



CLEARWATER RIVER WATERSHED DISTRICT

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April 20th, 2016

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Acct. No.: XXXXXXXXXXXXX

Re: Clearwater Harbor & Hidden River Communal Sanitary Sewer Systems
Nitrogen Mitigation & Analysis Plan (NMAP) Implementation Update

PURPOSE

The Clearwater River Watershed District (CRWD) has prepared this letter to update residents of the Clearwater Harbor & Hidden River Communal Sanitary Sewer Systems on the efforts to implement the Minnesota Pollution Control Agency (MPCA) mandated Nitrogen Mitigation & Analysis Plan (NMAP). This plan is a requirement of the operating permit with the MPCA that both systems fall under. The CRWD, as owner and operator of these systems, is mandated to implement this plan.

BACKGROUND

The Clearwater Harbor and Hidden River Communal Sewer Systems are located to the north of Clearwater Lake. The systems treat wastewater for 112 properties in a manner that must protect the groundwater as well as the nearby surface waters from sewage pollution.

The systems are permitted by the Minnesota Pollution Control Agency (MPCA). The permits have a robust set of requirements which includes groundwater monitoring for nitrogen levels. The original MPCA permit required monitoring of nitrogen via groundwater wells, but in 2014 the permit changed to require that nitrogen not exceed a certain level. Monitoring of groundwater indicated nitrogen levels above the new permitted levels; as such, the MPCA mandated the CRWD address these levels.

In late 2014 and 2015 the frequency of groundwater monitoring was increased to better understand trends. Operational modifications were made. During this time, residents indicated they wished a fiscally conservative approach to address the nitrogen levels. The monitoring in 2014 and 2015 trended to a more consistent, high level of nitrogen, with the average value of two times the permitted level, and a range of zero to five times the permitted level. District staff and engineers engaged with MPCA to keep lines of communication open and explore options and funding for the necessary nitrogen mitigation.

In late 2015, MPCA showed more concern that progress was not being made to reduce the nitrogen. At the March 2016 meeting of the CRWD Board of Managers the decision was made to move forward to apply for grants to help with a more robust solution.

GRANTS AND LOANS

Numerous grant and loan options were evaluated for the systems' nitrogen mitigation. Currently the Point Source Implementation Grant provides the best opportunity. If successful, this grant currently reimburses 50% of cost of the project, which includes costs incurred prior to grant execution. Additionally, there is pending state of Minnesota legislation (HF 3692 and SF 3415) that increases the Point source Implementation Grant to 80% of the project cost. Included with this information is a *Contact Your Legislator* request.

OPTIONS TO REDUCE NITROGEN

Four options were evaluated to meet nitrogen reductions goals. Options one and two below are being considered for the Point Source Implementation Grant. The District is in a good position to receive the grant. Option four (connecting to Annandale Municipal Waste Water) is the least-practical option. Last years' operation and maintenance (O&M) for the two systems was approximately \$70,000 per year.

| Option | Description | Estimated Nitrogen Load Reduction | Estimated Capital Cost | Estimated Annual Operation & Maintenance |
|--------|--|-----------------------------------|------------------------|--|
| 1 | Orenco Treatment & Denitrification System | 50% | \$1,620,000 | \$68,000 |
| 2 | Bio Microbics Treatment & Denitrification System | 45% | \$1,160,000 | \$72,000 |
| 3 | Recirculating Gravel Filter & Denitrification System | 40-75% | \$1,440,000 | \$66,000 |
| 4 | Connect to Annandale Wastewater System | 100% | \$4,850,000 | \$127,000 |

ESTIMATED RESIDENT COSTS

Below is an estimated break-down of the options per resident.

| Option | Description | Estimated capital cost per household (1- w/o grant, 2- w/ 50%grant) |
|--------|--|--|
| 1 | Orenco Treatment & Denitrification System | 1- \$14,727 2- \$7,363 |
| 2 | Bio Microbics Treatment & Denitrification System | 1- \$10,545 2- \$5,272 |
| 3 | Recirculating Gravel Filter & Denitrification System | 1- \$13,000 2- \$6,545 |
| 4 | Connect to Annandale Wastewater System | 1- \$44,090 2- N/A |

RESIDENT INPUT

The CRWD welcomes the input of the residents of the Clearwater Harbor and Hidden River Sanitary Sewer Systems. You are invited to attend the May 11th, 2016 regular meeting of the CRWD Board of Managers | 6:30pm | Annandale City Hall (30 Cedar Street East), Annandale MN. This matter is at the beginning of the Board's agenda. If you prefer to submit written comment, please have such comments to the CRWD office by Friday, May 6th, 2016 at noon to ensure inclusion at the meeting.

SUMMARY

- Clearwater Harbor and Hidden River Communal Sewer Systems are not meeting Minnesota Pollution Control Agency permit requirements. Operational modifications continue, but so far have not resolved the high nitrogen levels. Monthly monitoring over the last 18 months indicates the nitrogen levels exceed standards on average by a factor of two, with a range of zero to five.
- The Minnesota Pollution Control Agency is requiring further steps be taken to resolve the high nitrogen levels.
- A Point Source Implementation Grant application is being submitted. If successful, the grant will cover 50% of the costs. The grant award announcement is expected in the fall of 2016.
- There is pending legislation to increase the Point Source Implementation Grant from 50% to 80%.
- Residents are encouraged to attend a CRWD Board of Manager's meeting on Wednesday, May 11th, 2016 | 6:30pm | Annandale City Hall (30 Cedar Street East) Annandale MN. The nitrogen mitigation strategy is on the agenda. Written comments will be reviewed at the meeting if received in the CRWD office by Friday, May 6th, 2016.
- The Clearwater River Watershed District is committed to the residents of Clearwater Harbor and Hidden River to resolve the nitrogen mitigation issue in a long-term, fiscally responsible manner. Potential District funding, grants, loans, and other creative approaches are being explored.