Van Anda Improvement District
February 2, 2016 Meeting Minutes

In Attendance:

Trustees:	Bob Timms Karen May Mike Craggs Terry Hollo Walter Gussman
Employees:	Mike Craggs, Fire Chief Ken Soles, Water Maintenance Heidi Gable, Administrator
Guest:	David Chan John Dove re: Western Painted Turtles

Declarations of Conflict of Interest: There were no conflicts to declare.

Additions and Approval of Additions to Agenda: A motion was made to adopt the agenda as amended; all were in favour, carried.

RES'EAU WaterNET Report: RES'EAU research scientist, David Chan went over the report from December and January. December's testing focused on the ion exchange treatment to determine its ability to remove natural organic matter from the raw water at Priest Lake. Natural organic matter is the main precursor to disinfection by-products when water is chlorinated, so the removal of it is of paramount significance. Experiments were also conducted with the UV system to assess its ability to inactivate coliforms found in Priest Lake raw water. Fecal coliforms are used as indicator microorganisms of those that may cause human illness, and therefore, must be inactivated before the water is considered safe for human consumption. From the first and second breakthrough experiments, for approx. 25 hours of operation the ion exchange process had an organic removal of greater than 70%. At 25 hours of operation, there were signs of breakthrough and the organic removal gradually reduced to 43%. The results show the robustness the ion exchange process and its robustness in removing natural organic matter, and improving the quality of water for downstream disinfection with UV and/or chlorine.

Also in December, the coliform inactivation test was conducted with an amalgam UV system to determine its ability to disinfect the water (inactivate E.Coli). As a pre-treatment, a combination of filters were used to remove the larger particles from the raw water and over the course of the experiment the UV dose was around 50mJ/cm2. From the data collected in December, the UV system was able to inactivate all of the coliforms at a UV does of 50 mJ/cm2. Further investigation will focus on assessing the performance of the UV at lower dosage, and also examine its efficacy after pre-treatment with ion exchange.

The focus during the month of January was to complete the analyses of the two ion exchange breakthrough experiments conducted in December. Moving forward, the experiments conducted with the ion exchange treatment will assess the energy efficiency of the entire process and quantify the reduction of disinfection by-product formation potential. David prepared to conduct the granular activated carbon breakthrough experiments for February.

David also brought forward a request from a UBC curriculum developer. As part of two new courses offered to first year engineering students their final design project challenge will be to propose and evaluate a design for a self-contained off-grid rainwater harvesting system in a remote community. The developer would like to produce a set of videos to communicate the problem statement to students enrolled in the course. These videos would highlight the work of RES'EAU with the V.A.I.D. and will include interviews with people directly involved with water issues in remote communities discussing their experiences and the needs of the communities. The trustees have agreed to participate in the program.

Fire Report

10 new helmets have arrived and are now in service. These helmets are expected to last 15 years. They will be tagged.

The **reorganization of the hall** is nearly complete. The department is running out of usable space.

CPR training for members will begin in two weeks.

The **Rescue coveralls** have arrived and are now having the Rescue Logo printed on them.

A **shop-vac was purchased** for the lower hall. The standard vacuum has been returned back upstairs.

Still waiting the results of the **Air Brakes training** for the new member.

Level One First Aid/CPR is being arranged for Gillies Bay members through our department trainer. Waiting to hear on final numbers of those participating.

A meeting has been scheduled with Gillies Bay Fire Dept on Thursday morning to continue with **discussions surrounding the revisions to the mutual aid agreement.**

Water Report:

Pump hours – distributed for perusal. Pump hours are averaging at the lake at 7.64 hours/day. This translates to about 81,767 gallons/day. The Wall Street pump hours averaged 1.72 hours per day.

Work completed over the past month:
- received a call regarding a **leak at the building at the saw mill site**. The water was shut off to the mill site so operator of the mill could do repairs. Water remains off.
- **checked the shut off at 506 Coleburn**. The water is confirmed shut off.
- **sampled sites 5 to 8** on January 20th. All the results came back good.
- the **lake level was over the spit** at the lake have the heavy rain on January 23.
- **cleared a trail to the dam** and did a **visual inspection** on January 25. The water was flowing quite heavily. Also checked the culvert at the Gem Creek. There wasn't a lot of water flowing through the culvert.
- After another heavy rain on January 28, the **lake level rose over the spit again**.
- Called out the electrician on January 29 to do **watertight splices in the pump junction box** at the well instead of a terminal block. The water level was over the spit and the well lid.
- **ran the Gen Set** on January 30 for half an hour. All was good with the Gen Set.
- took **THM samples** from the tank and outlet on January 31. Packaged the THM samples along with the necessary paperwork and shipped priority post to Exova on February 1.

Safety

Fluids in the eye wash station at the chlorination building have been swapped out with the spare bottle.

Secretary's Report:

January 12, 2016 Minutes – Chair asked for errors or omissions to the January 12, 2016 minutes as distributed. There being no errors or omissions, it was moved to accept the minutes as distributed, seconded, all were in favour; carried.

Correspondence:
- **Email for Sandy McCormick, Area D Rep,** with regards to the lack of funding available to Improvement Districts for infrastructure upgrades. Sandy requested the Infrastructure Minister to investigate if there was any way for small systems such as ours to qualify for federal funding.

- **Building Sustainable Small Water Systems –** the BCWWA is calling for participants in a pilot project to build financial and management capacity among small water systems in BC to help safeguard public health and the environment. It involves a one day workshop, a series of educational webinars, and one-on-one professional coaching from system experts. Trustees and the administrator expressed interest in attending but each person may not be available for all. Can these trainings be shared? Administrator to email Dan Glover back for more details.

Old Business:

RES'EAU WaterNET Open House – date has been set for Saturday, Feb. 20. Will meet at the T.A.C.T. building at 9:00 for a one on one with RES'EAU team and the trustees. The presentation to the community will begin at 11:00. Once the presentation is complete, the Open House at the pilot trailer on site at Priest Lake will follow. Following the Open House, we will have lunch at the Texada Island Inn. After lunch, we will meet upstairs at the fire hall for an update discussion with Darren Brown of Holcim-Lafarge.

For the meeting between the RES'EAU team and the trustees, projects to discuss are a Master Water Plan, stakeholders meeting, update on testing, length of stay, etc.

Engineer's Report –Apek Engineers have been hired to proceed with the drawings and site visits for a new Water Storage Tank site. They won't be available to come until March.

New Business:
Water Conservation Bylaw – tabled to February 9th meeting.

Sawmill Site Subdivision – the improvement district has been approached to investigate the price on 8" piping. The improvement district's responsibility is to get water to the property line. It will be up to the owners to install the water connections at their cost to their far lot along Marble Bay. There are two lots on the upper side of the highway and 3 on the lower side. Ideally, a water line would be installed running from the tank, down the old quarry haul road to the driveways of the bottom lots to form a loop. Several fire hydrants will also need to be installed for fire protection purposes.

Finance Report:
- **Financial spreadsheets** distributed for perusal.

- **Invoices already signed and needing signing perused**, cheques signed.

- **Outstanding Ratepayer Accounts** – no provisions have been made by the ratepayer whose account is still grossly outstanding. The consensus of the trustees is to turn the water off.

Meeting Adjourned: **10:00 pm**

Next Meeting Date: **March 8, 2016, 7 pm**
Emerg. Response Plan/Water Conservation Bylaw: February 9, 7 pm
RES'EAU Open House: February 20, 9 am
Budget Meeting: February 23, 7 pm
Court of Revision: February 27, 10 am-12 pm
Internship/Drought Conf.: March 15, 7 pm

Minutes Approved:

Bob Timms, Chair

Heidi Gable, Administrator

Notes concerning John Dove's report on the Western Painted Turtle:

John Dove attended the meeting on behalf of Aimee Mitchell, Project Manager of the Coastal Painted Turtle Project. They are working on the construction of a turtle nesting beach at Priest Lake. The intent is to enhance the nesting habitat for the endangered Western Painted Turtle; a map is attached indicating where the nesting beaches would be constructed. John discussed the concern for the Stickleback with the construction of the nesting beaches as they use (breed) along the edge of the road. They like it where the terrain is steep and no weeds. The Stickleback are red listed – they are under the highest protection. Anything that impacts the roadway may impact the breeding of the Stickleback. The Stickleback need 2 species to continue to exist living in the same lake. They evolved as two separate species since the last ice age. Research on the Stickleback continues, recently it was discovered they may have importance in cancer research.

The Turtle recovery program – along the edge of the water – sediment entering the water during Stickleback breeding time would be detrimental. The Stickleback need to be able to see each other - as part of their breeding ritual. The bellies of the male Stickleback need to be visible by the female – one species of male bellies is red, one is not. Females need to be able to see the colour of the belly in order to mate with the correct species of Stickleback male. Nesting Area #1 important to both the turtle and the Stickleback.

Nesting Area #3 has only been used for the last 12 years or so.

Preparing Nesting Area #2 for a new nesting site. The quarry will supply appropriate materials. Aimee would rather see Area #1 (original nesting site) improved upon for the turtles to nest in.

The turtles nest during the summer – June and July.

Concerns – if there is an increase in the number of turtles in the lake, would they not jeopardize the population of the Stickleback – if it has been proven the turtles eat the Stickleback eggs? Would an increase in the turtle population cause an increase in organic matter in the lake? Fecal matter? Could this create an issue with water quality?

Both the turtles and the Stickleback are legally protected by the federal government. Aimee is a contract worker for the federal government. Funding for the habitat protection and population conservation recovery comes from the federal government.