

CALL TO ORDER

At 6:45 PM, Chairman Bailey called the December 10, 2019 Special Board Meeting of the Moses Lake Irrigation and Rehabilitation District to order. The record shows that Chairman Bailey, Vice-Chairman Dexter, Director Teals and Director Selmann were present. Legal Counsel, Brian Iller and General Manager Chris Overland was also present. Gene Welch, a Consulting Limnologist and Prof. Emeritus at the University of Washington, also attended via-telephone to give his expert opinion on the lake water quality improvement options. The record indicates that this meeting was recorded. The Pledge of Allegiance was then recited.

DISCUSSION OF AGENDA ITEM(S)

Chairman Bailey called on the board members and the audience for discussion on any agenda items and nothing was brought forward.

APPROVAL OF THE AGENDA

Chairman Bailey stated the agenda is set and the reason the meeting was called was to consider lake water quality improvement options.

ACTION ITEMS

- Director Selmann asked Gene Welch if the Alum injection study would be a pre-dilution study, or if the Alum injection study would be in concert with the Alum Treatments to be able to study the efficacy, or if the Alum injection study would be done before the Alum treatments in terms to inform what Alum treatments need to happen. Gene Welch stated there are three options for consideration. A north-lake dilution study, an Alum injection study, and Alum treatments water column stripping. The north-lake dilution study would need an engineer to find out the cost to deliver the water to the north end of Moses Lake. He stated at the same time MLIRD needs to ensure they can receive the water and that the Quincy Irrigation District is agreeable. Gene Welch stated General Manager, Chris Overland has spoken with Harvey Harper out of Florida who has done a lot with Alum and is probably the best expert in the country on Alum treatments. Gene Welch recommends the District ask him what it would take to inject Alum into Rocky Ford Creek. With the Alum treatments water column stripping, he stated MLIRD would want to start around May and add Alum to the upper 1,500 acres of the Rocky Ford arm to strip the water column and remove the phosphorus. Gene Welch believes the three options are not all that different in terms of affecting the phosphorus concentration. The North-lake dilution study does the best job as far as he has been able to estimate. The Alum injection study and the Alum treatments water column stripping are approximately the same in terms of what the phosphorus concentration after 90 days would look like. The unfortunate thing is the following year because Rocky Ford Creek runs year-round, the phosphorus concentration returns to what it was. This means every year something will need to be done, which will get expensive. Gene Welch believes the dilution water from the W-20 is the best option because it would not require Alum treatments every year. Chairman Bailey shared a thought for consideration of administering Alum year-round into Rocky Ford that could be coordinated with other processes to reduce the phosphorus. Gene Welch stated it would be great if Alum could be administered year-round. However, he assumed \$500,000 for three months would be a big stretch in terms of funding. He believes injecting Alum into Rocky Ford would be like putting in a

Wastewater Treatment Plant that would knock phosphorus down to approximately 20 micrograms per liter. Director Selmann asked if MLIRD chose to administer the Alum treatments water column stripping, would the phosphorus concentration end up about the same after 90 days as the Alum injection. Gene Welch stated he compared all three options on a 90-day basis. He stated whether you're stripping the water column in May which will take approximately a week to administer, if you're injecting Alum into Rocky Ford Creek, or if you're adding dilution water for 90 days, the phosphorus concentration will end up about the same after the 90 days for each option. Gene Welch believes the dilution water is a little bit better in his estimates. He also believes if MLIRD is diligent enough and injects Alum all year long or a fraction of the year, MLIRD would be able to determine how long it would be needed to administer treatments to end up with a low enough phosphorus concentration in the spring that would limit the algae adequately. Gene Welch believes the most impactful option would be to knock the phosphorus concentration down all year long, and you cannot do that with dilution water because you only get it during the spring, and stripping the water column is a one-shot deal. Once the water column is stripped, Rocky Ford Creek keeps running into Moses Lake with approximately 150 ppb (parts per billion) of phosphorus, and after 90 days, the phosphorus concentration will start to come back up again, and after a year it's back where it was, to begin with. Chairman Bailey stated the Board has enough information that their interests are piqued, and he would like to schedule a study session to address all options. Gene Welch says we will need to depend on Mr. Harper to determine what dosage of Alum to use, and this will determine the cost. Chairman Bailey stated the Board would discuss the options more and come up with a date and time to schedule a study session. Chairman Bailey also stated it might be helpful to get Mr. Harper to join the study session via-telephone as well.

ADJOURNMENT

Director Selmann made a motion to adjourn the December 10, 2019 Special Board Meeting. Director Teals seconded the motion. The motion carried unanimously. The meeting was adjourned at 7:04 PM.

Bill Bailey, Chairman

Kris Dexter, Vice-Chairman

Richard Teals, Director

Kaj Selmann, Director

By: _____
Secretary to the Board of Directors