



**MINUTES  
DEVILS LAKE WATER IMPROVEMENT DISTRICT  
REGULAR MEETING**

**DLWID OFFICE  
August 7, 2008  
6:00 P.M.**

**PRESENT:** Jack Strayer  
Smokey Aschenbrenner  
David Juenke  
Otis Winchester  
Brian Green

**ABSENT:** None

**AUDIENCE:** Don Sell  
Joe Eilers, SolarBees  
Raylene Erickson, PADL

**STAFF:** Paul Robertson

**MEDIA:** None

Winchester called the meeting to order at 6:00 p.m.

**Minutes.**

Strayer moved and Aschenbrenner seconded approving the minutes from July.

**Vote:** Unanimous. Motion passed.

**Financial Report.**

Two documents were included in the packet—the August report and the year-to-date through June 30, a synopsis of last year. This includes the amount budgeted, the amount spent and the amount over or under budget in percentages. The District netted \$46,000 that was moved over to Special Revenue Funds for Improvement Funds.

In response to a question regarding sampling areas from Strayer, Robertson replied that 11 samples are taken very near the lake shore at the highest risk areas. He said bacteria data have been extraordinary this year. Many times last year, the lake was in the red at D

River and Thompson Creek. Strayer asked if some of the sampling should be taken from the center of the lake. Robertson said it wasn't practical due to the short time window. Discussion continued regarding the pros and cons of testing in the center of the lake. Robertson said samples needed to be taken to Gale by Monday at 11:00 a.m. to get the results returned and the delivered to the *News Guard* by Tuesday.

Green moved to approve the financial report and pay invoices. Strayer seconded the motion.

Vote: Unanimous. Motion carried.

### **Public Comment**

Sell said there hasn't been a lot of activity on the lake this year. Last year, the lake was busy most of the time. All agreed that gas prices and cooler weather had curtailed lake activity.

### **Intern.**

Robertson said that he had hired an intern who came up from California; however, prior to her starting on Monday morning, she returned to California, stating that she was unhappy with the cottage she was going to rent and rental costs were too high in the area.

Robertson interviewed three additional applicants; however, a fourth came up and he is quite impressed with her background. She has a Chemistry degree and is relocating to Newport for two years with her husband with the Coast Guard. She received excellent reviews from a previous professor who strongly recommended her hire. Green moved to permit Robertson to hire this intern as soon as possible and Strayer seconded the motion.

Vote: unanimous. Motion carried.

### **Nominations for chair, vice-chair and secretary of the DLWID Board for the upcoming year of 2008-9.**

Winchester asked for nominations for chair of the Board for the upcoming year—2008-9. Strayer nominated Green and Aschenbrenner seconded the nomination.

Vote: Unanimous. Green will be chair for 2008-9.

Aschenbrenner nominated Strayer as vice-chair of the Board for the upcoming year—2008-9 and Green seconded the nomination.

Vote: Unanimous. Strayer will be vice-chair.

Green nominated Aschenbrenner to be secretary-treasurer for the year 2008-9. Strayer seconded the nomination.

Vote: Unanimous. Aschenbrenner will be secretary-treasurer for the upcoming year.

### **Unfinished Business**

#### **Boat House/Docks.**

Robertson reported that he sent an e-mail to Matt Spangler inquiring about the hearing that was to take place in Lincoln City. Spangler replied that the ODFW and DSL had completed a meeting discussing their internal review. He said it would be awhile yet

before a final decision is made. DSL doesn't have the expertise of ODFW. The goal is to ensure the County boat dock ordinance will reflect a streamlined application process so that questions and answers are simplified. The County is awaiting completion of these discussions and then they will complete their process.

#### **Bioswale Update.**

Robertson met with Kate Danks, NRCS, at the site near Taft 7-12 and Voris Field. She will draft the Agreement between DEQ and the City for up to \$3,000 in materials. AnneMarie Muller was going to work with Lila on this; however, she has been on vacation.

#### **Lake Level Update.**

The level is currently at 9.6 feet, just below the low point of the dam. With some rain, the lake came up slightly. Robertson said they would work to maintain the level as high as possible during the summer months.

Juenke asked if Dr. Dreher had been notified of the bluegreen algae bloom, since he had previously expressed interest in taking a look at it if and when one occurred. Robertson said he thinks that he is on the notification list. Juenke asked if Robertson would give him a phone call and ask him if he would run a DNA profile and track, identify and compare toxicity. Robertson agreed to phone him.

#### **The Devils Lake Plan.**

Juenke said that there are areas that each Board member could take a specific interest in. He said he would be happy to help work on any of the abatement programs. Robertson replied that the hand-out is a draft of action steps from the Special Meeting and is by no means complete. Certain topics were not finalized; however, he feels that the Action Plan could be a working document for some of the priorities established during the Special Meeting. Juenke said he suggests that the Board peruse the document and take some time to decide how they could help Robertson accomplish the steps.

#### **A. Native Revegetation**

Strayer discussed merging his previous Revegetation document into the Lake Plan. He suggested that Robertson edit the verbiage to fit his style. He said the most pressing issues at this time are contacting DSL and applying for a permit. Castelli had indicated an easement may be required to launch the project. Strayer recommended that Robertson call Castelli and complete the necessary document that can be downloaded from the DSL website. Since it might take up to 60 days, it should be completed as soon as possible.

Strayer suggested that he and Robertson talk to Dr. Sytsma about recommending a botanist to assist in the project, obtain his comments on the Revegetation plan and ask for any sources he has for acquiring plants. He suggested Bill Sexton could be contacted about acquiring gabions and setting them into the lake. Placement of the gabions could provide preliminary information about whether other vegetation will return.

Green asked about a plan for the project. Strayer said he'd like to get a botanist to evaluate a plan and provide some validation. Strayer said gabions can be obtained from the same supplier the State uses. A gabions is a 3' x 12' x 3' container on which you attach all sides to build the boxes. Sexton could make one pass around the selected areas and install them with his crane since they are 60 or 70 pounds apiece. Robertson suggested a conference call to Dr. Sytsma with Strayer. Strayer said he has not yet provided a copy of his document to Sytsma for the discussion.

**B. SolarBees. Q & A with Joe Eilers (this session took place right after the financial report was approved).**

Eilers provided a hand-out with written responses to the questions previously posed to him by Robertson.

He said for optimum results he would discourage placement of one, two or three units, since so few might not provide the type of circulation that matches the geography of the lake. However, if two units were installed, one could act as a barrier for the rest of the lake while the area inside the other one would be the test area. If three were installed, an adequate test area could probably be assured. The average depth is 8 to 9 feet in the area he designated on his hand-out for three units. This should be adequate to control bluegreen algae. Two or three test area sites would provide more data for testing native vegetation growth.

Erickson reported that the bluegreen scum is prevalent near where the two units were placed on the map—at the mouth of Thompson Creek and is somewhat deeper than the average depth.

Aschenbrenner asked how far off shore the units would be placed. Eilers replied that the center of the arms would be best. He said that the units can survive in up to 100 mph winds, but are set for 60-70 mph winds. He said it would be best not to anchor them since they should move during the wind rather than remain stationary due to possible breakage. Aschenbrenner asked if they would be placed in a straight line. Eilers replied, "Yes, they would be about 2,600 feet apart down the center of a designated area."

Strayer asked about the minimum effective depth. Eilers replied that there is no minimum depth—it might be best to move them out to 5 or 6 feet of water. Robertson then asked if they are limited by the shallowness of the water and Eilers said, "No, an intake brings in water horizontally and redistributes it. So, whether it is five or 25 feet, the principle remains the same."

Green asked about measuring the effectiveness of the invasive weed control.

Eilers replied that one way would be to install the exclosures similar to Dr. Sytsma's project. Green asked how many exclosures would be required. Eilers said he would prefer to leave that decision up to a botanist. Strayer asked if Eilers had any botanists in mind. Eilers replied that he has worked with some in the past.

Green asked if Eilers had any new data on controlling invasives. Eilers replied that controlling invasives was not part of the initial goal; however, customers have been reporting that macrophytes are dying out. He said that once the samples reached about 75, as many as ten lakes have reported that in addition to controlling bluegreen algae, some of the invasives were being impacted. Plants were turning yellow.

When they were in touch with the U.S. Army Corps of Engineers, the SolarBees were working to reduce the amount of ammonia that the plants required to survive. Ammonia was being converted to nitrates.

Eilers said that the units are installed on about 275 lakes as of the end of July, so they are receiving many more reports and are conducting serious investigations to document the results. In Blue Lake where they have three units in a 61-acre lake, they historically had a problem with macrophytes. The second summer SolarBees were in the lake, people were reporting macrophytes dying on the west end of the lake where there are no homes, so there was not a chance that people were applying anything. Portland Metro has been using an intern who has been working on 200 test plots of sampling for two years. This fall, they will take a look at the decline.

In response to Strayer's question, Eilers replied that Devils Lake has a thick, shallow sediment layer. Strayer asked if there are plants that root deeply. Eilers replied that deeply rooted plants are not impacted. Lilly pads were mentioned as a native plant. Green asked if they have not controlled Brazilian water weed. Most are along the Oregon and Washington coast and there are no SolarBees in those areas, so Eilers replied that they have no data on it. He said the Brazilian water weed is similar in structure to Eladia that the SolarBees are effective against. He said that they could be successful in controlling some bluegreen algae and there might be some that they will not be effective in controlling. Eilers continued that the SolarBees will only be effective to the depth that they set the water intakes, so the intakes must be placed down to the maximum depth you desire to treat, and macrophytes could be below the 15-foot depth. Intake tubes are flexible and the units are usually placed in the middle of the lake and 20-foot tubes are placed on them to move them up or down.

Eilers says he does not have all the details worked out yet. All lakes are variable and they continue to adapt various aspects of the installations.

Strayer asked if the bluegreen algae will diminish in areas other than where the SolarBees are located. Eilers responded that one of their customers in California only wished to purchase four units. They placed them on a major inflow area and observed that there was some residual effect extending throughout the reservoir even though they were not treating the optimum area. Eilers feels that the District could probably get by with a smaller area; however, if the entire lake is treated—20 units would treat 280 million gallons of water a day and you would have positive effects extending beyond the rings shown on the map.

Eilers said that they currently have a test ongoing for Pacific Corp with 12 units in Upper Klamath Lake. If they were to treat the entire system, he would recommend 30 or 35 units; however, the lake is bloom free. The more you treat, the more you increase infection. The results are consistent that circulation increases the contact between the bluegreen algae. However, on one lake with lots of bluegreen algae, winds are from 40 to 80 mph and a lot of bluegreen algae remains. So, the issue is much more complicated than just wind circulation. Eilers said that he probably would not place the units in the highest wind areas. Strayer asked if wind has an effect on the SolarBees. He replied that wind probably increases protection downstream.

Robertson how it would be possible to quantify the SolarBees' success. He is concerned about the scum formation at Regatta Grounds. Robertson asked about bringing in five units with three in the upper arm and two in front of Regatta Grounds to demonstrate a

benefit to the public that the units maintain a clean park area. Eilers replied that placing one in that area might work.

Robertson said that once blooms appear in the summer, they move from north to south. He said because of the wind being off the hillside, there is calmer water in the upper arms. Green asked how you could measure the effectiveness from summer to summer since the blooms vary. This summer they are weak, but are just beginning. There has been little sun this year and there are slightly cooler temperatures.

Discussion ensued regarding aerial photos of the lake and the length of water required to land a seaplane.

Eilers suggested encouraging universities to become involved in measuring the project's effectiveness so that SolarBees are removed from the issue due to potential conflict of interest. SolarBees will offer their expertise as requested. He said there are three parameters for measuring success: Phytoplankton, cell densities and chlorophyll. He said the District could purchase equipment to gather special data to determine how far light is penetrating.

Robertson stated that another aspect he would like to measure would be sediment breakdown. Eilers replied that they are successful in organic reduction of sediments. He said that he would not recommend stirring up the sediment too rapidly or the oxygen demand would be so great that the entire system would be upset. It would be best to drop down gradually. He also mentioned that wakeboarders can stir up the sediment 12 feet down.

Robertson asked about the chances that the SolarBees would move from less toxic species to create conditions for more toxic species, to which Eilers replied if the SolarBees are effective against the major forms, it is unlikely that one would be eliminated and a worse one return.

Green asked if there was a baseline on which to measure the effectiveness. Robertson replied, "Yes, there is a baseline for phytoplankton, cell density and zooplankton. Not so much for chlorophyll. There is some history, and the contractor who did the research is still available. Eilers asked where the data was taken from and Robertson replied that it was broad lake data. Now data is from near the shore. Robertson said that in addition to the expense of the SolarBees, testing would cost about \$240 per sample.

**Modeling.** Eilers has been working with Jerry Warner's son-in-law, Kelly, who has a PhD in modeling in one-, two- and three-dimensions. One-dimensional modeling is simply a spread sheet, two-dimensional modeling is a slice-and-dice view of cross sections of the lake. Eilers showed he Board a model of Odell Lake and described the procedure and views. He showed how he would cut Devils Lake into segments, making the arms independent segments. He also showed a three-dimensional model of a two-million gallon municipal water tank. He said that while the two-dimensional models take about three or four days, the three-dimensional models have to be entered into a CAD model and are very costly and time-consuming to create and run. He recommended a two-dimensional model for Devils Lake.

Strayer asked if the SolarBees would move or would the anchors move in a storm. He asked if they could be moved off the lake to prevent damage prior to a storm warning. Eilers replied that he would not recommend moving them, since the units remaining in

place is important for working on sediments. He said he would recommend placing them in the lake in the fall to allow them to begin working during the winter. If the District purchased the units, they could anchor them so that they would be stationary. They would simply add additional weights to make them heavier. He said they have placed seven to eight anchors on units that were situated in a canyon. They use all stainless steel parts above and on the shackles and anchors below.

Strayers asked how far out the anchors extend. Eilers said it is a seven to one ratio—in ten feet of water, there is 70 feet of anchor line. Minimal anchoring is vertical and it is attached to another anchor that extends vertically from the unit.

Strayer asked what work the service crews would perform. Eilers said that if solar panels are used, the local people would need to clean off any salt or residue from the units.

They could be squeegeed or sprayed. Service crews check revolutions and impellers. Impellers can get fouled with floating debris. Strayer asked about organic debris. Eilers said that they can become covered with algae, but it will not affect their performance, since the motors are above water. Sometimes the propellers can get gummed up and would require cleaning. Or, waterfowl can get caught in the units, but they are programmed to repeat the rotation with a certain amount of resistance so that the waterfowl can escape. Healthy fish will not be pulled into the impeller. Fish like the units because they can eat the plankton. Fishermen soon learn that fish congregate near the units, which makes the units more popular with the fishermen.

Regarding permits, Eilers said that there have been none required in any of the states in which they are operating. There has been no mention of the anchor systems.

Strayer asked what the rental cost included. Eilers replied that it includes the monthly rental, delivery and installation. After one year, 60% of the monthly rental cost applies to the purchase price; after two years, 40% of the rental cost would apply to the purchase price. Beyond that, negotiations would apply. He said the rental option would not be the best. They now have sold more than 1400 units and in spite of the economy, sales remain ahead of last year.

The Board thanked Eilers for his presentation and he left.

### **C. Action Items.**

Green asked the Board what they thought about the SolarBee option. Juenke said he favors placing three units in front of the side arm plus a fourth one at Regatta Grounds to see how it would maintain the area during the summer season.

Green said that it is not really a test if they just place one in there to see if it would work; Robertson replied that it is actually testing a very specific thing. They could determine if Regatta Park could become a safe zone. Robertson preferred the idea of installing four SolarBees. Juenke suggested that another good thing about the area is that it is a very high use area. He said that he had a concern about the units being placed in the center of the lake—it could cause boaters to steer closer to the shoreline and cause even more erosion.

Discussion began about the number of units to place and where to place them in the lake. Green said he would like to see SolarBees commit to a two-year test and allow 60% of

the rental cost to apply to purchase with a two-year commitment of \$175,000 for rental. He would like to see the District get as much as possible.

Juenke moved that the Board engage in the lease of four test units. Three would be located in the arm and one at Regatta Grounds. The District would approach SolarBees with the notion that it should be for a two-year test period and a deal could be worked out to apply 60% of rental to purchase.

Strayer asked about obtaining an offer that would give more leverage later if more were purchased at a later date.

Green said they supposedly are selling as many as they can manufacture. He asked if the price has increased. Robertson said the price has increased about \$5,000 from two-and-a-half years ago. Strayer said if the District agreed to their price, they should get an option to continue to purchase at the same price. Aschenbrenner reminded the Board that they have a repurchase plan if the project isn't successful. They do not want dissatisfied customers. SolarBees has been taking the units back if customers do not want them. Strayer asked if they should ask for a "best and final offer." Green said SolarBees might wish to get into Devils Lake because of the low invasive weed profile and they could show that the units can maintain the low level. They could stabilize the existing situation and they might want to be able to document that success.

Strayer said maybe Robertson should find out if DSL requires a permit. Green said the District ought to offer SolarBees less. He said he was hoping that at one point the District could get some testers free of charge on a trial basis, since they might have done this in other lakes. Robertson said that SolarBees did a lease with Steilacoom who purchased an insurance police. Robertson said he would prefer one of the Board members to do the negotiating. Green said he would not mind undertaking the negotiations; however, he would begin with a general negotiation, such as, "Let's talk about it . . . and if we purchase . . ."

Juenke said he would withdraw his motion.

Winchester moved and Strayer seconded the authorization for Green to negotiate the best possible deal with SolarBees and bring the results back to the Board for approval prior to making any decisions.

Vote: Unanimous. Motion carried.

Aschenbrenner said that they could approve the results of the negotiating at the September meeting or at a special meeting prior to September's meeting.

Robertson said that two-and-a-half years ago, the units were priced at \$41,050; they are now \$46,000, so they have increased about \$5,000

## **New Business**

### **Contract Renewals.**

There were two contracts that were not approved pending today's Board meeting—the attorney's contract and the minutes recording contract. The two contracts that were approved with no increases were the payroll and the contractor contracts.

Strayer moved that the contract for the attorney's services be approved and

Aschenbrenner seconded the motion.

Vote: Unanimous. Motion carried.



Aschenbrenner moved that the contract for minutes recording be approved and Strayer seconded the motion.

Vote: Unanimous. Motions approved.

**The Board went into Executive Session at 8:50 pm** to discuss approval of the manager's contract.

**The Board resumed the regular meeting session at 9:30 pm.** Green reiterated the decisions of the Board to the lake manager.

Strayer moved and Juenke seconded approval of the manager's contract with a few minor amendments.

Vote: Unanimous. Motion carried.

Green moved that the three contracts be made retroactive to July 1, and Aschenbrenner seconded the motion.

Vote: unanimous. Motion carried.

#### **Audit.**

Robertson reported to the Board that this year, since expenditures were \$150,000, the State did not require an outside auditor's report. He said that it would be possible to save the \$2,400.

Strayer moved that the District save the \$2,400 and submit the report rather than perform the audit.

The Board asked for more clarification. Robertson said that, effective June, 2008, if the District's expenditures were less than \$150,000, they can submit a report form in lieu of an auditor's report. Winchester asked who would be required to sign the report and Robertson said an elected official. Juenke stated he felt the District should continue with the auditor, since it would provide continuity in the event a grant or a loan is required for purchasing SolarBees.

Strayer withdrew his previous motion and moved that the District approach Ms. Grimstad to determine what her fees would be for a new contract for performing future audits.

Green seconded the motion.

Vote: Unanimous. Motion carried.

#### **Toxicant Reduction.**

Robertson reported that the County commissioners met with the City of Lincoln City in a workshop to discuss cessation of spraying herbicides on County roads that work into the drinking watershed. The city manager and the major expressed their concern about herbicides. Robertson took this opportunity to inform the attendees at the workshop that the District is working on a Lake Plan that includes the issue of toxicant reduction.

#### **NALMS, Banff, Alberta, Canada.**

Robertson requested funds to attend the NALMS event. He provided the cost breakdown for registering and reserving space within the next two weeks.

Juenke moved that Robertson be permitted to attend the NALMS meeting and Strayer seconded the motion.

Vote: Unanimous. Motion carried.

**Vacation Request: August 29, September 10-11, 2008**

Winchester moved and Aschenbrenner seconded that Robertson's request for vacation be approved.

Vote: Unanimous. Motion carried.

**Non-Agenda Items**

None

**Public Comment**

None

**Announcements**

1. KBCH 1400 am, August 12, 2008, 7:15 a.m.
2. OLA '08--Wallowa Lake, September 12-14, 2008. Robertson is the committee chair.
3. Erosion Control Seminar, October 9, 2008. The Board asked Robertson to report on the cost of this seminar, who attends, and the perceived value to the District.
4. Robertson will attend on Tuesday a special meeting in Tigard on the Tualatin River cyanobacteria. USGS will be the speaker.

Green mentioned a final thought on the SolarBees issue. He said that since the Portland Metro study with Dr. Sytsma will not be completed until the fall, would it affect the negotiating with SolarBees? Should he wait in the negotiations? The Board agreed that cyanobacteria reduction remains the crucial issue for the SolarBees, so the negotiating should proceed.

**Adjournment**

The Board meeting adjourned at 10:10 p.m.

Respectfully submitted,  
Linda Burt