

St. Croix Special Well Casing Depth Area Towns of Hudson and Warren

Public Informational Meeting



Team Members

DNR - Remediation and Redevelopment

- **Candace Sykora**, West Central Region Hydrogeologist
- **Dave Rozeboom**, West Central Region Team Supervisor

DNR - Drinking Water And Groundwater

- **Stacy Steinke**, Private Water Field Supervisor
- **Marty Nessman**, Private Water Section Chief
- **Kyle Burton**, Field Operations Director

Department of Health Services

- **Curtis Hedman**, Toxicologist

Staying Connected

- 1st meeting – may be future updates
 - Meeting recording will be available
- Website and FAQs
 - DNR homepage → search 'St. Croix wells'
 - Sign-up for email updates →



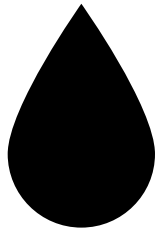
to updates about the SWCDA and private well contamination in the towns of Hudson and Warren.

- For more information - contact DNR
 - Email DNRStCroixSWCDA@Wisconsin.gov
- For health-related questions – contact DHS
 - Email DHSEnvHealth@dhs.wisconsin.gov



Agenda

- History of Contamination Sites
- What is Trichloroethylene (TCE)
- Special Well Casing Depth Area (SWCDA)
- Water Treatment Funding Status
- Well Variances
- Well Owner Information & Next Steps
- Question + Answer Session



What to Expect during this Listening Session

Zoom Meeting Logistics

- All attendees are automatically muted when they join the call
- After the presentation:
- Joining by **web**
 - Use 'chat' feature to type questions
 - use the 'reactions > raise hand' feature to request to be unmuted to ask a question
 - Joining by **phone**
 - *9 raise hand
 - *6 mute/unmute

To ask a question, use the **Reactions** button and select **Raise Hand**

You will be unmuted when **Appropriate.**

Chat “Chat” questions will be sent privately to the meeting host.

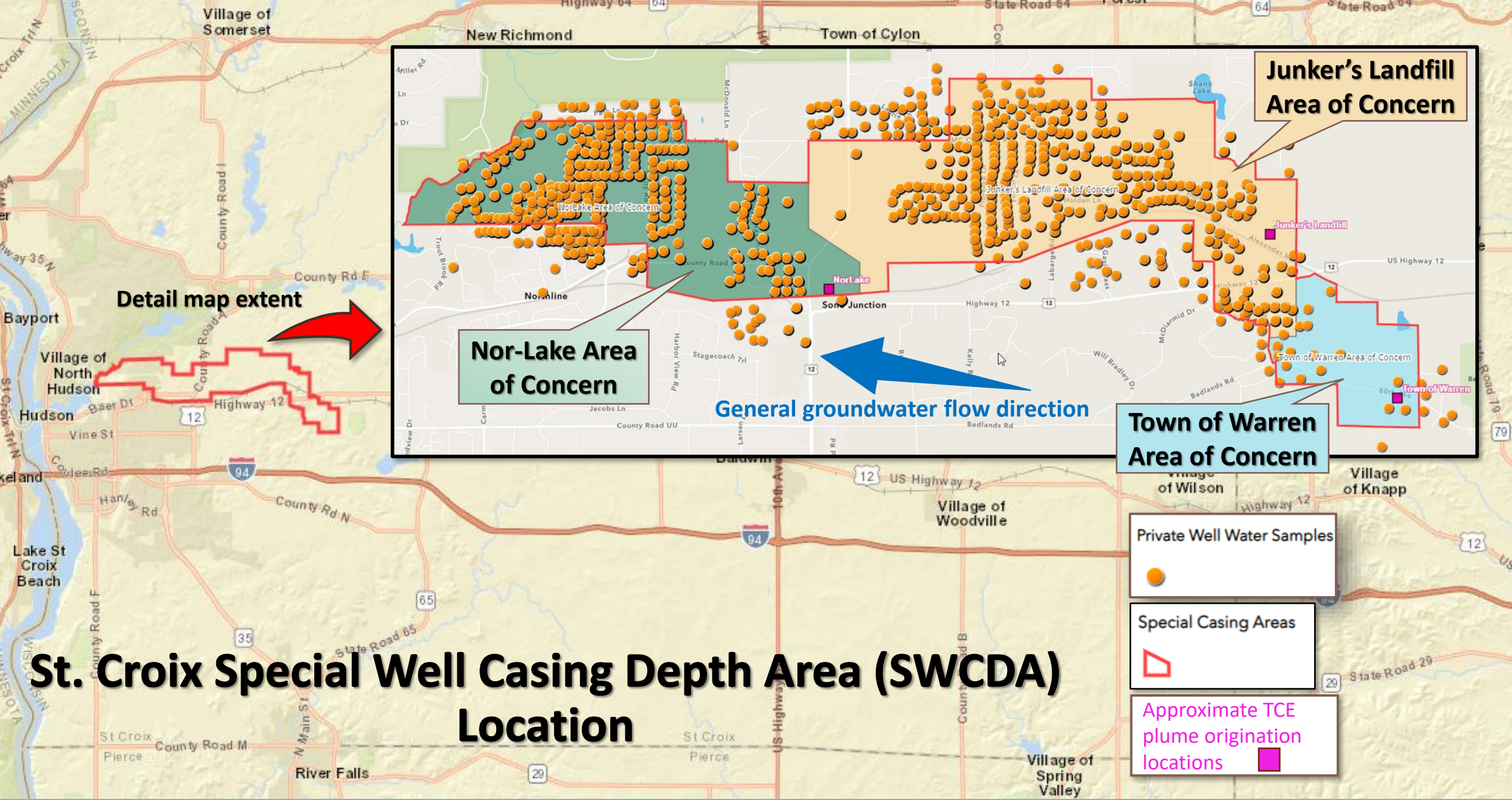
The screenshot shows a Zoom meeting interface with a map in the background. A green arrow points from the 'Reactions' button in the top toolbar to the 'Raise Hand' button in the expanded reactions menu. An orange arrow points from the 'Chat' button in the bottom toolbar to the 'Chat' button in the expanded chat window. The bottom toolbar also shows 'Mute', 'Start Video', 'Participants', 'Share Screen', 'Record', and 'Reactions' buttons.

St. Croix Special Well Casing Depth Area

Towns of Hudson and Warren

History of Contamination





Detail map extent



Nor-Lake Area of Concern

Junker's Landfill Area of Concern

Town of Warren Area of Concern

General groundwater flow direction

Private Well Water Samples



Special Casing Areas



Approximate TCE plume origination locations



St. Croix Special Well Casing Depth Area (SWCDA) Location

History of Contamination

The St. Croix SWDA was established in 1991, consists of 3 remediation sites

- **Junkers Landfill**
- **Town of Warren**
- **Nor-Lake Inc.**

Junkers Landfill

- Operations
- Late 1980s the landfill was
 - Capped
 - leachate collection system installed
 - installation of a monitoring well network to delineate groundwater impacts.
- Primary contaminant of concern is trichloroethene (TCE)
- Granular activated carbon (GAC) systems installed on impacted private wells

History of Contamination

Nor-Lake

- Manufacturing facility of industrial refrigeration products since the 1960s.
- Groundwater contamination discovered in 1984
- Contamination source - tank failure
- Contaminant of concern- TCE
- 42 homes currently have GAC systems installed.

Town of Warren (TOW)

- Contaminant of concern- TCE
- Limited to groundwater
- *Source is unknown*

St. Croix Special Well Casing Depth Area Towns of Hudson and Warren

What is Trichloroethylene (TCE)



Trichloroethylene (TCE)



- Main contaminant of concern within the St. Croix SWCDA
- Has commonly been used as a metal degreaser/solvent in industrial processes
- May be discharged to the environment from unintentional releases or improper disposal of industrial wastes
- Does not easily break down or degrade in soils or groundwater
- dhs.wisconsin.gov ⇒ search for “TCE”

DHS recommended change to the standards for TCE

Units in micrograms per Liter ($\mu\text{g/L}$)	Current TCE Standards (2011)	Recommended TCE Standards (Proposed in 2019)
Enforcement Standard (ES)	5	0.5
Preventive Action Limit (PAL)	0.5	0.05

DHS recommends lowering the enforcement standard for TCE to 0.5 $\mu\text{g/L}$.



The recommended standard is based on the EPA's drinking water concentration based on a cancer risk level determination.



A concentration of 0.5 $\mu\text{g/L}$ corresponds with a **lifetime cancer risk level of 1 in 1,000,000.**



St. Croix Special Well Casing Depth Area

Towns of Hudson and Warren

Special Well Casing Depth Area



What is a Special Well Casing Depth Area (SWCDA)?

- An area requiring wells to be constructed differently than normal (generally deeper) due to contamination
- St. Croix Towns of Hudson & Warren SWCDA was established in July 1991 to protect residents from exposure to contaminated water
- DNR continues to evaluate water quality data to define the current extent of the contamination and maintain a SWCDA boundary that protects area residents

July 1991

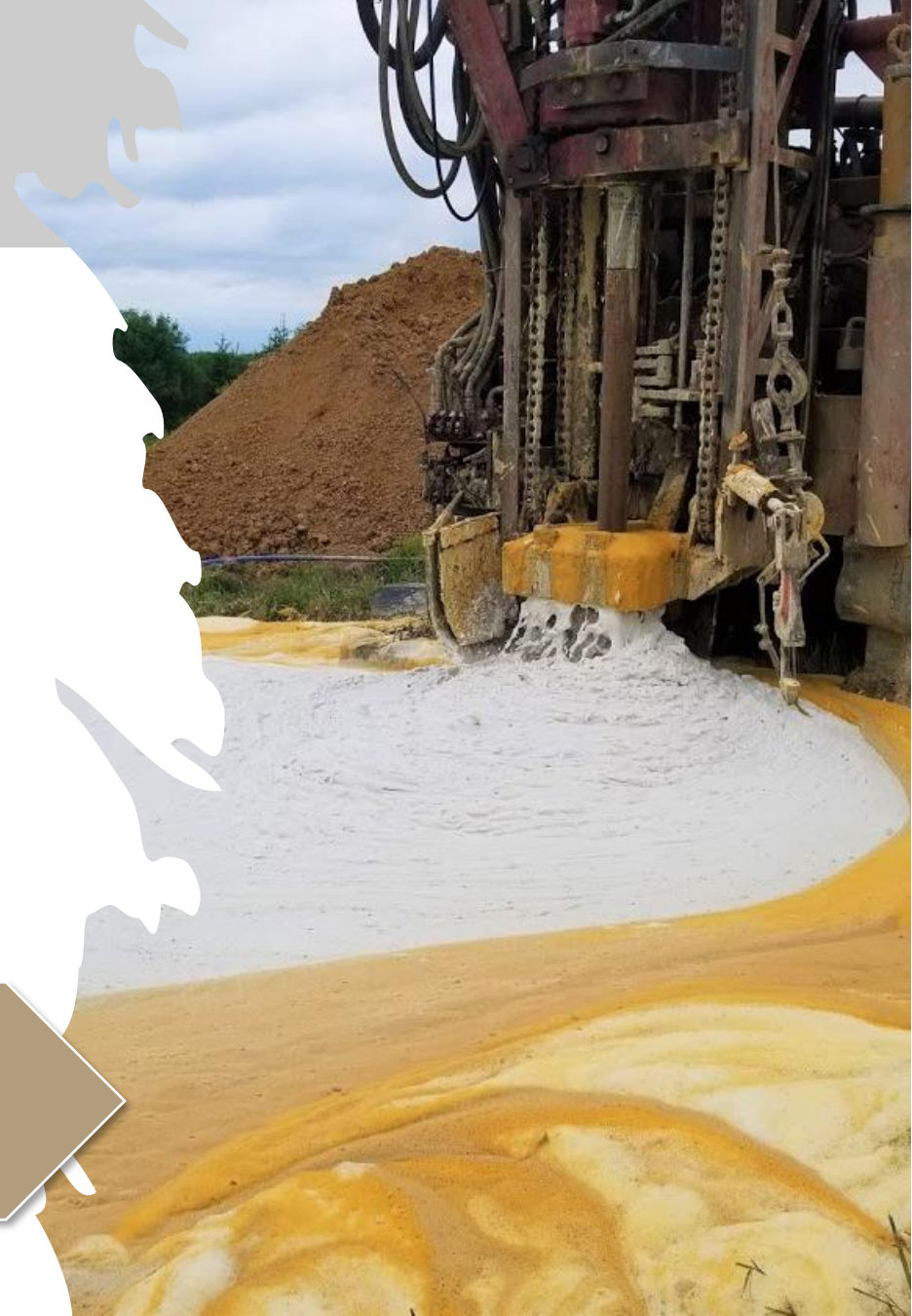
SWCDA boundary
established

July 1992

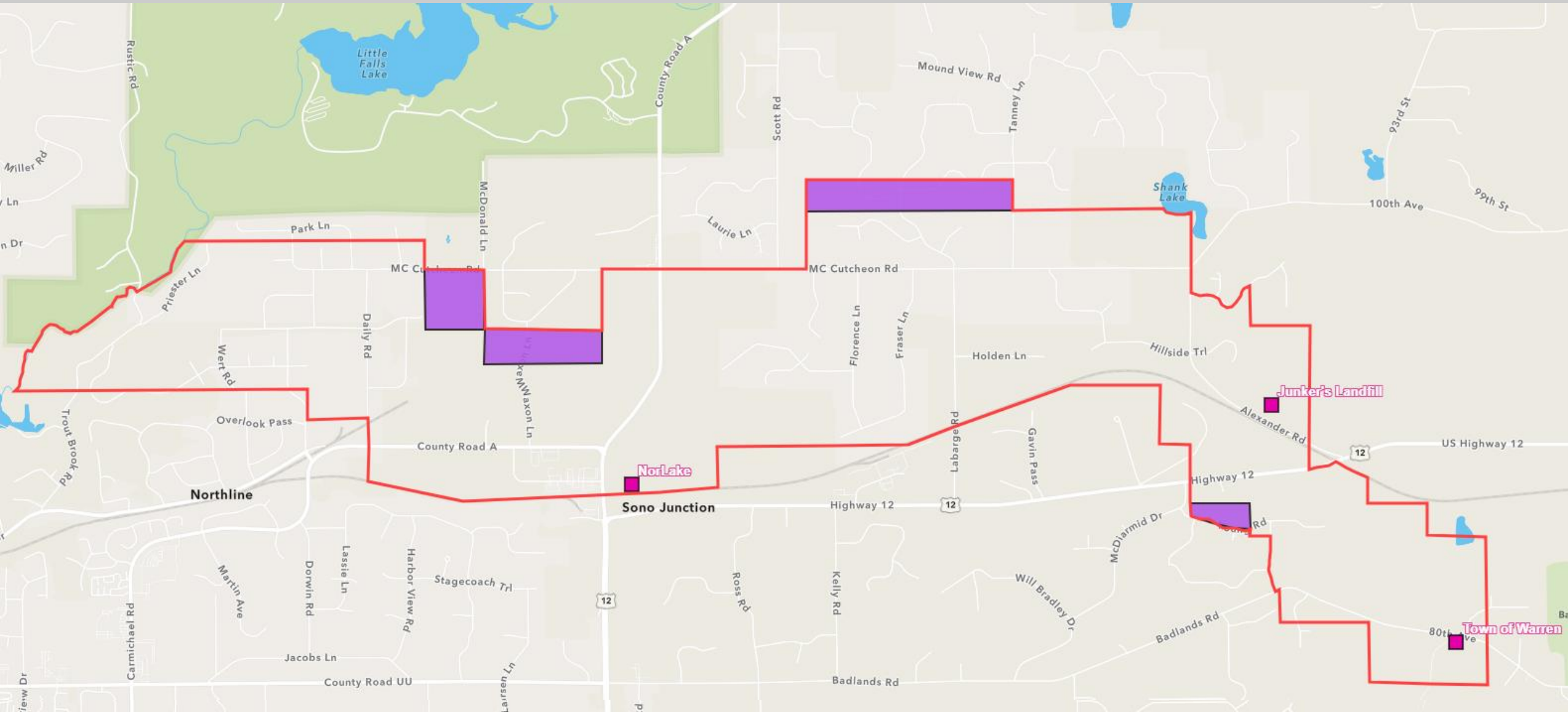
SWCDA boundary
updated

July 2021

Current SWCDA
boundary update

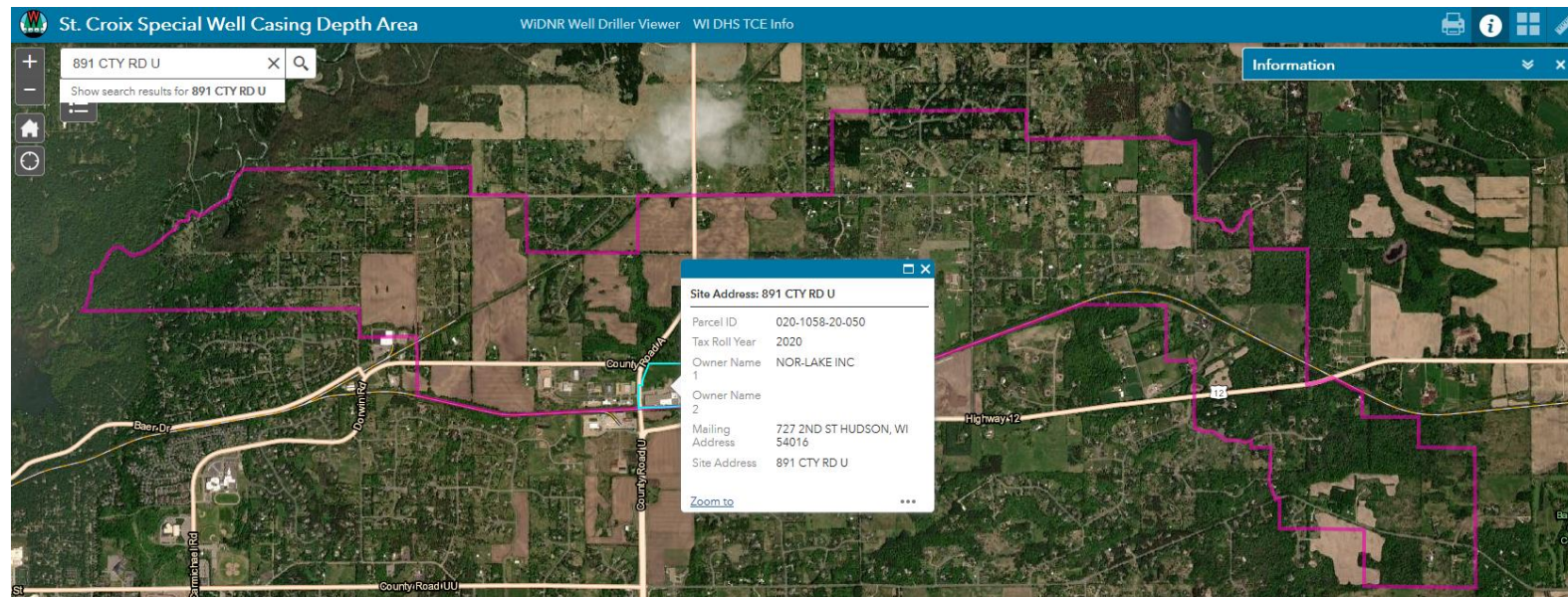


Special Well Casing Depth Area Boundary Revisions



Is your well/property within the SWCDA?

- Check the St. Croix County SWCDA interactive map
 - dnr.wi.gov ⇒ search for “St. Croix Wells”
 - Map link is under “Background” section
- Zoom into your property location or use the address search feature



New wells must use construction methods that prevent contamination from entering the well.

SWCDA Requirements

Deeper Wells

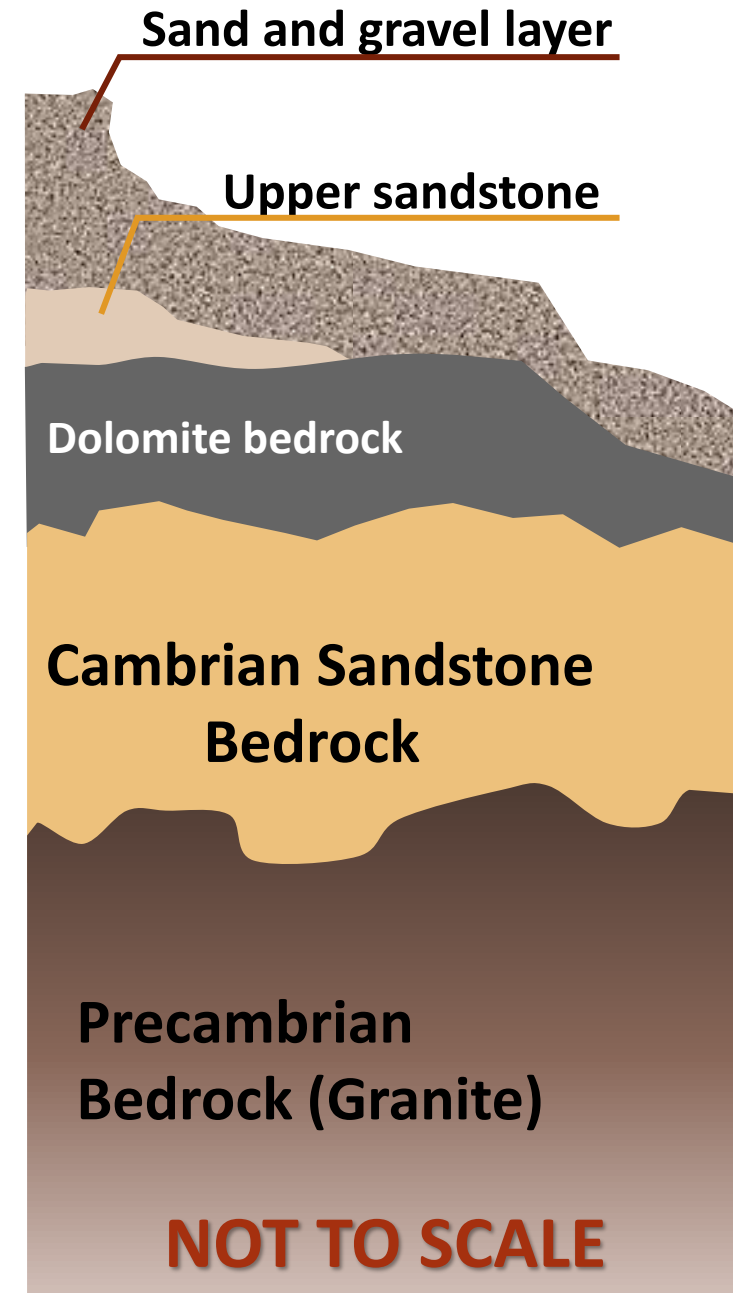
- Wells must be constructed to draw water from the deep (350-400 ft) Cambrian Sandstone aquifer

Seal off Contaminated Aquifer

- Well casing must extend into the lower Cambrian sandstone and be grouted/sealed in place with neat cement

Water Sampling

- Water samples for VOCs (Volatile Organic Compounds) must be collected within 30 days of installing the well pump
- Annual samples for VOCs must be collected until determined unnecessary



St. Croix Special Well Casing Depth Area Towns of Hudson and Warren

Water Treatment and Funding Update



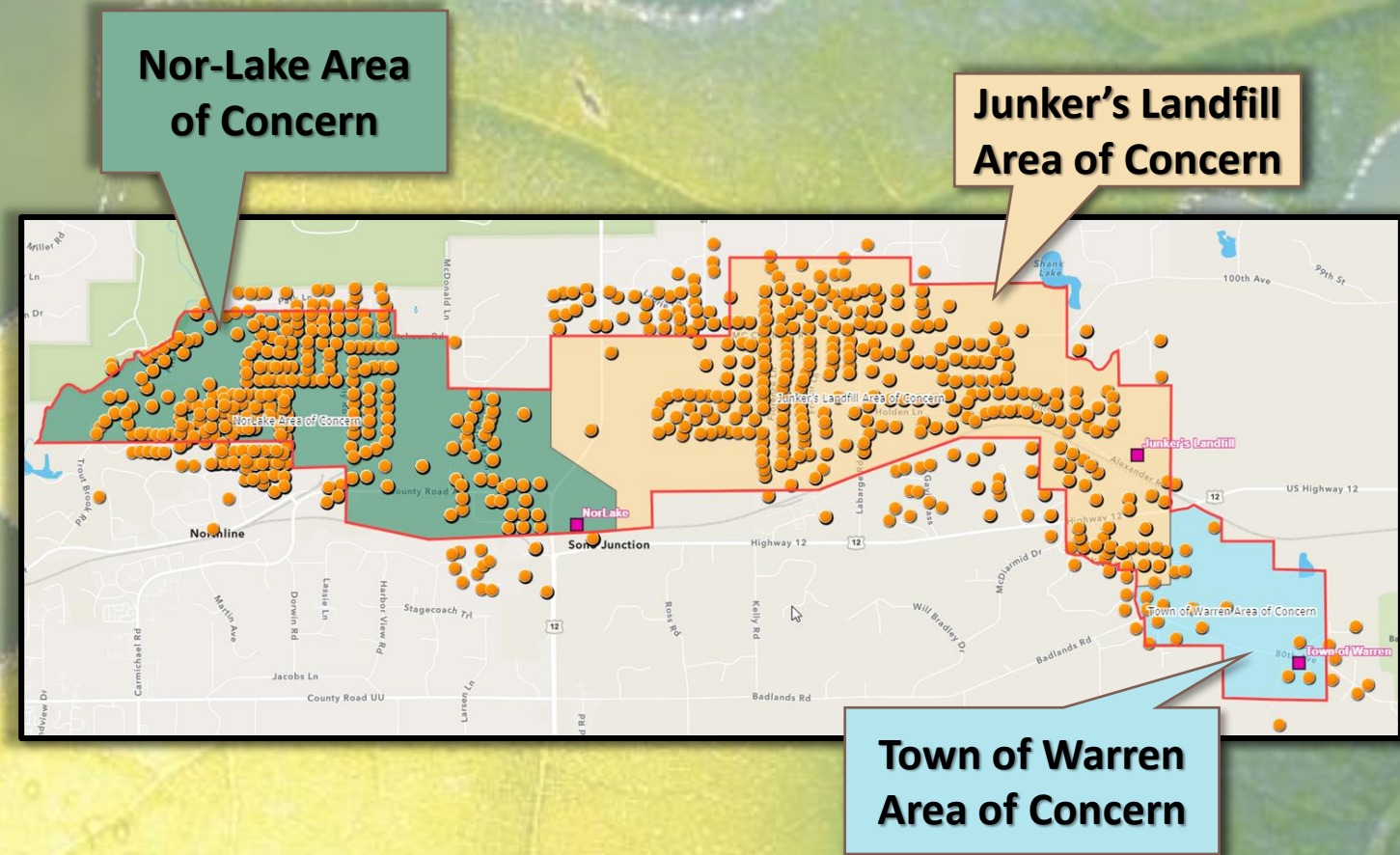
Funding

Nor-lake

- Current active responsible party (RP)
 - Private well treatment and groundwater plume monitoring.

Town of Warren

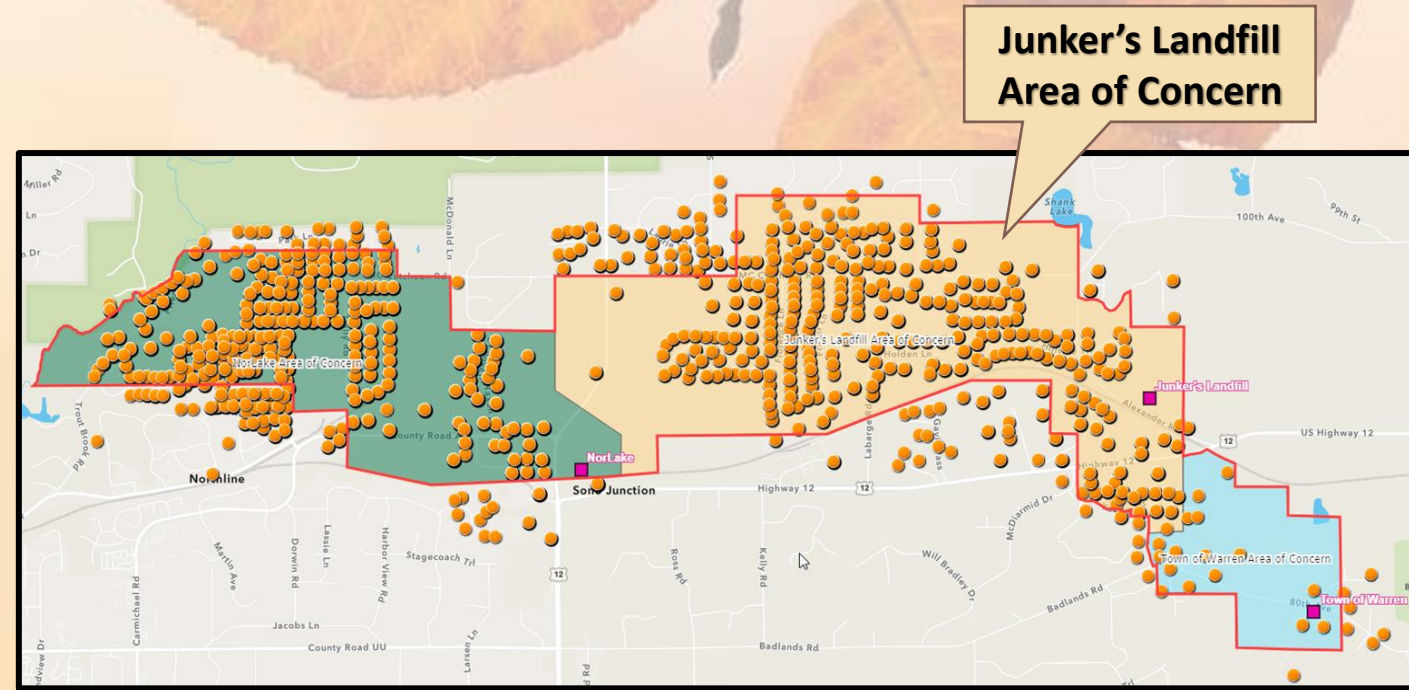
- State funded as the source is unknown.
 - Clean up of groundwater to reduce TCE
 - No additional funding for remediation is planned at this time.



Funding

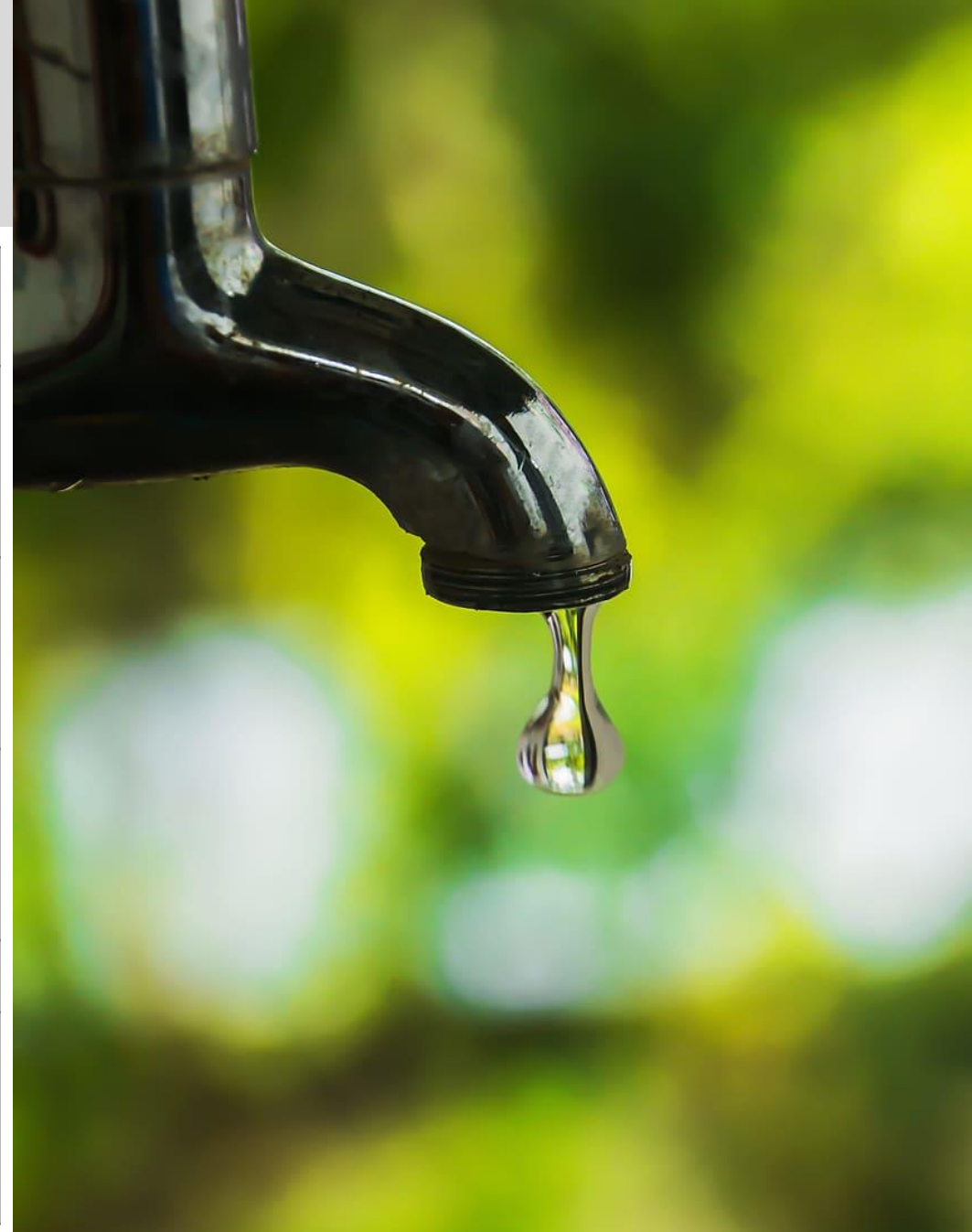
Junkers Landfill

- Environment Trust Fund established 1997
- Fund was established to:
 - Operate & maintain of the landfill
 - Maintain water treatment for the affected population present in 1997 that included 70 homes
 - Provide groundwater monitoring for the remedy chosen-natural attenuation
 - Contamination was expected to attenuate naturally with 25 years.
- Growth of the area means that the fund can no longer sustain additional systems.



Water Treatment (GAC) Systems installed

Sample Results	Number of Wells
Junkers	~280
Town of Warren	0
Nor-Lake	42
TCE standards	>5.0 ppb



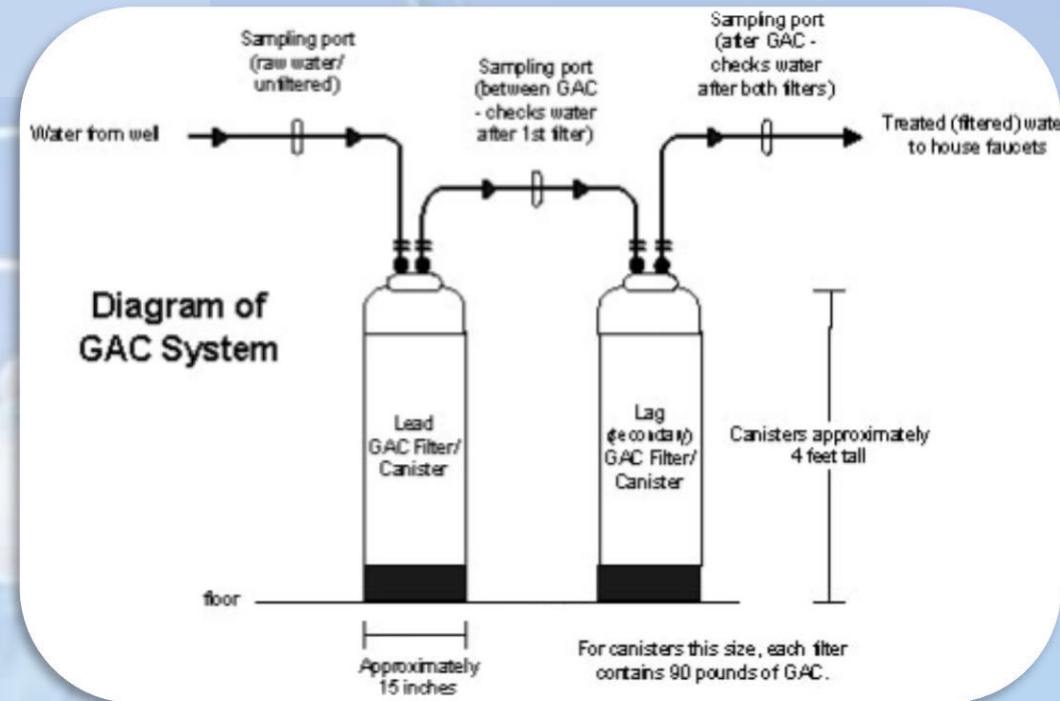
DHS recommended change to the standards for TCE

Units in micrograms per Liter ($\mu\text{g}/\text{L}$)	Current TCE Standards (2011)	Recommended TCE Standards (Proposed in 2019)
Enforcement Standard (ES)	5	0.5
Preventive Action Limit (PAL)	0.5	0.05



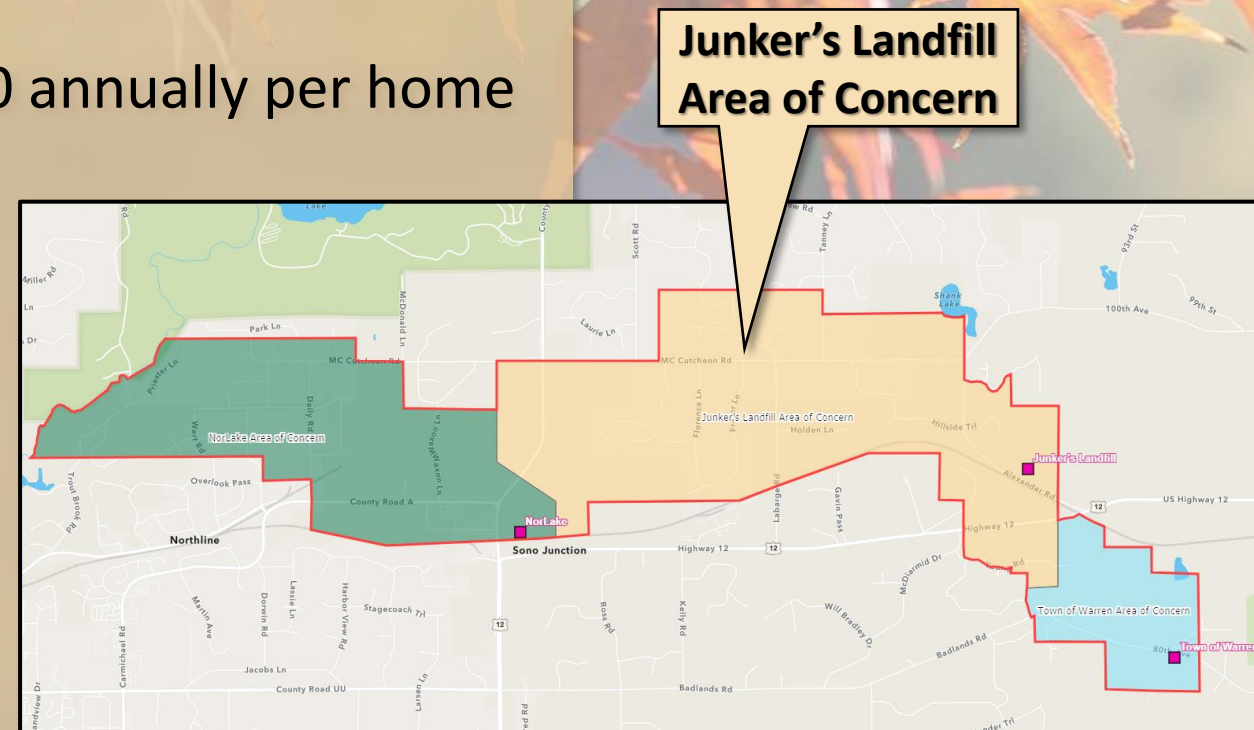
Water Treatment for TCE

- Approved Water Treatment
- Whole-House Filters
 - Granular Activated Carbon systems(GACS) removes TCE to below detection levels



Costs and Sampling

- Under the Junkers Landfill Environmental Trust
 - Homes have been evaluated based on need for current in-place systems
 - Tank change outs costs range \$340-\$1500 annually per home
 - Based on groundwater impacts
 - Water usage
 - Tanks are changed out by Culligan water
 - Scheduled by contracted consulting firm
 - Cedar Corporation
 - Sampling is conducted
 - quarterly,
 - semi-annual,
 - annually or
 - bi-annually schedule for homes based on historical results



Changes in Funding

- December 1, 2022
 - Monthly disbursements from the Environmental Trust will be discontinued.
 - Any remaining funds in the account will be used for Landfill maintenance and funding treatment system maintenance until funds are expended
- The public will be updated as any developments regarding
 - The Junker's Funding status.
 - TCE standards changes and how it effects funding.

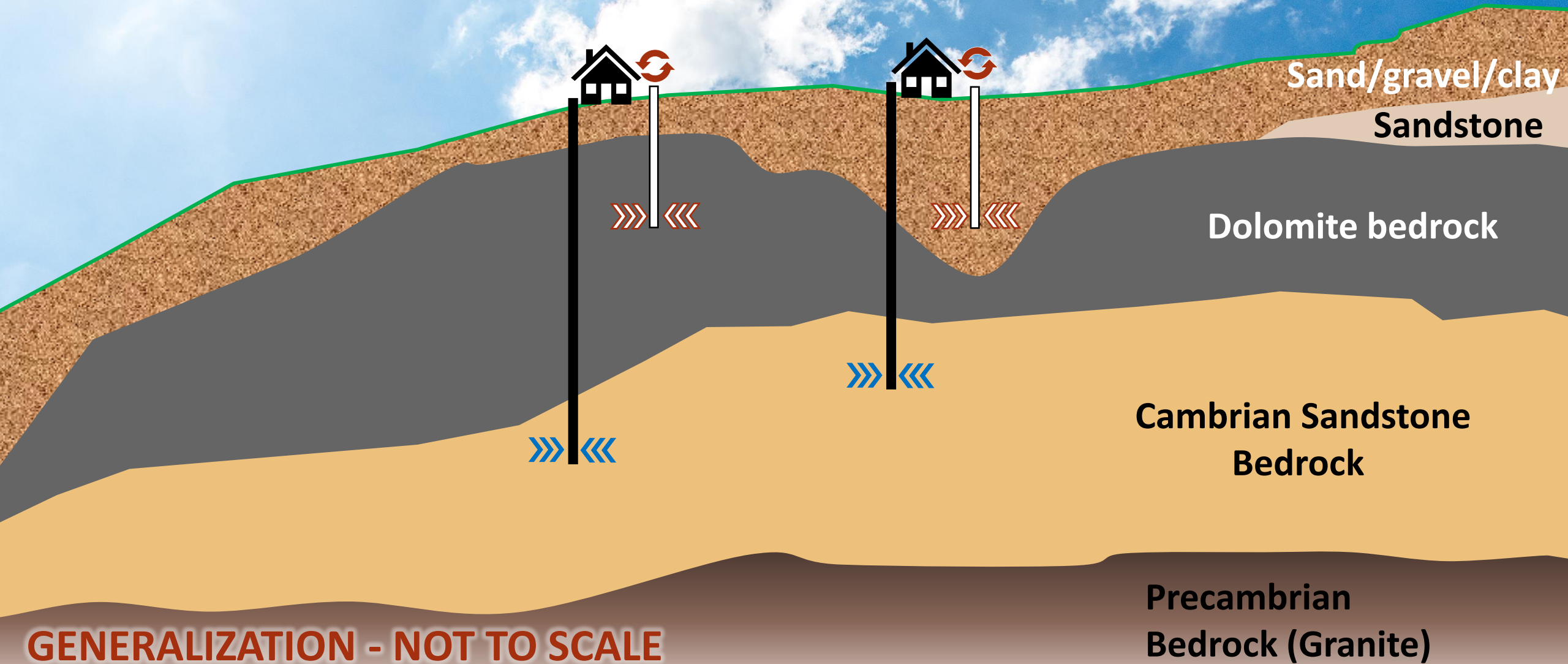
St. Croix Special Well Casing Depth Area

Towns of Hudson and Warren

Status of Well Variances



Well Variances



St. Croix Special Well Casing Depth Area

Towns of Hudson and Warren

Well Owner Information & Next Steps



Well Owner Information

Your Well Results

All existing wells in the St. Croix SWCDA have been evaluated based on current standards.

To get past sample results, please reach out to DNR via the “Submit” option on our webpage. Include your address, request and best way to contact you.

Collect a Water Sample

If you would like to sample your water, there is information available on the webpage under “Information for Homeowners”

Lower TCE Standards

New contaminant standards in 2022 may require all wells in the area to be reevaluated.

You may be contacted by Ayres Associates if you are in the Nor-Lake area or Cedar Corporation in the Junkers Landfill or Town of Warren area.

Existing Variances

To determine if a variance was recorded for your property and obtain a copy, contact the St. Croix County Register of Deeds

Wells constructed in the SWCDA between 1991 and July 2021 will have a variance with detailed conditions. St. Croix Co. Register of deeds: 715-386-4652



Have Questions? Want More Information?

Website and DNR Contacts

DNR homepage → search 'St. Croix wells'

Sign-up for email updates → sign up for updates and future meetings

SUBSCRIBE

to updates about the SWCDA and private well contamination in the towns of Hudson and Warren.

Email DNRStCroixSWCDA@Wisconsin.gov

- Include your address, question and best way to contact you

Candace Sykora Candace.sykora@wisconsin.gov

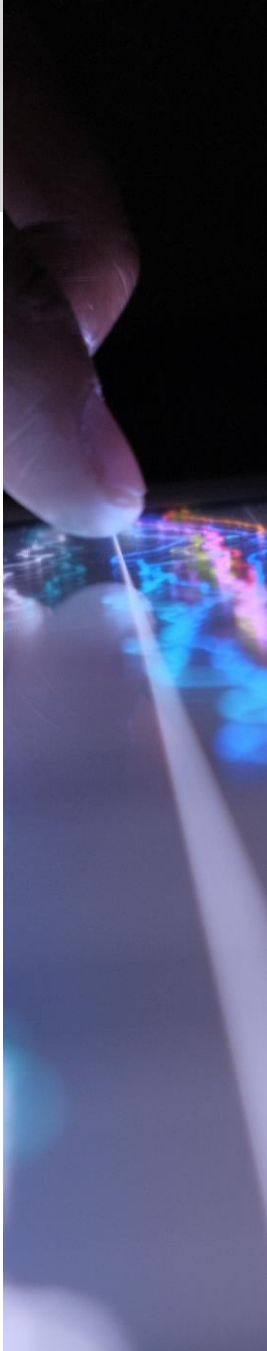
- ?'s about contamination sources, water treatment systems, clean up funding, sample results

Stacy Steinke StacyJ.Steinke@Wisconsin.gov

- ?'s about variances, well construction, SWCDA requirements, sample results

For health-related questions – contact DHS

Email DHSEnvHealth@dhs.wisconsin.gov



Anticipated Next Steps



NEW TCE STANDARDS



FUNDING UPDATES

St. Croix Special Well Casing Depth Area

Towns of Hudson and Warren

Listening Session – Open Q + A



What to Expect during this Listening Session

Zoom Meeting Logistics

- All attendees are automatically muted when they join the call
- After the presentation:
- Joining by **web**
 - Use 'chat' feature to type questions
 - use the 'reactions > raise hand' feature to request to be unmuted to ask a question
 - Joining by **phone**
 - *9 raise hand
 - *6 mute/unmute

To ask a question, use the **Reactions** button and select **Raise Hand**

You will be unmuted when **Appropriate.**

Chat “Chat” questions will be sent privately to the meeting host.

CONNECT WITH US

Call: (888-626-3244)

Email:

DNRStCroixSWCDA@Wisconsin.gov

DHSEnvHealth@dhs.wisconsin.gov



/WIDNR



@WIDNR



@WI_DNR



/WIDNRTV



"WILD WISCONSIN:
OFF THE RECORD"