

We Are Water MN

Docent handbook



Guidance for exhibit volunteers



MINNESOTA POLLUTION
CONTROL AGENCY

MINNESOTA BOARD OF
WATER AND SOIL RESOURCES

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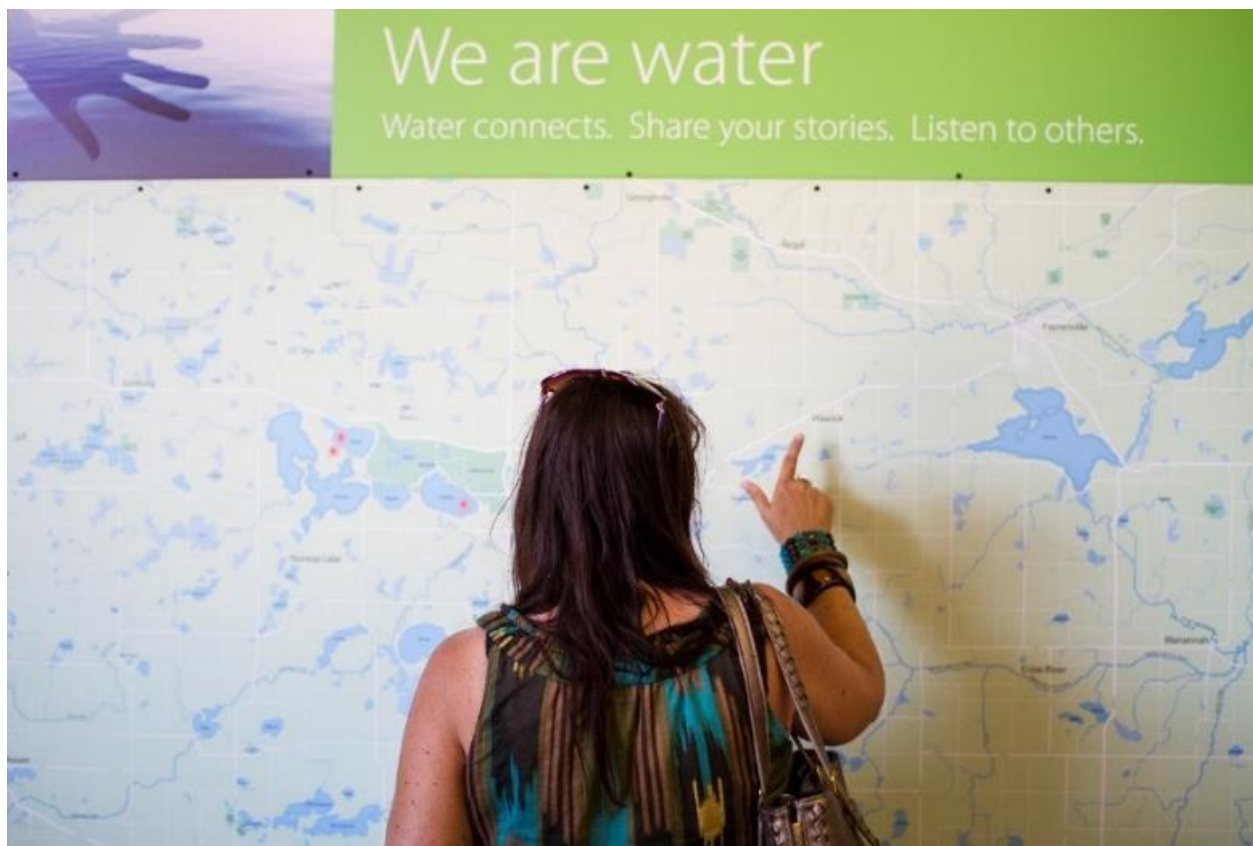
CLEAN
WATER
LAND &
LEGACY
AMENDMENT

About

We Are Water MN is a traveling exhibit and community engagement initiative. It is also a partnership among state agencies and host sites, formed to tell Minnesota's water stories collaboratively, bringing together personal narratives, historical materials, and scientific information. Combining these ways of knowing water strengthens Minnesotans' relationships with and responsibilities to water.

The partnership supports host communities to collect and tell local water stories, rediscover the many reasons they care about clean water, and practice community-identified ways to protect water. There is about one year of planning together and then eight weeks of public programming, events, and display of a water-themed exhibition. It's not just about water science; it's about history, economy, health, and community identity around water.

Visit the project website at mnhum.org/water.



Welcome

This handbook is for volunteers, staff, and educators who will help others appreciate and enjoy *We Are Water MN*. It includes:

- **Tips for being an informed and effective docent.** A docent is a volunteer or staff member who acts as a guide. They encourage visitors to think about the subject matter and invite them to share memories and personal connections.
- **Main messages, reflection questions, and activities** that expand upon exhibit content and encourage conversation. Some of the “Get Interactive” activities will require additional materials. If they don’t, the activity is noted by a checkmark, instead of a circular bullet point.
- **Ideas for group visits.** How to structure a 1-hour visit from a student or community group.

Thank you for hosting visitors in the *We Are Water MN* exhibit. We hope you and the visitors enjoy learning with—and from—one another.



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Tips for being an informed and effective docent

Docent tips adapted from the Smithsonian Museum on Main Street

Introduce yourself and make sure each visitor in your group feels welcome.

Orient your visitors to the exhibit.

Assess your audience and structure your time accordingly. Younger visitors often relate to technology, popular culture and references to today, while older visitors relate to historical content and personal memories. Be prepared to provide information to any visitors that may not be able to access the exhibition due to a disability.

Be familiar with the exhibit and the information provided. Aim for comfortable and conversational exchanges with your visitors.

Encourage visitors to ask questions. Don't be afraid to say, "I don't know," but try to find out the answers before the visitors leave.

Avoid focusing on questions that can be answered with "yes" or "no." Ask open-ended questions like: "What do you think...?" or "How do you feel about...?"

Give visitors time to think about and answer questions. Usually someone will speak up in about 10 to 15 seconds.

Select a supplemental "Get Interactive" idea or activity to share with visitors. Be sure to ask your volunteer coordinator for any necessary supplies.

Practice your tour. Remember, if you're relaxed and having a good time, your visitors will enjoy themselves too. Have fun!

Be prepared. As representatives of the host site, docents are often asked all sorts of questions.

Know the host site's name, address, phone number, hours of operation, and the location of the gift shop, restrooms, water fountains, and seating areas for all visitors, including those with disabilities.

Be familiar with the dates and times of programs and special events associated with *We Are Water MN*, and with other exhibitions at the host site.

Ask visitors to fill out a survey when appropriate.

Main messages and reflection questions

This section is meant to prepare docents for their role as exhibit host. You'll find the main messages of the exhibit and reflection questions that encourage conversation.



Main Message #1: We Are Water

No one knows the water like the people who live here. Water is a large part of identity in the 'Land of 10,000 Lakes' and it's been embedded in the heritage of the region for far longer. Dakota and Ojibwe people have been intimately connected to the region within and beyond the boundaries of 'Minnesota' for a very long time. **Mnisota Makhoche** is a Dakota phrase that means 'Land where the water reflects the sky'. Through a Dakota perspective, water is more than a basic need or a source of recreation, it is a family member with whom we have a reciprocal relationship.

Let's talk about it:

Why do you think this exhibition is called *We Are Water*? Consider the biological, physical, and emotional ways water impacts you.

Water determines where we live and work, what we eat and drink. Consider your hometown. Is it located on or near a water body? How would your community be different without that water? Water also influences our cultures and religions. Do you have any water traditions? How is water a part of your holidays?

What place would you choose if you were asked to name a special water spot? Why is that place special to you? How do you take care of the water and how does the water take care of you?

Main Message #2: How's the Water?

We are the headwaters. Located on a triple, continental-scale water divide, Minnesota's waters travel to the Gulf of Mexico, Hudson Bay, and the Atlantic Ocean. What we do matters downstream. Currently, **40% of Minnesotan waters are polluted.** That's not the end of the story, however. There are a multitude of ways citizens can improve the health of our waters.

Let's talk about it:

Water is eternal, but finite. No new water is created, but because of the **water cycle**, water acts like a renewable resource. Can you believe that we are drinking the same water that was used by the dinosaurs? What factors determine the availability or lack of water in different places around the world?

Show visitors the map of altered streams in Minnesota. Why do we modify, create, and reroute waterways? How do humans make water work for us and how do humans work for water?

Public water supplies in Minnesota are tested regularly for more than 100 contaminants. When a new private well is built, it also is tested. After that, it is up to the property owner to have their well tested on a regular basis. Finances, language, and education can be barriers to having wells tested or treated. Do you use a public or private water source? Do you know from what body of water or **aquifer** your water is drawn? What can we do to ensure safe water for all?

Main Message #3: People + Water + Choices

People change water. What you do matters. History, climate change, access to information, and aging infrastructure can all pose challenges to people sharing equally in our water wealth. The flow of water both connects and divides us; water can act as a boundary or a bridge.

Let's talk about it:

Water is shared and it crosses borders. Because of this, states, communities, and individuals often look for ways to agree upon water use, quality, and quantity. Are you affected by water laws? How do they make you feel? Are there groups of people that benefit more than others from certain water laws?

What are the ways water forms connections and divisions in your community? What boundaries in your area are formed by water? Are those boundaries political or cultural or both?

Read the text on the back of "naming water places" sign with visitors. What names do you know for lakes and streams in your area? Why were those names given? Do they have multiple names? Consider the debate surrounding changing the name of "Lake Calhoun" back to "Bde Maka Ska," the original Dakota name for the Minneapolis water body.

In order to take care of our aging water infrastructure, Minnesota will have some large investments to make in the coming years. It's expected that in the next 20 years, it will cost \$4 billion to upgrade wastewater infrastructure and \$7.4 billion for drinking water infrastructure. How do you think we should cover those big bills? Is safe drinking water a right or privilege? Why is water, an essential for life, cheaper than many nonessential resources?

What concerns and hopes do you have for the water in your community?

Main message #4: You + Me + Water

Every day, more people are learning about Minnesota's water and what it takes to protect and preserve it. Citizens of all ages, and organizations of all sizes are taking action around the state. **Let's improve the water together.**

Let's talk about it:

The average American uses 80-100 gallons of water every day and, for many Americans, water is so easy to get that we don't think about it. However, there are still places in the United States

without access to running water, or safe water. How many times have you interacted with water today?

What you flush matters. Some everyday products such as medicines, engine oil, fragrances, and microfibers cannot be removed from water sources by current wastewater treatment plants. The impacts of these products are still being studied. Scan items to learn what may impair water quality. Have you chosen to buy a product because of its “environmentally-friendly” label or chosen to stop using something potentially toxic? How did you make your decision? Whose responsibility is it to ensure our products are safe for ourselves and our environments?

What organizations work towards protecting water in your community?



Engaging with Visitors

Docents can welcome visitors to the We Are Water MN exhibit when they arrive. Give visitors time to look around, and let them know you are available to answer questions. You can encourage visitors to engage with the various interactive activities within the exhibit. Become familiar with the exhibit so you can recommend activities to different visitors. Docents can also choose to set-up a supplemental activity for visitors to participate in. A selection of We Are Water MN's interactive activities and suggested supplemental activities are described below. Materials for supplemental activities are provided by We Are Water MN. Ask your host site coordinator for these supplies.

Interactive Activities

Main Message #1: We Are Water

- ✓ Watch and listen to the water stories. Some of these stories share moments of fun or play. Others tell of loss or change. Together, they reveal the central nature of water in our lives. Consider what happens when stories are told from only one person or group's perspective. Why is important to have many perspectives on water?
- ✓ Remind visitors to share their personal water stories on the map or globe. Does your story categorize water as recreation, spiritual, survival, or something else? What about the stories already on the board? Do you notice any patterns in the ways visitors are telling their water stories?
- ✓ Play with the puppets!
- ✓ Read a book from the book basket. Talk through the discussion questions.
- Allow children to trace their outlines on paper. Shade 60-70 percent in blue to represent the percent of our bodies that is water.



Main Message #2: How's the Water?

- ✓ Complete the water cycle puzzle.
- How's my Watershed? Allow visitors to enter their zip code to learn more on the [MPCA Website](https://www.pca.state.mn.us/water/watersheds) (<https://www.pca.state.mn.us/water/watersheds>) on a laptop or tablet.
- Altered Watercourses – pull up the [searchable map](https://bit.ly/39lelFg) on a laptop or tablet. Encourage visitors to notice modified watercourses near their communities. <https://bit.ly/39lelFg>
- Show visitors a tray of aquatic macroinvertebrates collected from a local waterway. Some species are more sensitive to pollutants than others. Use a key to identify species and look through the flip book to see their sensitivity. What can the diversity of species tell us about the quality of the water?

Main Message #3: People + Water + Choices

- ✓ Bookmark your county in the *Minnesota Place Names Encyclopedia*. Flip through and locate local waterways. Do you know other names or stories?
- ✓ Try out the listening games! What open-ended questions can you think of?
- Provide information about water infrastructure issues in your community such as wastewater, drinking water, dams, stormwater, etc. Consider hosting a special community event with local representatives and experts to discuss these challenges and any proposed solutions.
- Show visitors the Water Sayings from Around the World sheets. Hypothesize from which region of the world these sayings originate and discuss what clues about the environment, peoples' relationship to it, and lessons or morals are embedded in the sayings.

Main Message #4: You + Me + Water

- ✓ Demonstrate the **Secchi tube**. Why might the amount of light reaching through the water matter?
- ✓ Write a water protection idea on a raindrop.
- ✓ Invite visitors to sign up for the one-time action email.
- Show labeled jars of local water collected at different times, such as after a storm. Notice any changes in water **turbidity** or appearance and discuss possible causes.
- Demonstrate the proportion of the world's water that is fresh, non-frozen, accessible, and non-polluted with the Project WET activity: A Drop in the Bucket, (Appendix 1).
- Invite visitors to try to float a paperclip on the surface of a bowl of water. It can be done! Add a small drop of dish soap and watch the clip sink. Discuss the phenomenon of **surface tension** and how household items can act as pollutants by disrupting habitat.

Supplemental Activity 1: Exhibit Scavenger Hunt

Adapt or print the next two pages as a fun scavenger hunt for visitors. This is a great activity to have out during docent hours, or for visiting groups. Clipboards are useful here, and prizes are a fun reward.

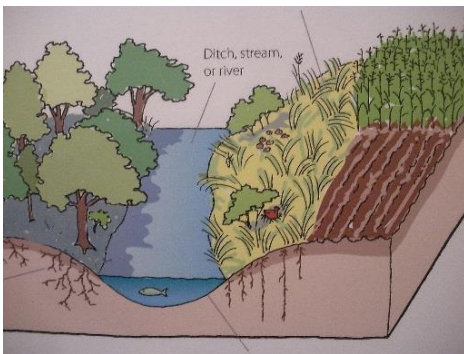


We Are Water MN exhibit scavenger hunt

Locate the pictures and answer the questions.



Find the card titled "Sediment." What is sediment?



How do trees and plants with long roots protect water? List two ways.



What are two good things a wetland does?

What percent of wetlands have disappeared since Europeans settled here?

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What does a Secchi disk measure?



Some drinking water in Minnesota has a pollutant in it called nitrate.

Where does nitrate pollution come from?

Stories from the St. Croix Valley

In these 3-minute audio clips, local people talk about their relationship with water. A few share stories of play, action, and explanation. Others share stories of loss, change, meaning, and memory. Together, they reveal the central nature of water in our lives.

For eight years, **Astoria Jespersen's** family lived on a houseboat during the summer, giving her and her sister some unique childhood memories.

Would you want to live on the water? Why or why not?

Rosetta Peters was not born in Minnetonka, but she describes her move to Minnesota as "coming home" for more than one reason.

When have you gathered with friends or family around water in your life?

Listen to one of the audio stories. Whose story did you listen to?



What will you do to protect water? Write it on a water drop, and here:

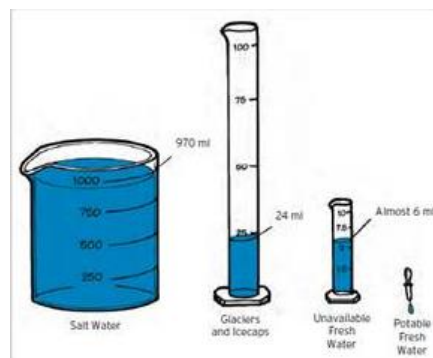
Supplemental Activity 2: A Drop in the Bucket

(Adapted from Project WET)

Summary: Visitors understand the precious nature of fresh, accessible, and potable water through a visual representation.

Materials:

- 1000 ml container
- 100 ml container
- 10 ml container (2)
- Eyedropper
- Optional: small metal bucket
- Water



Directions:

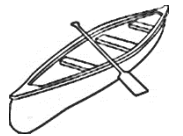
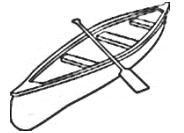
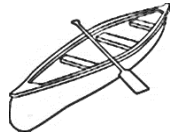
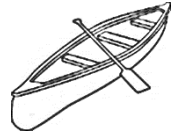
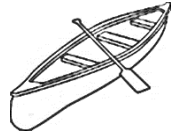
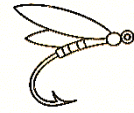
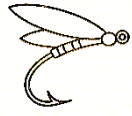
1. Show visitors 1 liter (1000 ml) of water and tell them it represents all the water on Earth
2. Ask where most of the water on Earth is located. *Oceans*. Can we use ocean water for drinking? Pour 30 ml of the water into a 100-ml graduated cylinder. This represents Earth's fresh water, about 3% of the total.
3. Ask visitors where the next largest amount of fresh water is located. *Glaciers, ice*. Almost 80% of Earth's fresh water is frozen in ice caps and glaciers. Pour 6 ml of fresh water into a small dish or cylinder and set the rest (24 ml) aside. The water in the dish (.6 percent of the total) represents fresh, non-frozen water.
4. Ask visitors where the next largest amount of fresh water is located. *Below Ground*. Only about 1.5 ml of this water is surface water; the rest is underground. Pour 1.5 ml into another small dish or cylinder. This represents the fresh, non-frozen, surface water.
5. Use an eyedropper to remove a single drop of water (.003 ml). Release this one drop into a small metal bucket or drop it into a visitor's palm. If using the bucket, ask visitors to be quiet enough to hear the sound of the drop hitting the bottom of the bucket. This represents clean, fresh water that is not polluted or otherwise unavailable for use, about 0.00003% (or 3/100,000) of the total! This precious drop must be managed properly.

Discussion: Why does water seem plentiful in some places but in others it is a scarce commodity? *Geography, climate, and weather affect water distribution. Agriculture, infrastructure, industry and domestic use also affect availability.*

Supplemental Activity 3: Button Maker

Adapt or print the next two pages to use with the button maker. This is a great activity to have out during docent hours. Instructions for how to use the button maker are included with the equipment.





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Hosting Groups

Schools, Senior Centers, and community leaders are examples of groups that may come to visit the exhibition. The We Are Water MN Educator Guide provides detailed instructions, curriculum ideas, and lesson plans for hosting various ages of students and visitors to the exhibit.

In general, when hosting groups...

- Communicate with the group leader in advance to know how many visitors are coming and what age.
- Select activities for the visit from the supplemental activities above, or by consulting the Educator Guide.
- Schedule docents as needed.
- See page 5 for more tips on being an informed and effective docent.

