no  
2 lower than .3 mg/L. David Bunker said it really means millions of dollars for residents who live here, and he thinks this  
3 is a great effort.

4 Dr. Richards said we also need to increase our efforts in carp removal. Carp are like public enemy number one for  
5 Utah Lake. The carp removal program started in 2009 and it was successful until about 2018. The carp population is  
6 starting to go back up probably because once you remove the big carp, all the baby carp have less competition, so they  
7 are growing and replacing them.

8 Neal Winterton asked how important the Limno corral study is to understand the ecology of the lake. Once we have  
9 the data, will that help establish a level of treatment and nutrient removal? Rich said when we started this project 2 years  
10 ago, we wanted to change the narrative coming from DWQ that the lower limit is better. The Army Corps of Engineers  
11 suggested this vegetation study, and it will also acquire wetland mitigation. This study will show a lack of obtainability  
12 and save residents money.

13 Neal said if science is important, why is the state not paying for the whole thing. Rich said we tried to get money  
14 from the legislature but were slow in getting to them. Rich said he is optimistic that we will be able to get \$200,000.00  
15 from the state next year. This presentation was given to the Utah Lake Authority, and they had a positive reaction to it.  
16 Rich said if we can get the data, it would show wastewater treatment plants are not the problem.

17 **\*David Bunker left 7:00**

18 Jeff DenBleyker, Jacobs Engineering, gave a presentation on Integrated Solutions for Utah Lake, and how we can  
19 reduce harmful algal blooms (HABs) in Utah Lake. Wastewater treatment facilities are just one small part that may be  
20 contributing to the presence of HABs in Utah Lake. There needs to be a collaborative approach that tackles in-lake  
21 nutrient cycling, watershed input and ecosystem structure. The ULWQS's goal was to develop site specific criteria,  
22 identify sources of pollution, develop a TMDL and then reduce nutrient loading.

23 Phase III - 2023 In-Lake Solutions will look at what science tells us, and what solutions we can develop that will  
24 move us forward. The Limno corrals will look at whether the lake is naturally buffered, what role adult carp and wind  
25 turbulence play, can fisheries management be part of the solutions, and can mollusks help improve water quality. The  
26 shoreline restoration with native plants will look at whether we can stabilize the shoreline to improve water quality and  
27 habitat.

28 The District together with the Division of Forestry, Fire and State Lands are investing \$400,000/year to investigate  
29 and develop realistic, holistic, and long-term solutions that are attainable and reduce the intensity, duration, and  
30 frequency of future harmful algal blooms (HABs) in Utah Lake. The request is for an additional \$200,000 per year for  
31 2023. This will increase the frequency of sampling from 3x per year to 2x per month to detect changes in algal growth  
32 and scale up the shoreline vegetation restoration concept from small enclosures to 1/3-acre plots. Rich said this is an  
33 update on what we have been doing and paying for. We are asking for an additional \$200,000.00 for this year to do  
34 these experiments.

35  
36 **Neal Winterton made a motion to approve the expenditure of \$200,000.00 for 2023 for the continuing work on**  
37 **the Utah Lake Restoration Project including the vegetation restoration study and Limno corral operations and**  
38 **give Manager Rich Mickelsen discretion to use that \$200,000.00 for appropriate studies that will help the cause to**  
39 **gather more information for the District.**

40  
41 Mark Christensen asked the total we have spent on this in past years. Rich said the total of all parties involved is  
42 about \$750,000.00. Mark said he appreciates and understands what we are trying to accomplish, but he is to the point  
43 that after this year, he is not interested in funding studies. The state must step up and do it themselves or we shouldn't  
44 keep funding this. Mark said he needs to justify to residents why we are spending fees that could be going to other  
45 projects. Brian Braithwaite said if the state requires TSSD or any other treatment facility to do things that do not make  
46 sense, then this is money well spent to provide evidence that their decisions are wrong. Even if the state or DWQ is not  
47 making good decisions, it is still in our best interest to continue to have and provide evidence that their decisions are not  
48 right. Mark said even with the scientific evidence they will still probably force it. Mark said he will support it this year,  
49 but if we do not see traction, he does not want to keep spending. He would like to see that this is making a difference.

1 Brian said if it saves us \$200 million, then it is money well spent. Mark said yes if it does, if not, we have just wasted  
2 half a percent of a \$200 million project.

3

4 **Brian Braithwaite seconded the motion. Those voting “Aye” – Jay Meacham, Mark Christensen, Mack  
5 Straw, Chris Condie, Brian Braithwaite, Chandler Goodwin, Neal Winterton and Joel Thompson. The motion  
6 passed unanimously.**

7

8 **3. UV Disinfection Equipment**

9 **4. Cloth Pile Filter Equipment**

10 Jay said proposals were received last week for the UV Disinfection Equipment and the Cloth Pile Filter Equipment.  
11 The engineering committee evaluated those proposals. Jay asked Mack Straw to present these items. Mack thanked staff,  
12 Carollo Engineers and everyone involved in reviewing and scoring these proposals. Mack said the scoring metric  
13 included a lump price with the additional capital costs, and the 20-year O & M cost. The engineering committee  
14 recommends the board consider Trojan Technologies for the UV Disinfection Equipment and Aqua Aerobics Systems  
15 be considered for the Cloth Pile Filter System.

16 Chandler Goodwin asked what caused the O & M costs to be so different on the UV Disinfection proposals. Rich  
17 said there is the construction of the building and Trojan uses a 1000 W lamp, so they use less lamps, where “Company  
18 B” uses 800 W lamps and have almost twice as many lamps. Chandler asked about capital costs on the Cloth Pile Filter  
19 Equipment. Rich said it was similar there, “Company C” uses 13 filters instead of 6 so it requires a bigger building.

20 Neal Winterton asked if staff had commented on or indicated that moving forward with these recommendations  
21 would be in their best interest to maintain the systems. Rich said yes.

22

23 **Chandler Goodwin made a motion to approve the award of the contract for UV Disinfection Equipment to  
24 Trojan Technologies, subject to the District Manager, specific contract terms and conditions, which are  
25 acceptable to the District. Brian Braithwaite seconded the motion. Those voting “Aye” – Jay Meacham, Mark  
26 Christensen, Mack Straw, Chris Condie, Brian Braithwaite, Chandler Goodwin, Neal Winterton and Joel  
27 Thompson. The motion passed unanimously.**

28

29 **Mack Straw made a motion to approve the award of the contract for Cloth Pile Filter Equipment to Aqua  
30 Aerobics Systems, as proposed. Brian Braithwaite seconded the motion. Those voting “Aye” – Jay Meacham,  
31 Mark Christensen, Mack Straw, Chris Condie, Brian Braithwaite, Chandler Goodwin, Neal Winterton and Joel  
32 Thompson. The motion passed unanimously.**

33

34 **Communication**

35 **1. Manager’s Report**

36 Rich said graphs from last year were added to the manager’s report for comparison. Mark Christensen asked if the  
37 influent BOD is lower this year compared to last year because of ground water saturation. Rich said yes, more water  
38 gives more dilution which would make that lower. Brian Braithwaite asked why the influent flow was lower. Rich said  
39 we have been trying to solve the issues with the flow meter. It should be a controlled flow through the Parshall flume,  
40 but there is an inherent turbulence going through there now. That is giving erroneous results going through that flow  
41 meter. It seems the more flow, the more inaccurate it becomes. Rich said we are trying to resolve that through other  
42 measurements. Rich said we also know it is inaccurate because the six flow meters that come from the cities more  
43 closely match the mag meters going into the distribution box. Brian asked if we should put an asterisk by that flow  
44 number just to show it is not accurate. It feels disingenuous if we are putting out reports that are not accurate. Rich said  
45 we mention this in our reports we send to the state, so they are aware. They will work with us to resolve issues.

46 Rich said in previous floods have broken the American Fork riverbank, and has flowed down and flooded Boat  
47 Harbor Lift Station, so we have taken precautions by putting sandbags around there.

48 Rich said the Bond for the CL-N1 project was awarded on Tuesday and the rate came in at 3.17%.

49

50 **Closed Session**

1        **Brian Braithwaite made a motion to go into closed session for the purpose of pending litigation. Mack Straw**  
2 **seconded the motion. Jay Meacham, Vice Chair, took a roll call vote. Those voting “Aye” – Jay Meacham, Mark**  
3 **Christensen, Mack Straw, Chris Condie, Brian Braithwaite, Chandler Goodwin, Neal Winterton and Joel**  
4 **Thompson. The motion passed unanimously. 7:46 p.m.**

5  
6        **Chandler Goodwin made a motion to go back into regular session. Neal Winterton seconded the motion.**  
7 **Those voting “Aye” – Jay Meacham, Mark Christensen, Mack Straw, Chris Condie, Brian Braithwaite, Chandler**  
8 **Goodwin, Neal Winterton and Joel Thompson. The motion passed unanimously. 8:05 p.m.**

9  
10       **Adjourn: Chandler Goodwin made a motion to adjourn. Neal Winterton seconded the motion. All present**  
11 **“Aye.” Meeting adjourned. 8:07 p.m.**

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