



Building a Better World  
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# MEMORANDUM

TO: Ash River Sanitary Sewer District Board

FROM: Colin Marcusen, P.E. (Lic. MN, ND, SD, IA)  
Project Manager

DATE: August 12, 2020

RE: Engineering Updates  
SEH No. STLES 146794 14.00

The purpose of this memo is to provide you with updates related to the Ash River Sanitary Sewer District (ARSSD) Collection and Treatment Systems project for decision making at the next regular District meeting.

## FACILITY PLAN UPDATE

We do not yet have approval of the Facility Plan from MPCA. The following will lead to Facility Plan approval after an amendment is submitted:

1. Service Area Decisions:
  - a. Total project area has an estimated project cost of \$16,987,500.

Alternative	Capital Cost
Mechanical Pretreatment with Biomicrobics System and Subsurface Dispersal	\$5,108,000
Low Pressure Collection System	\$9,717,000
Additional Collection System Costs for Serving Properties on the South Side of the River	\$2,162,500
<b>Total Project Costs</b>	<b>\$16,987,500</b>

- i. We have received Preliminary Effluent Limits from the MPCA that do not allow for treated effluent discharge to surface waters in this area (Outstanding Resource Value Waters). Therefore, a subsurface discharge will be required. Costs listed above are conservative and assume much of the excavation will require removal of bedrock.
    - ii. Low Pressure Collection System Costs assume bedrock is present in many areas. Additional soil borings are required to refine cost estimates.
  - b. Options for Serving South Side of River Properties
    - i. One River crossing and low pressure system - \$2.16M
    - ii. Two River crossings and low pressure system - \$2.60M
    - iii. Low pressure system and small community treatment system - \$2.24M
    - iv. Individual systems – hybrid model. Owner pays a one time fee for construction or improvements to their individual system. They then pay a monthly fee for the District to maintain and make future improvements. Costs for this alternative have not been calculated.
    - v. No service - \$0.
2. PPL Scoring

- a. While not pertinent to obtaining approval of the Facility Plan, the project will be scored against other projects in the state. In order to be considered in the “fundable” range, we’ll need to exhibit non-compliance in individual septic systems.

**PROJECT NEXT STEPS**

1. Archaeological Review
  - a. Sue with Duluth Archaeological Center will be contacting property owners to gain permission to access their properties and if she chooses, to explore further by use of hand tools (shovel). MnSHPO required that this review be completed prior to Facility Plan approval.
2. Easements
  - a. Would like to establish blanket easements for review and construction so that we do not have to modify easements if the tank location needs to move slightly at the time of installation.
  - b. Need a decision from the District on Title Commitments from a Title company for each parcel or Owners and Encumbrances reports
    - i. O & E is most common and has been used on other similar projects.
    - ii. O & E only looks at the last deed of record to identify land owner
  - c. If homeowner refuses consent to an easement will the District elect to utilize eminent domain to acquire the easements?
  - d. If there are mortgages on the properties, we will need consent from the lender because easements are a violation of the mortgage terms. Usually easy to obtain from local lenders but not as easy for national banks.
3. Soil Borings
  - a. To get an idea of the amount of available sand or depth to bedrock, soil boring should be conducted at each place where a grinder installation is planned. This will help refine costs and help us better plan for construction.
4. Project Commitment
  - a. Will the District require connection for every property in the District?
  - b. To get an idea of those property owners who would like to connect to a community system, we will send correspondence to include a “Commitment Card”. By signing the document, the property owner agrees to connect to the future system. This will help the District to get an idea of how many connections there will be. The costs of construction and O & M are split among the users. More owners means less cost per user and less funding needed.
    - i. Connection of every property would result in 230.8 EDUs at the current calculation
5. Review of EDU assignments – future meeting

**SCHEDULE**

The project is currently in report phase. The draft Facility Plan was submitted to the Minnesota Pollution Control Agency (MPCA) in March 2020. An Amendment to further refine the scope of work and to include the archaeological review, will be submitted after the review is complete.

Preliminary Project Schedule	
Archaeological review complete and submittal of Facility Plan Amendment	September 2020
Public Hearing to discuss Findings of Facility Plan	September 2020
MPCA Facility Plan Review	Sept-Dec, 2020
MPCA Facility Plan Approval	December 2020
Submit Intended Use Plan (funding) Request to MPCA	Deadline June 2021
Design of Recommended Improvements	January – May 2021

Submit 90% Design to MPCA for approval	May 2021
Secure Construction Funding	Prior to Bidding
MPCA approval and Advertisement for Bids (pending securing funding)	As early as August 2021
Project Bid Date	As early as September 2021
Earliest Potential Construction Start	October 2021

## FUNDING

Minnesota Clean Water Legacy Grant funds have been obtained for a portion of this project. The grant is in the amount of \$450,000, but includes a match of \$90,000 from St. Louis County's Environmental Trust Fund, for a total of \$540,000. These funds will be mostly expended by engineering and geotechnical services. The JPB and SEH's lobbyists have secured another \$450,000 in grant funding for Ash River. SEH will complete the budget and schedule in the next few weeks and submit to MPCA for review to finalize. This funding will allow completing of easements, soil borings, and design with likely some left over for construction. Additional funding will be needed to complete the construction of the project. The goal in obtaining funding is to set sewer rates at or below \$100 per month per EDU.

clm/mrb

c: Jason Chopp, SEH

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# Ash River Sanitary Sewer Collection and Treatment St. Louis County, Minnesota



STLES 146794

## SEH Project Engineer

Colin Marcusen  
Project Manager  
320.229.4359

[cmarcusen@sehinc.com](mailto:cmarcusen@sehinc.com)

August 2018 | Project Status No. 2

Hello and welcome to the Ash River Sanitary Sewer Collection and Treatment Project Status Update. In the upcoming issues, we will be updating you periodically on the status of this project.

## Happening Now

The project is about to enter report phase. In the coming weeks and months, you will see correspondence from us in hopes that you might give some input on the best way to improve wastewater treatment or collection on your property. This correspondence may come by letter or we may try to arrange a site visit with you. We look forward to meeting you.

On July 24, 2018 during a County Board meeting held in Orr, the County Commissioners passed a resolution for the County to petition the State to form the Ash River Sanitary Sewer District. This is the first of many steps in an expected year-long process to create the Sanitary District, but it is a great first step in moving the project forward. The County cares about the Ash River residents and resort owners and want to see the area improved, which is why they are willing to take on the task of establishing a Sanitary Sewer District for the area.

If you are interested in joining an advisory board or being a member of the future Sanitary Sewer District Board, please contact Mark St. Lawrence, St. Louis County Environmental Services Director at 218.749.0647 or [stlawrencem@stlouiscountymn.gov](mailto:stlawrencem@stlouiscountymn.gov)

## Project Status

The project is just about ready to kick off. The MPCA is reviewing final grant paperwork. Once complete, we can start the work on the report phase of the project.

As noted in the previous Newsletter, the Clean Water Legacy Grant funds, already obtained, will cover the costs of the report and a portion of the design phase. In order for this project to qualify for additional funding, a report called a Facility Plan, will need to be developed and submitted to the Minnesota Pollution Control Agency (MPCA) as well as funding agencies. Applications for funding will be prepared and submitted at the same time.

After MPCA approves the report, we can move forward with design. In order to keep user rates at a manageable level (on past projects the Clean Water Joint Powers Board's goal has been \$100 per month for a typical home) additional grant funding will need to be procured for this project in order to move forward.

We will do our best to inform you of the project timeline as it is developed. Look for more project details in the next Project Status Update and please feel free to contact me with any questions you may have.



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# MEMORANDUM

TO: Ash River Sanitary Sewer District Board

FROM: Colin Marcusen, P.E. (Lic. MN, ND, SD, IA)  
Project Manager

DATE: September 29, 2020

RE: Engineering Updates  
SEH No. STLES 146794 14.00

The purpose of this memo is to provide you with updates related to the Ash River Sanitary Sewer District (ARSSD) Collection and Treatment Systems project for decision making at the next regular District meeting.

## FACILITY PLAN UPDATE

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- ii. Low Pressure Collection System Costs assume bedrock is present in many areas. Additional soil borings are required to refine cost estimates.
- b. Options for Serving South Side of River Properties
  - i. One River crossing and low pressure system - \$2.16M
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  - iv. Individual systems – hybrid model. Owner pays a one time fee for construction or improvements to their individual system. They then pay a monthly fee for the District to maintain and make future improvements. Costs for this alternative have not been calculated.
  - v. No service - \$0.

## PROJECT NEXT STEPS

1. Archaeological Review
  - a. Sue with Duluth Archaeological Center has said they have about 60% response rate granting permission to access properties to perform the necessary survey. Please return a response to Duluth Archaeology Center if you have not already done so.
2. Easements – Mia (Fryberger Lawfirm – Sanitary Dit)
  - a. Would like to establish blanket easements for review and construction so that we do not have to modify easements if the tank location needs to move slightly at the time of installation. Board agreed with blanket easements on each property before conducting soil borings.
  - b. Need a decision from the District on Title Commitments from a Title company for each parcel or Owners and Encumbrances reports Board decided to proceed with Owners and Encumbrances reports.
    - i. O & E is most common and has been used on other similar projects.
    - ii. O & E only looks at the last deed of record to identify land owner
  - c. If homeowner refuses consent to an easement will the District elect to utilize eminent domain to acquire the easements?
  - d. If there are mortgages on the properties, we will need consent from the lender because easements are a violation of the mortgage terms. Usually easy to obtain from local lenders but not as easy for national banks. Board agreed that Mia should obtain consents.
3. Soil Borings
  - a. To get an idea of the amount of available sand or depth to bedrock, soil borings should be conducted at each place where a grinder installation is planned. This will help refine costs and help us better plan for construction. These will follow obtaining easements.
4. Review of EDU assignments for future ordinance
  - a. Kab Township – Puck’s Point ordinance attached.

## SCHEDULE

The project is currently in report phase. The draft Facility Plan was submitted to the Minnesota Pollution Control Agency (MPCA) in March 2020. An Amendment to further refine the scope of work and to include the archaeological review, will be submitted after the review is complete.

## FUNDING

Minnesota Clean Water Legacy Grant funds have been obtained for a portion of this project. The grant is in the amount of \$450,000, but includes a match of \$90,000 from St. Louis County’s Environmental Trust Fund, for a total of \$540,000. These funds will be mostly expended by engineering and geotechnical services. The JPB and SEH’s lobbyists have secured another \$950,000 in grant funding for Ash River which will be split between FY 2020 and FY 2021. SEH has completed the budget and schedule and submitted to MPCA. in the next few weeks and submit to MPCA for review to finalize. This funding will allow completing of easements, soil borings, and design with likely some left over for construction. Additional funding will be needed to complete the construction of the project. The goal in obtaining funding is to set sewer rates at or below \$100 per month per EDU.

### Other items:

- There are holes where the original soil borings were performed. SEH will contact Braun Intertec to have these filled. Property owners may fill these in if immediate need.
- The land swap with the State for the treatment property will likely be finalized in December.
- The next Voyageurs National Park Clean Water Joint Powers Board will be held at the VNP office in International Falls on October 21, 2020 at 10 am. The District will try to have a representative there.

Engineering Updates

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c: Jason Chopp, SEH

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# Ash River Sanitary Sewer Collection and Treatment St. Louis County, Minnesota



# Project Status

STLCO common

## SEH Project Engineer

Colin Marcusen  
Project Manager  
320.229.4359

[cmarcusen@sehinc.com](mailto:cmarcusen@sehinc.com)

May 2018 | Project Status No. 1

Hello and welcome to the Ash River Sanitary Sewer Collection and Treatment Project Status Update. In the upcoming issues, we will be updating you periodically on the status of this project.

## Happening Now

We wanted to notify you that during the week of May 7<sup>th</sup> through 11<sup>th</sup>, 2018, you may see a drone flying around the area. The drone is being flown by a surveying company. They are collecting survey data for us to use during the report and design phases of the project.

If you have any questions about the drone or see any issues with this schedule, please don't hesitate to contact me. Otherwise feel free to say hi to Jeff. He will be on site, flying the drone.

## Project Status

The project is just about ready to kick off. The final version of the report and design contract is being reviewed by St. Louis County. We anticipate that the contract will be approved and the project can move forward by May 22, 2018.

The Clean Water Legacy Grant funds, already obtained, will cover the costs of the report and a portion of the design phase. In order for this project to qualify for additional funding, a report called a Facility Plan, will need to be developed and submitted to the Minnesota Pollution Control Agency (MPCA) as well as funding agencies. Applications for funding will be prepared and submitted at the same time.

During preparation of the report, our staff will be on site to review locations of existing piping and treatment systems. Your input at this point is critical, to tell us the location of existing systems, anything we should try to avoid, and your plans for the future. We want to work together to develop the best plan to serve your property and those around you.

As noted above, after development of the Facility Plan, it will be submitted to MPCA – by the beginning of March 2019. After MPCA approves the plan, we can move forward with design. In order to keep user rates at a manageable level (on past projects the Clean Water Joint Powers Board's goal has been \$100 per month for a typical home) additional grant funding will need to be procured for this project in order to move forward.

After additional funding has been obtained, design can be finalized. Plans and specifications will be submitted to MPCA for review and approval, if possible by March 2020. The project can then be bid and construction can begin. As you can see, this is a process that may take some time. We will do our best to inform you of the project timeline as it is developed. Look for more project details in the next Project Status Update and please feel free to contact me with any questions you may have.



# VOYAGEUR'S NATIONAL PARK CLEAN WATER JOINT POWERS BOARD

## Ash River

Project Contacts:

Colin Marcusen – SEH

Phone: 320.229.4359

Cell: 320.290.3610

Email: [cmarcusen@sehinc.com](mailto:cmarcusen@sehinc.com)

Jason Chopp - SEH

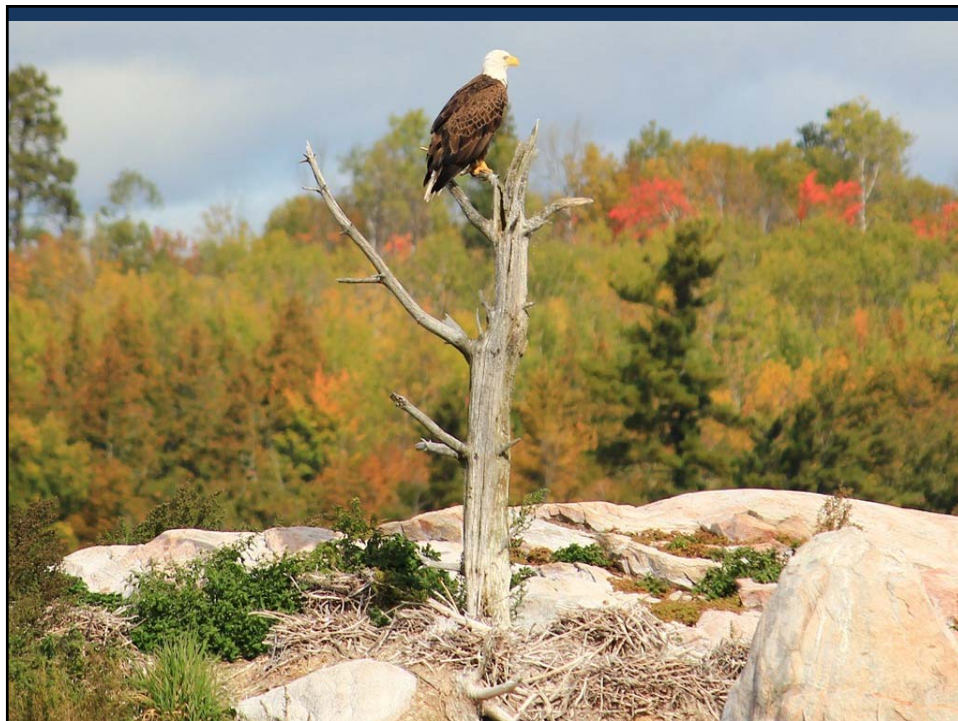
Phone: 218.305.4733

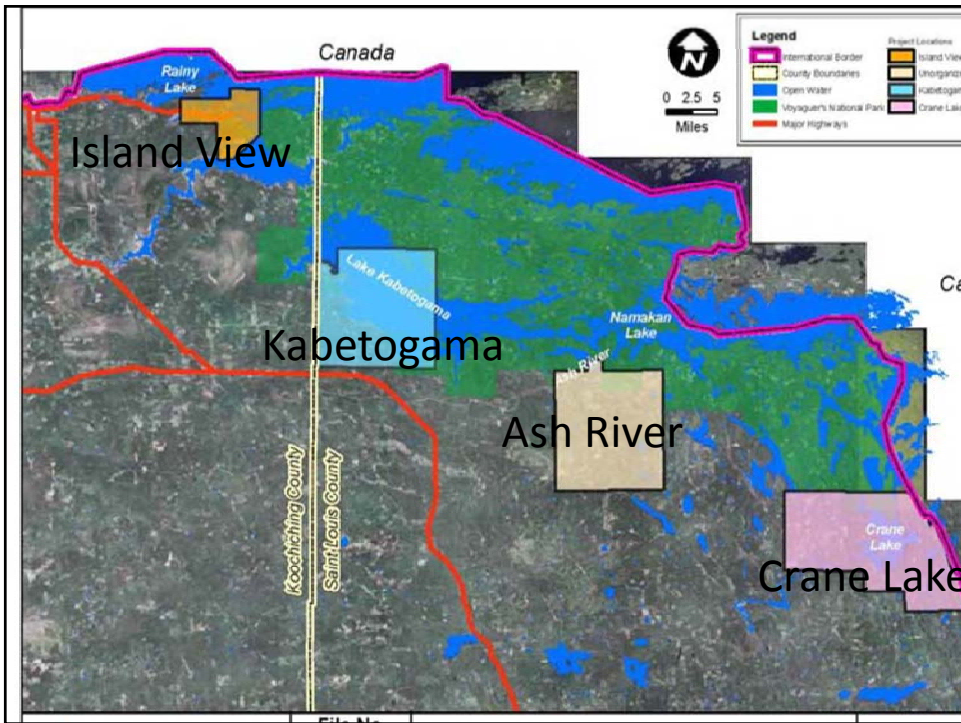
Email: [jchopp@sehinc.com](mailto:jchopp@sehinc.com)

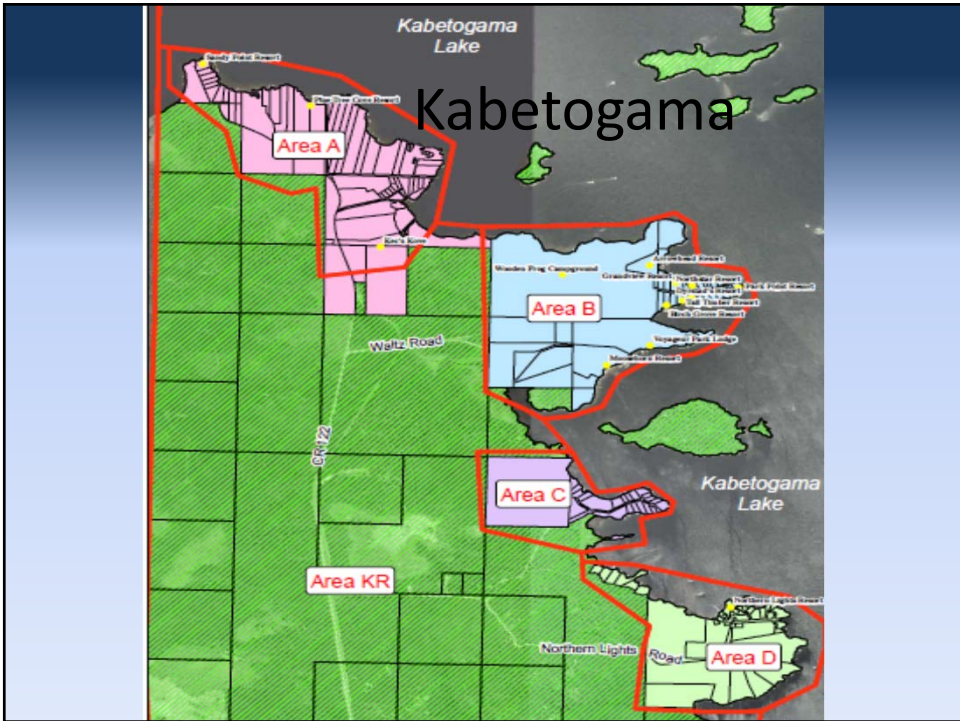
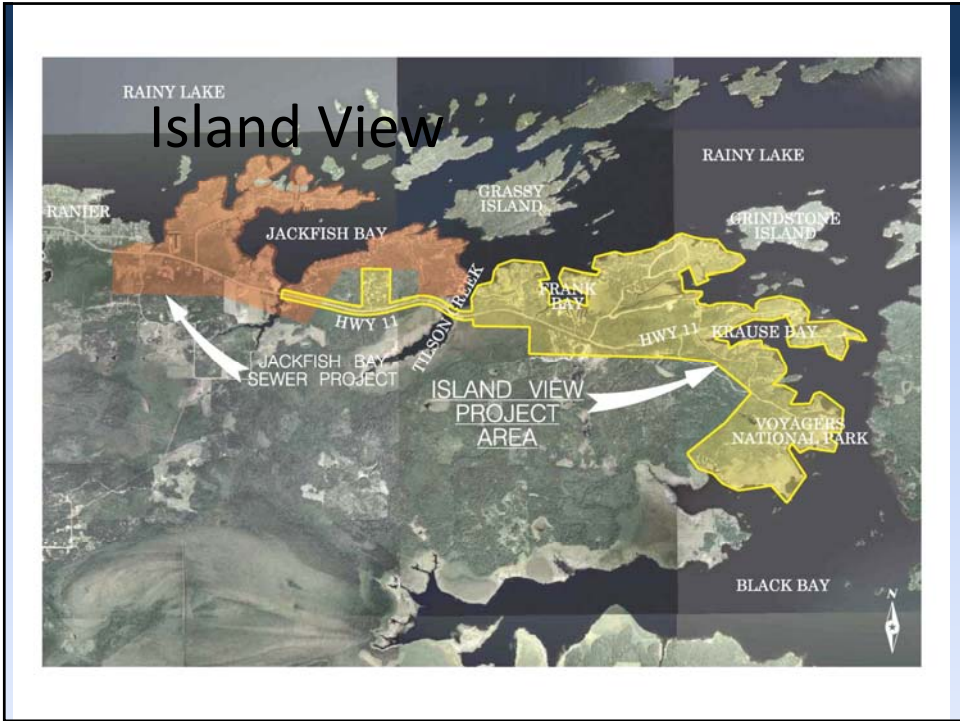
Mark St Lawrence– St Louis County Environmental Services

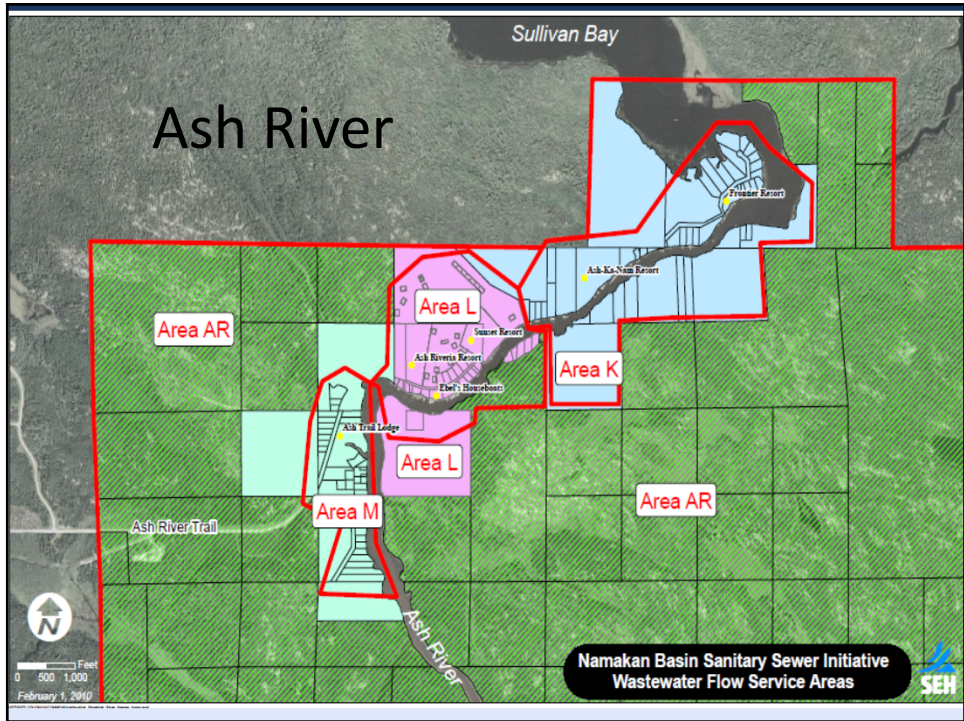
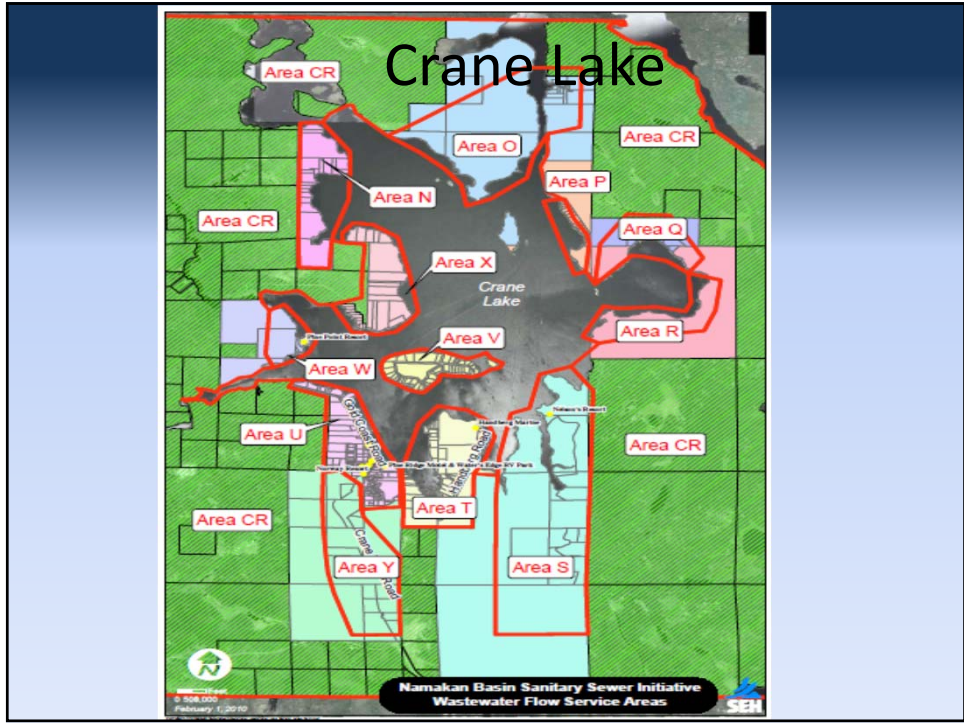
Phone: 218.749.0647

Email: [stlawrencem@stlouiscountymn.gov](mailto:stlawrencem@stlouiscountymn.gov)









## WHAT IS THE PROBLEM?

**\*Non-complying/failing Septic Systems\***

2010 Study Results -64% non-conformance rate

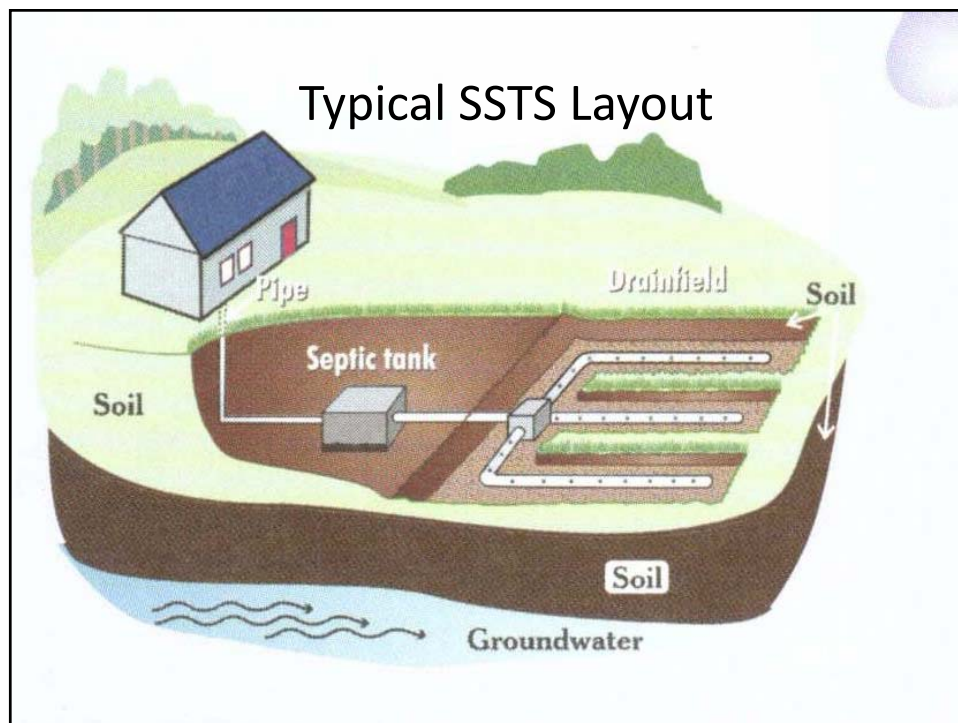
Island View Project - 64% non-conformance rate

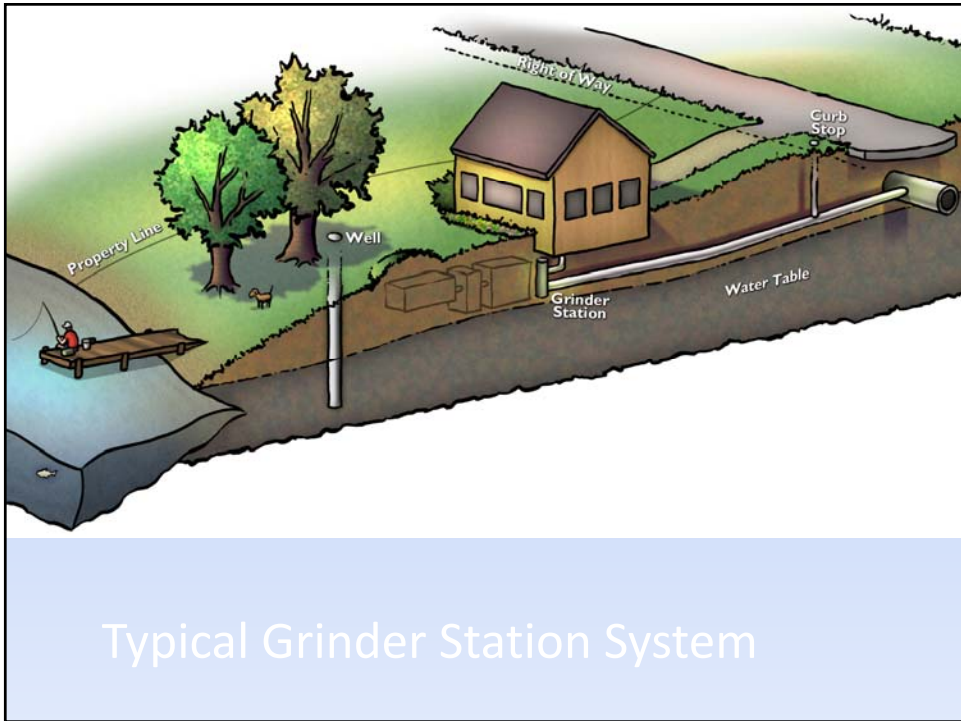
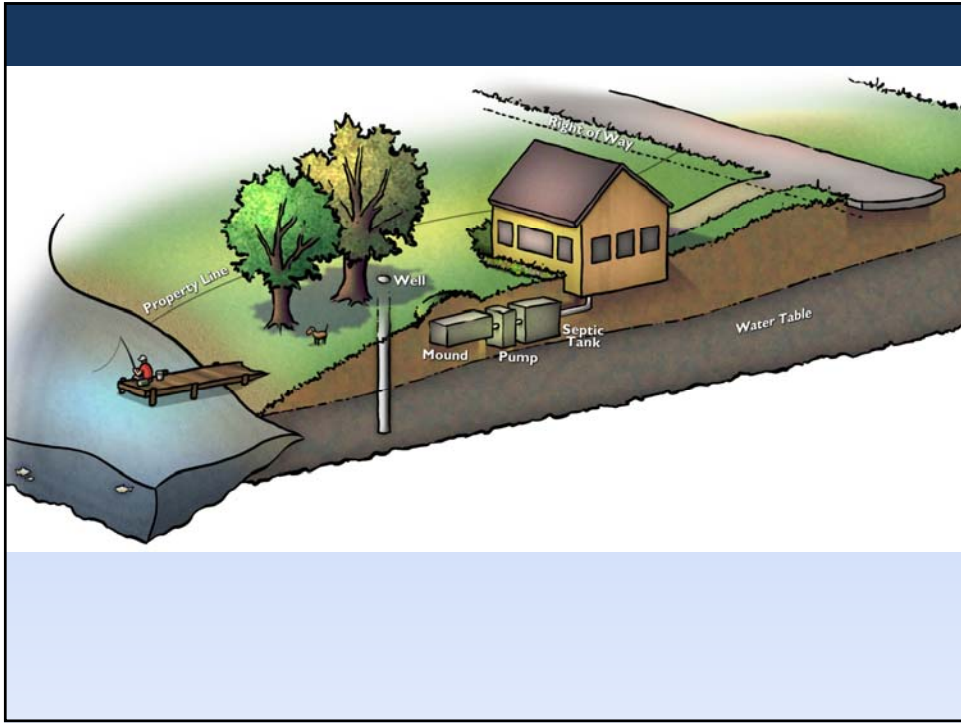
Kabetogama Project – 77% non-conformance rate

Crane Lake Water & Sanitary District – 41% non-conformance rate

Note 100 properties are served by a community system

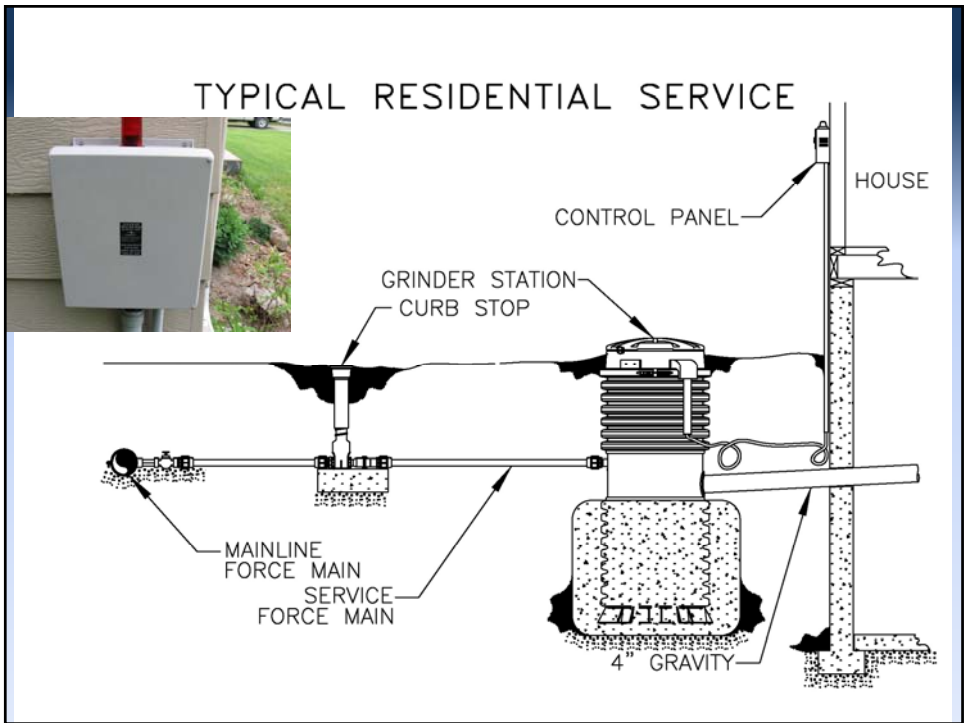
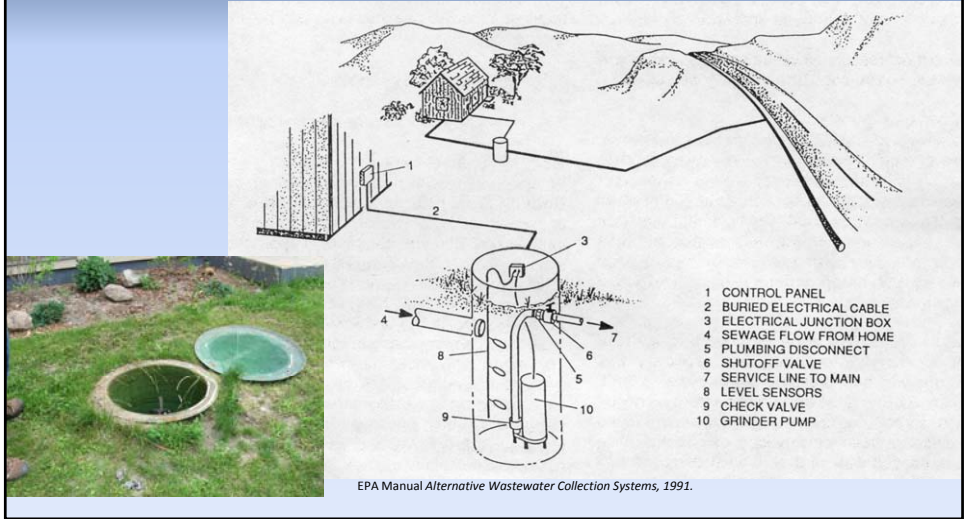
**Ash River – 73% non-conformance rate**





Typical Grinder Station System

# Low Pressure Sanitary Sewer Collection System



## KABETOGAMA

<u>TRACT 1</u>	<u>AMOUNT</u>
Small Community Wastewater Program (loan)	\$400,000
Small Community Wastewater Program (grant)	\$1,600,000
Kab Township GO Bond (Mn Rural Water)	\$76,824
MPFA PSI Grant	\$1,161,200
IRRRB	\$179,349
Legacy	\$940,000
Other Township Sources	\$48,598
DNR Capital Fee	<u>\$64,175</u>
SUBTOTAL FUNDING	\$4,470,147

User Fees: Approximately \$90/month

## What has been done so far?

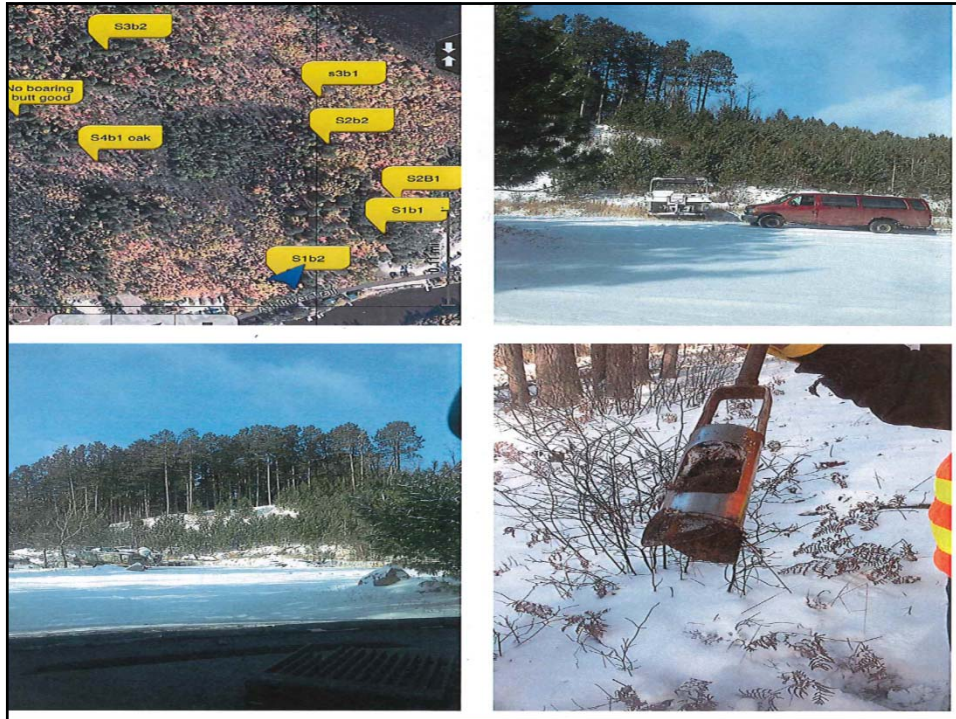
VNPCWJPB set up to secure outside funding

- Submitted \$2.5 million request for clean water funds
- Clean Water Funds obtained - Board allocated \$450,000 Clean Water Legacy funds to Ash River Project

Soil testing has been completed on the proposed treatment facility site.

The County and DNR are working on a land exchange for the treatment site. Complete end of 2017





## Why Pursue the Project?

- Eliminate non-compliant and failing septic systems
  - 73% Non-conformance rate
- Reliable wastewater treatment
- Improved ground and surface water quality
- Greater utilization of properties

## Where do we go from here?

Neighborhood meeting - today

Facility plan (report) – outlines the cost, service area, technical layout. Include borings for bedrock along route. Aids in funding  
 -Contract for Facility Plan has been submitted to County for review and approval.

Formation of sanitary sewer district

Land exchange for treatment site, by end of 2017

Design project – 2018

TASKS	SCHEDULE
Soil Borings and initial survey	September, 2017
Facility Plan/CAR Preparation. Preparation of Environmental Information Worksheet (EIW), which includes desktop archaeological review, historical review, and DNR Natural Heritage Information System Data Review. Conduct site visit to each property to discuss existing and future sewer service.	September – January, 2017/2018
Sewer District Formation – Community outreach and meetings, legal descriptions. Establish EDUs for system. Complete DNR Land Transfer.	Start September, 2017
Submit Project Priority List Application (PPL) to secure future funding through MN PFA	March, 2018 deadline
Design – Preparation of Plans and Specifications, Finalize Discharge Permit Application. Groundwater mounding analysis.	Summer, 2018 to Summer, 2019
Funding Meeting	Summer, 2019
Construction Easements and Permitting (NPDES, MPCA, County).	Fall, 2019
Bid	Winter, 2019-2020
Finalize Funding Package	February, 2020
Construction	Spring – Fall, 2020
Assistance with Sewer Use Ordinance and Fees (work with District's Financial Planner)	Summer, 2020
As-Built Survey and Easement Preparation	Fall, 2020
Preparation of Operation and Maintenance Manual for Treatment System	Fall/Winter, 2010/2021



## Want to know more?

### Project Websites:

VNPCWJPB

<http://www.sehinc.com/online/namakan>

Island View Project

<http://www.sehinc.com/online/island-view-sanitary-sewer-project>

Kabatogama Project

<http://www.sehinc.com/online/puckspoint>

Crane Lake Water & Sanitary District

<http://www.clwsd.org/>