



Edelweiss Maintenance Commission

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Fall 2017 Newsletter

General Manager's Message from Dick Volckmann

The weather outside is frightful - - It's supposed to be fall but winter is winning! If you've ever been to Boston in the winter, you'll know of what I speak. Damp, cold, gray – the kind of cold that goes through all the layers. At least we don't have the wind off Boston Harbor! We've already had a total of 8 inches of snow. It's pretty much gone, but we're hoping for a lot more. The North Cascade Highway closed for the season last week, so now we are truly at the end of the road. Visions of sunlit cross-country ski trails are keeping us going.

Now to business . . . It's all about the water!

Thank You! - On behalf of the Edelweiss Board of Directors, thank you to all who participated in the recent request for a vote on the water system assessment for 2018. Of 296 properties, 154 voted 'yes' and 6 voted 'no', a majority approval, which indicates an overwhelming recognition by the community of the need to maintain our valuable infrastructure. The assessment amount of \$250.00 will be billed on your 2018 invoice, to be mailed out at the beginning of January 2018. The total amount will go entirely to upgrades of the water system.

In requesting your vote, we presented a brief explanation of the reason for the assessment as part of the continual upgrade of our water system. The following, more detailed explanation should serve to point out the problems we have faced in the past and the need for further upgrades in the future.

Water System History - When the Edelweiss Maintenance Commission took over the newly installed water system from the original developer, the system suffered from significant deficiencies. In many places the wrong sort of piping was used, both in composition and size, pipe was not buried deep enough, and pipe was not bedded properly. An effort was made at the time to correct the deficiencies; however, in the years following, as repairs have been made, we have found that indeed, many deficiencies remain. In many places the water lines are not buried to the proper depth of 5 feet. In addition, some of the pipe consists of electrical conduit, not schedule 40 PVC as

would have been required at the time of installation. The plain truth is, we don't know for sure what sort of pipe is in the ground, or how deep it is in any given area unless we dig it up on purpose, or have to repair it.

Some examples of water system problems occurring in the recent past:

Freeze-ups- In 2008, the water line on Fawn Road froze. We had to excavate through frozen ground to expose the frozen pipe and repair the resulting break. It was buried to a depth of only 3 feet.

In 2009, the main booster pump water line froze at the lower end of Mustard Mountain Road. This meant that water could not be pumped to the reservoir. If that had not been repaired, no one in the community would have been able to receive water! It was excavated (again through frozen ground), repaired, and found to be buried only 3 feet deep.

In 2010 the water line at the west side of Bitterbrush froze, then thawed. The flow washed out some of the backyard of one of the Bitterbrush residents. Again - the line was only 3 feet deep.

The picture is clear. Much of the water system was never buried to a proper depth, exposing the community to continual repair costs – usually in winter when excavation is at its most difficult.

Recent Freeze-Thaw-Replace- In January of 2017, the waterline on the east side of Trillium Road froze, cutting off water to two of the homes, one a full time resident. The cost was over \$6,000 to thaw the road surface over the frozen area (using special heating mats) and then repair the break. The water line was only 1 ½ inch in diameter – barely larger than a garden hose, buried only 3 feet deep. Last summer, in order to avoid another freeze-up and repair, that portion of the Trillium line was replaced with 4" C-900 pipe to a depth of 5'. Okanogan County Electric Coop (OCEC) shared part of the excavation costs so that they could install new electric power conduit. The total cost of installation was over \$27,000, of which Edelweiss paid over \$19,000 and

OCEC paid over \$7,800 as their share. Thus, the total cost to Edelweiss for thawing (\$6,000+), repairing and replacing this one section of water line (\$19,000+) was over \$25,000.00 .

Last winter the water line to Sunflower Lane froze, depriving water to the homes there until spring when the ground thawed. We found the line buried, again, no more than 3' deep. It was replaced at a cost of over \$6,000, of which OCEC paid about \$1,500. During the installation, another leak was discovered. The line was excavated and replaced at a cost of \$2,700. OCEC was not involved with this replacement

Other Costs- There have been some other significant expenditures associated with the water system in 2017. The radio/telemetry system, (that automatically signals the well pumps to come on and deliver water from the aquifer to the reservoir) had to be replaced this year, costing almost \$6,000. One of the main 'booster' pumps at the mid-station failed and was replaced at a cost of \$5,800.

Getting the picture?- Unanticipated problems with the water system have cost Edelweiss almost \$50,000 in 2017. The scenario has been repeated several times – we find ourselves chasing breaks in the water lines as the result of freezing and thawing of pipes that are too shallow, and in some cases, pipes that have ruptured because they are brittle with age. And we have had to deal with mechanical issues in delivering water to the reservoirs.

Comprehensive Plan- In 2008 Mel Hartwig, our engineer at the time, detailed the need for replacement of essentially all of the Edelweiss water system. In his analysis, the first priority was the replacement of the water lines to and from the Cassal booster pumps on East Fawn Creek Road to the reservoir above Blue Grouse road. This was done in 2010 at a cost of just over \$90,000.00. When the old pipes were exposed, it was found that they were a tangled assemblage, and none of them had been buried to the proper depth of 5 feet. We dodged the proverbial bullet! Hartwig's second priority was the replacement of the 6" water main across the top of the upper meadow from a point just below East Fawn Creek Road to the intersection of Crab Apple and Highland Roads. The line was replaced with 6" C900, at a cost of approximately \$100,000.00 and ensures good flow from the reservoir to the northwest side of Edelweiss.

OCEC Sharing- OCEC intends to replace all of the old, direct-buried electric power lines in Edelweiss with conduit -protected 3-phase wire. As excavation is the most expensive part of water main replacement and OCEC is willing to share the cost

of excavation with Edelweiss, we have a cost sharing opportunity, which results in a significant savings to the community. Much of our oldest pipe should be replaced due to insufficient burial, or simply due to age, and it is imperative that we take advantage of the cost-sharing effort whenever we can. The new pipe installed will be 4" or larger depending on hydraulic needs. The current specification for water pipe is AWWA C900 which is estimated to have a life of 50 to 100 years.

Over the past couple of years, we have altered Hartwig's sequence of water line replacement in order to coordinate with the power company. To date, cost-sharing with OCEC, we have replaced the lines on River Road, Lupine Road, Highland Road to Eagles Nest, the lower half of the entrance road, and as mentioned above, a section of the Trillium line and a part of the Sunflower line. We felt it would have been short-sighted to have missed the opportunity to coordinate with OCEC in the excavation of these roads. If we need to replace a line, OCEC is happy to cooperate with us, and vice-versa, but we need the funds to do so.

. **Engineering-** In 2013, Mel Hartwig gave notice that he no longer would be working with Edelweiss. We contacted several engineering firms in Wenatchee, settling on Erlandsen Engineering in Wenatchee to develop a much broader analysis of our water system. They developed satellite-driven topographic maps, which led to analysis of future pressure changes in the system as build-out of the community continues. Part of their analyses helped determine the reason for low water pressures on Trillium Road. It was found that the reservoir above Trillium was built approximately 50 feet lower than is shown on the water system map. When the reservoir was installed, the contractor was unable (or unwilling) to install it any higher because of the steepness of the terrain, so it was installed where it was most convenient – about 40 feet lower than specified. However, it continued to be shown on our water system map at the elevation as originally specified. We will need to work with engineering to deal with the low pressures on Trillium and to plan as necessary to insure the life and efficiency of the water system.

What's next?- The water line (and OCEC's power line replacement) for which \$250.00 assessment was requested extends from the booster pump house on East Fawn Creek Road, along Highland Meadow Road and Homestead Road to the first intersection with Cassal Road, a distance of 2250 feet. It is one of the original 4" PVC lines. At places on Highland Meadow Road it is only 3 feet deep, where it is highly subject to freezing. Why it has not yet is a miracle. OCEC is going to replace the power line on that route whether we cooperate or

not. We feel it would be ill advised not to take the opportunity to replace that aging and shallow water line in cooperation with the power company. Additionally, the Okanogan Dept. of Public Works has plans to replace the community sewer line from the lift station near the Cassal booster-pump house along Highland Meadow road to the upper-meadow drain-field. That sewer line froze last winter, again, because it wasn't buried deep enough. Cooperating with both OCEC and Okanogan County during excavation will be an additional cost benefit to EMC.

Paying for it all - We apologize for throwing all this financial information at you, but we feel it's necessary to let you know how your dues and fees have been, and will be, allocated to the infrastructure of Edelweiss. We have been able to pay for the replacement of the previously mentioned water lines from Edelweiss operating funds and water delivery fees, however, we can't do it for this next phase - hence the need for the assessment. The assessment per lot for the year 2018 is \$250.00 but there is a probability of future assessments unless other sources of funding become available. The Board is extremely sensitive to the need to keep spending at the lowest possible level, but undoubtedly, more funds will be needed in order to continue to keep our infrastructure upgraded at an appropriate level. The Board is currently in discussion with USDA with the hope that they can be of some help in developing funds for water system projects. This will not only help to continue to provide drinking water to community,

Bad new good news- So that's the bad news. The good news is that we have some of the finest water anywhere in the United States, helping to guarantee that, among other benefits, property values will remain among the highest in the Valley.

Our water comes directly from an aquifer under the Methow river which, in some places, is 1000 feet deep. We owe much of that aquifer to melt water from the glacier that filled this valley as recently as 10,000 years ago. It is clean, clear and pure. Our water consistently tests free of contaminants, and is still not required to be chlorinated. The water is pure as it comes out of the ground, but it depends also on the quality of the water delivery system to ensure that it is just as pure as it comes out of your faucet.

However - As you may have heard, there is an application to the U.S. Forest Service from a mining company to do exploratory drilling in the vicinity of Flagg Mountain. Their objective, if the drilling proved positive, would be to

develop an open-pit copper mine. A copper mine on or near Flagg Mountain would be disastrous for the entire Methow Valley. The loss of natural beauty, the noise of ore trucks rumbling through the valley – these are only part of the aesthetic impacts that would be felt. The worst impact would be the contamination of the aquifer from which we get our water.

That said, we intend to be proactive in our efforts to protect our precious water supply. John Kirner, Board President, and I have written a letter to the Forest Service in support of the proposed Methow Headwaters Mineral Withdrawal Act, which is aimed at permanent protection of the Methow Valley watershed and the aquifer underlying the valley. You may have seen a condensed version of our letter in last week's Methow News under 'My Turn'.

Open pit mining is particularly damaging to the environment because it not only produces vast quantities of unsightly overburden, but reveals rock that has lain unexposed for millions of years. When excavated, and crushed, these rocks expose toxic dust which, when mixed with water can flow, no matter how well contained, easily into unconsolidated material such as makes up the Methow Valley aquifer. One of the metals commonly found with copper is lead. And when lead pollutes the aquifer there may be no drinkable water in the valley, perhaps forever.

Because of this possibility, we have proposed that the Methow Valley aquifer is a prime candidate for designation as a '*sole source aquifer*'. A sole source aquifer is defined by the Environmental Protection Agency as one which supplies at least 50% of the drinking water in the area overlying the aquifer, and that there is no alternative source of drinking water to that area. Edelweiss is in the process of reviewing the procedures necessary for presenting a petition to the EPA for just such a designation. If that can be accomplished we can ensure that this beautiful valley will remain unblemished for generations to come.

Finally – So, If you've managed to stay awake this far in the newsletter, I commend you for your determination. Once again, thank you for your support of our mission in providing you all with the best water anywhere.

Speaking for the Board of Directors, Craig Hook and myself, I wish you all a Happy Thanksgiving, Merry Christmas and Happy New Year.

Dick Volckmann