

ORGANIZER  
AND  
DISCUSSION  
LEADER  
GUIDE

# YAHARA2070

## DISCUSSION GUIDE

FULL-LENGTH VERSION

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*Creating a desirable future for  
water and people*

# YAHARA2070

## DISCUSSION GUIDE

The Yahara 2070 scenarios and discussion guide are part of the Water Sustainability and Climate Project at the University of Wisconsin-Madison, a research effort to understand how water and the other benefits people derive from nature could change over time. The five-year project (2011–2016) focused on the Yahara Watershed in southern Wisconsin and was funded by the National Science Foundation.

Visit [wsc.limnology.wisc.edu](http://wsc.limnology.wisc.edu).

### PROJECT SPONSOR

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## HOW TO USE THIS GUIDE

This discussion guide will help your group use the Yahara 2070 scenarios to talk about the future of water and people. But we encourage more than talk. Your group likely came together with a desire to *do something* about the future. As such, this guide is a springboard for conversations we hope will evolve into efforts to work toward a desirable future.

There are two versions of this discussion guide to accommodate various capacities. This one is the full-length version and contains two more discussions than the abridged version. We recommend this version if your group has the time to complete it and/or if your group already has a good understanding of natural resource issues in Wisconsin.

Both the full-length and abridged versions can be completed as a weekly series, as a retreat or workshop, or in whatever other format suits your group's needs.

The discussions cover a lot of ground. We recognize the amount of time and energy this process demands and thank you for making this investment for future generations.

### The Discussions

#### DISCUSSION 1

**A LENS FOR THE FUTURE** will help your group explore what long-term thinking means.

#### DISCUSSION 2

**“WHAT IF?” FOR THE FUTURE** will help your group compare the possibilities presented in the Yahara 2070 scenarios and identify elements you would like to include in your vision of a desirable future for water and people.

#### DISCUSSION 3

**ENVISIONING OUR DESIRABLE FUTURE** will guide you through the process of creating your own scenario of a desirable future for water and people.

#### DISCUSSION 4

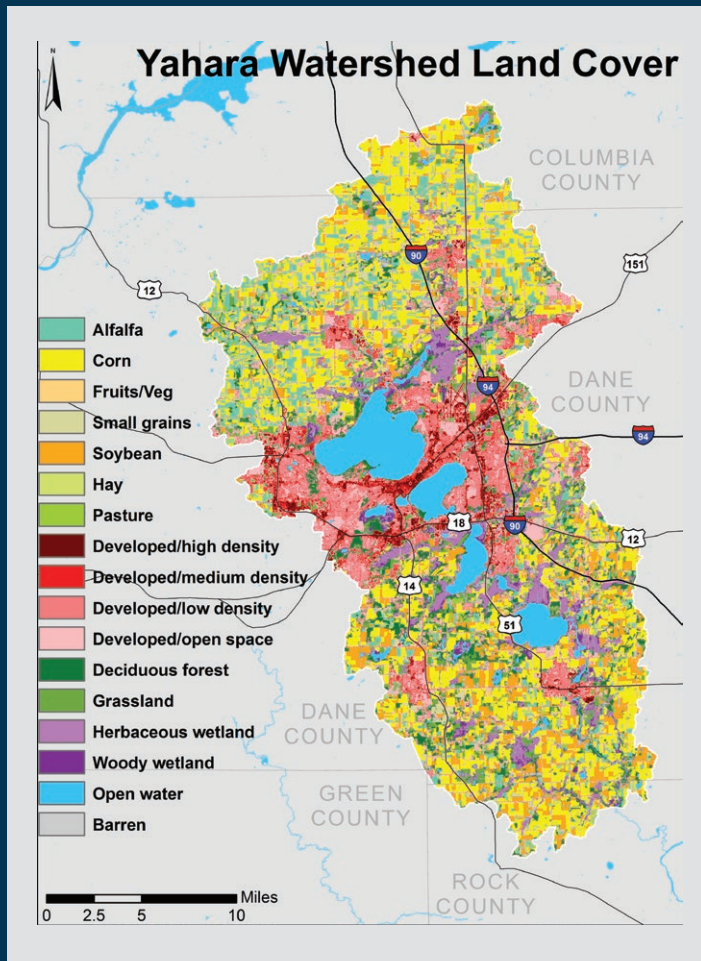
**BUILDING OUR DESIRABLE FUTURE** will help you start to identify what your group can do to achieve your desirable 2070.

### Whom is this guide for?

This guide is for groups in the Yahara Watershed and beyond that are interested in helping to create a desirable future for our waters and communities, such as the following:

- A neighborhood or community group
- Place-based stewardship groups, such as “friends of” lake or watershed groups
- Religious congregations or organizations
- Non-profit organizations and their members
- Public groups organized by municipalities, counties, other governmental organizations, or elected officials
- Policy or government boards or committees
- Student groups at the university level
- Informally organized groups of engaged citizens (e.g., book groups)
- Businesses
- Coalitions of any of the above

This guide can be used with people who live outside the Yahara Watershed. Many of the issues the Yahara 2070 scenarios raise could apply to all of the counties the watershed lies in—Dane, Rock, and Columbia—and to other parts of Wisconsin, too.



## The Yahara Watershed

A watershed is a natural drainage basin for rain and snowmelt, in which all water flows to a single, low-lying point. The Yahara Watershed includes the land surrounding the Yahara lakes, where all surface water ends up in the Yahara River. The Yahara's waters flow into the Rock River and ultimately the Mississippi River. Watersheds are natural boundaries for thinking about land and water, which is why the scale is appropriate for these discussions. This map shows the boundaries of the Yahara Watershed and what types of urban, agricultural, and natural areas make up its landscape.

### Before you begin, ask yourselves...

- Why do we want to engage each other in an in-depth conversation about our future?
- What is or could be our group's role in shaping a desirable future for water and people?
- Do we already have defined goals for the future or are we looking for our path?
- Does our group currently have a process for thinking about the future? How might these discussions support this process?
- What difference would it make if our group discussed a desirable future for water and people?
- What are potential opportunities and barriers to engaging our community in a dialogue about the future?
- Who should be involved in these discussions, and how might we best engage them?



## INTRODUCTION

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“ *People are embedded parts of the biosphere and shape it, from local to global scales, from the past to the future. At the same time people are fundamentally dependent on the capacity of the biosphere to sustain human development.* ”

– Carl Folke, Swedish ecologist

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Considering our dependence on the entire living world—from our home place to the planet—and our influence on future generations is critical to the survival of our species. Unlike many aspects of society, nature changes slowly, and the causes and consequences are often complex. Considering our connections with future generations and addressing underlying causes of slow-moving change are important steps to reaping the consequences we want.

This discussion guide will help your group engage in long-term thinking to create a desirable future for water and people. On your journey, you will

- Learn what long-term thinking means,
- Use the Yahara 2070 scenarios to stimulate conversation about possibilities for the future,
- Develop your own vision of a resilient and desirable future, and
- Identify steps to work toward that vision.

### About Yahara 2070

The Yahara 2070 scenarios are a set of plausible stories about possible futures for the Yahara Watershed. They are based on a range of social and environmental changes that could impact the region's land and water resources and, ultimately, the well-being of future generations. They can help watershed residents consider the causes and consequences of long-term change, imagine different futures for their home, and envision a future that is desirable. By providing a more structured way to think about the inherent uncertainty of

the future, they can help us act more effectively in the present.

The goals of this discussion guide reflect those of Yahara 2070:

- to encourage more long-term thinking in our decisions and actions today, and
- to stimulate broad discussion about what kind of future is both desirable and possible, and what we should do today to help bring about that future.

**Yahara 2070 is not a set of predictions.** The scenarios are explorations of the question “what if.” They are not about what will happen to us, but about four possible futures we could consider. The real future will likely include elements from all four, in addition to numerous other alternatives. By discussing what is possible, we can identify ways to bring about what is desirable, avoid what is undesirable, and be prepared for the unexpected.

**None of the scenarios portray an ideal future.** The outcomes of each have advantages and disadvantages. This discussion guide helps you consider all four together, weighing the benefits and costs that living in each of these futures might offer.

Ultimately, Yahara 2070 rises from the understanding that we have some control over the future, and that knowing where we want to go helps us understand how we could get there.

Visit [yahara2070.org](http://yahara2070.org) to learn more.



*“Water is the most critical resource issue of our lifetime and our children’s lifetime. The health of our waters is the principal measure of how we live on the land.”*

– **Luna Leopold**, hydrologist and son of Aldo Leopold, a Wisconsin native and conservation thought leader.

## Why Talk About The Future of Water?

Yahara 2070 is focused on how we might ensure clean and abundant freshwater as we experience changes in land use, climate, and human demands into the future. Using scenarios like Yahara 2070 to encourage long-term thinking about the health of our waters and communities can help us build resilience.

Resilience means our ecosystems and communities can handle changes and continue on a path of progress, prosperity, and well-being. It also means we can adjust our course if what we are doing isn’t working. For example, building resilience is improving the health of our lakes so they can withstand climate change and increasing demands for food, both of which

could worsen water quality problems if not properly addressed.

Water provides an appropriate focal point for conversations about resilience because it connects us to each other, to the entire living world, and to past and future generations. It is especially important to the culture, economy, and quality of life of communities throughout Wisconsin. Given these connections, the future of water could determine the future of people.

We hope your discussions will inspire creative, game-changing solutions that could help make our waters and communities more resilient and lead us toward a positive future.

## NATURE'S LONG-TERM NATURE

A central issue in the Yahara 2070 scenarios is impaired water quality resulting from nutrient pollution, especially that from phosphorus, a fertilizing nutrient that is abundant in the soils and surface waters of the Yahara Watershed. This abundance causes algal blooms in the Yahara lakes, which can ruin people's enjoyment of them, threaten public health, and make the lakes and our communities vulnerable to disease, economic losses, or even political disruption. This challenge is tied to the region's history as a growing state capital surrounded by productive agriculture—a history that began in the mid-1800s. Throughout this time, the region has undergone shifts in how people use land and, more recently, changes in weather trends, such as more frequent heavy rainstorms. These long-term trends further complicate water quality problems and our ability to solve them, which, in turn, necessitates adopting a long time horizon when making decisions that will affect the health of our land, waters, and communities.

## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



## DISCUSSION GROUP ROLES AND RESPONSIBILITIES

The three leadership roles needed to conduct the discussion series are the organizer, the discussion leader, and the scribe. More than one person can take on each role. Below are the responsibilities.

### The organizer

At least one person should be the lead organizer who will make sure everything gets done. Having someone at the helm is important for steering the ship and making sure the wind stays in the sails. This person will be responsible for the following:

- Recruit discussion group members, as needed.
- Organize meeting logistics, such as place, time, and supplies/materials.
- Lead communication with the group, such as setting up the meetings and sending reminders.
- Make sure there are a discussion leader and scribe for each discussion.
- Distribute the discussion notes to the whole group after each discussion, such as via email.

### The scribe

The scribe is responsible for taking notes during the discussion, recording the important takeaways and action items especially. This person should be different from the discussion leader, so the latter can focus on her or his task of facilitating the conversation. The scribe does not need to be the same person for each discussion. Here are the duties:

- Take notes on the flipchart or large pieces of paper, when appropriate, to enable the whole group to see the major points being made.
- Take clear notes of major messages, takeaways, or action items on regular paper, when a flipchart is not necessary.
- Assemble the notes from the discussion and give them to the organizer to distribute afterwards.

### The discussion leader

The discussion leader is responsible for facilitating the discussion(s). The organizer could also be a discussion leader, but that person does not need to lead every discussion. Consider sharing the role with other group members to help strengthen leadership and ownership within the group. The following are the duties of the discussion leader(s):

- Read the discussion(s) you are responsible for leading in advance, so that you know what to do when it comes time to lead it.
- Guide the group through the discussion by reading to them questions and instructions, as appropriate.
- Watch the time during the discussion. Make sure you follow the time allotments to ensure there is enough time get through everything.
- Ensure that everyone who wants to speak gets the opportunity to be heard.
- Read and follow the Tips for Fruitful Discussions on page 11.
- Make sure everyone follows the discussion ground rules.
- Check out some of the facilitation resources highlighted on page 12 to learn techniques of effective discussion facilitation.

## ORGANIZING TIPS

Organizing an effective discussion circle can take some planning. These tips will get you started.

### Recruiting participants

If you do not have a group already assembled or would like to recruit more people to your group, consider these suggestions:

- Bringing together a diverse group of people will make the vision you create more powerful. Think about whose perspectives might be important according to your specific goals, and consider inviting people of different ages, backgrounds, ideologies, and racial, ethnic, and cultural groups.
- If you have a few people already interested in participating, have them each invite one or two more people.
- Consider whether there are specific individuals you'd like to invite, such as an elected official or a representative from a relevant organization. If you don't already have a connection with these individuals, a simple email invitation stating why you think their participation is important could work to get them involved. Don't be afraid to follow up if you don't hear from them immediately. Personal invitations are typically the most effective.
- If you would like to host this discussion with a group you are already involved with, such as a church, you could make an announcement at a meeting, hang up flyers, send emails, talk with people face-to-face, or utilize whatever methods you know work well for the group.

### Logistical matters

- Choose a site that participants can get to easily and provides a comfortable space for a two-hour discussion.
- Find a day and time that will work well for everyone.
- Find ways to make participation as easy as possible. Consider providing refreshments, childcare (if applicable), and carpools.
- Generate an email list of participants for group communication.

### Discussion Materials

- Snacks
- Flipchart or other large pieces of paper for recording group notes and for a doodle pad
- Markers for flipcharts
- Post-its or small scraps of paper
- Pens and paper for individual note-taking
- Copies of the participant discussion guide for everyone
- The Yahara 2070 stories, audio-stories, and graphics, which are available on [yahara2070.org](http://yahara2070.org)

## TIPS FOR FRUITFUL DISCUSSIONS

**READ OR LISTEN TO THE SCENARIOS!** Before you begin your discussion series, read or listen to all four scenarios in their entirety. You may want to also review the other scenario features on [yahara2070.org](http://yahara2070.org), such as the maps and graphs of environmental changes.

**MAKE SURE EVERYONE ELSE READS THE SCENARIOS, TOO.** Be clear in your initial communication with the discussion group that everyone must read or listen to all four scenarios before you begin your discussion series. Think of it like a book club. Rich and fruitful discussions are more likely to happen if everyone knows the stories.

**COME PREPARED TO LEAD YOUR DISCUSSION.** Before your group meets, read through the discussion(s) you are responsible for leading, so you know what it will take to lead your group through it.

**INVOLVE COMMUNITY LEADERS.** Undertaking the task of creating a desirable future demonstrates leadership. As you participate in these discussions, think about your role in your community and how you can spread the ideas your group generates. Also, consider inviting a community leader to be part of your discussion group. Involving a community leader can be important for carrying out any actions or initiatives that arise from your discussions, as well as for gaining buy-in from members of your community or organization who were not part of your discussions.

**ASSIGN AND SHARE ROLES.** Each discussion needs a discussion leader and a scribe. The organizer does not need to be the discussion leader, and the same person does not need to hold the same role for every discussion. Sharing the roles can empower others in your group. The major responsibilities for these roles can be found of page 9. An experienced facilitator is not required for any discussion.

**SET GROUND RULES.** As a group, take a few minutes at the start of your first discussion to set ground rules to help set the tone and ensure everyone's needs are met. The adjacent text box contains examples to help you get started.

### SAMPLE GROUND RULES

- Listen to each other, and respect everyone's views.
- Give everyone a chance to talk, and share the airtime fairly.
- One person speaks at a time. Do not interrupt.
- Be concise.
- Embrace and explore diversity and disagreement with open minds and empathy.
- Speak for yourself, not for any other person or group.
- Help the discussion leader keep things on track.
- *Add your own ground rules!*

**PROVIDE A COMMUNAL DOODLE PAD.** Everyone processes information differently. For some, it helps to draw out their ideas before or as they express them. To accommodate such differences, provide a communal doodle pad in the middle of the room or the table(s) for participants to write or draw out their ideas as the discussion is happening.

**CREATE A "WOODPILE" FOR OFF-TOPIC IDEAS.** The woodpile is a sheet of paper or other writing surface that is visible to the whole group and intended for collecting ideas or topics that are important, but not relevant to the discussion at hand. Ideas put on the

woodpile can be saved for later discussion, either at the end or at a different time. As the discussion leader, if a participant strays off topic, gently bring them back and offer to put their off-topic idea on the woodpile.

### **FRAME YOUR PERSPECTIVE AND EXPECTATIONS.**

This guide will have you discuss the scenarios together as a package, not separately. While it is important to consider the elements presented in each scenario, the point is to examine them as a set. Remember, there is no best case or worst case scenario; each has pros and cons. Think of Yahara 2070 as a sampling of ideas for the discussion table. Moreover, the scenarios do not attempt to answer every question about the future—in fact, they will likely raise more questions.

### **CHALLENGE YOURSELF TO THINK DIFFERENTLY.**

Thinking about the long-term future may make you or your group members feel uncomfortable—that's ok. It can be hard to think far ahead. The scenarios may present ideas and changes that wouldn't seem to work in today's world, or which might conflict with your worldview. In fact, the scenarios help highlight our values by challenging them. Tell your group that if anyone feels discomfort while reading the scenarios or in your discussions, they should lean into it and not be afraid to express their views. Creativity, innovation, and change rarely happen without discomfort.

## **OTHER FACILITATION RESOURCES**

There are many facilitation guides already out there, which could help you enhance the productivity of your discussions. Check out the following resources for more tips.

### **University of Wisconsin-Madison, Office of Quality Improvement's Facilitation Tool Kit:**

[oqi.wisc.edu/resourcelibrary/uploads/resources/Facilitator\\_Tool\\_Kit.pdf](http://oqi.wisc.edu/resourcelibrary/uploads/resources/Facilitator_Tool_Kit.pdf)

### **The Interactivity Foundation, facilitation resources:**

[interactivityfoundation.org/resources-downloads/guidebooks/](http://interactivityfoundation.org/resources-downloads/guidebooks/)

### **Tips for facilitating effective group discussions from the Harriet W. Sheridan Center for Teaching and Learning at Brown University:**

[brown.edu/about/administration/sheridan-center/teaching-learning/effective-classroom-practices/discussions-seminars/facilitating](http://brown.edu/about/administration/sheridan-center/teaching-learning/effective-classroom-practices/discussions-seminars/facilitating)

### **National Coalition for Dialogue and Deliberation's Resource Center:**

[ncdd.org/rc/](http://ncdd.org/rc/)

### ***Facilitator's Guide to Participatory Decision-Making* by Sam Kaner.**

You can buy the Third Edition of this book or download a PDF of the Second Edition here:

[ideal.forestry.ubc.ca/cons481/Facilitators%20Guide%20to%20Participation\\_Unknown.pdf](http://ideal.forestry.ubc.ca/cons481/Facilitators%20Guide%20to%20Participation_Unknown.pdf)

# YAHARA 2070 SCENARIO SUMMARIES

## ACCELERATED INNOVATION

THE POSSIBILITY:

***What if we prioritize technological solutions to our water and climate challenges?***

**CONSEQUENCES BY 2070:**



### OUR LIFESTYLES

- Technology influences everything
- Reliance on technology increases
- Material wealth increases
- Food comes from farms that rely heavily on technology to grow and enhance food; people eat less meat and dairy
- More people work in the tech industry than today
- Inequality still exists
- People are more disconnected from the natural world
- Individuals are vulnerable to technology failures (e.g., disease outbreaks)

### OUR COMMUNITIES

- Dane County has become a “solution center,” where lots of innovation happens
- Urban growth has increased due to an increased population and increased wealth, but the growth is dense (i.e., less sprawl)
- Communities rely on advanced public transportation and renewable energy systems, such as solar power and nuclear
- The economy is largely based in the tech industry
- Communities are vulnerable to technology failures

### OUR ENVIRONMENT\*

- Technology enhances the benefits people get from nature
- Nature is highly controlled
- The lakes are cleaner than they were in the beginning of the century, but still suffer from occasional algal blooms
- The environment is vulnerable to technology failures

## CONNECTED COMMUNITIES

THE POSSIBILITY:

***What if a global values shift towards less consumption and stronger communities occurs in response to our water and climate challenges?***

**CONSEQUENCES BY 2070:**



### OUR LIFESTYLES

- Less consumption and high life quality are central concerns
- Food comes mostly from local farmers; people eat more fruits, vegetables, and high quality foods, but less meat and dairy
- Inequality is decreasing, but still exists
- People participate more in policy-making and the democratic process
- People rely less on fossil fuels and more on renewable energy
- People spend more time with their communities
- Prices incorporate social and environmental costs, making some things more expensive and difficult, such as air travel

### OUR COMMUNITIES

- Communities are designed to enhance connections between people and with nature (e.g., shared backyards and more parks)
- It is easy to get around and between cities and towns by public transportation, bikes, or walking
- Wealth is measured by quality of life, not by material wealth
- The local economy improves
- Urban communities are denser; urban sprawl has stopped
- Communities rely on renewable energy; energy efficiency has improved

### OUR ENVIRONMENT\*

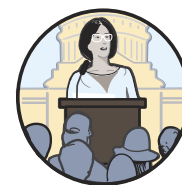
- There are more natural areas and green spaces in the region
- Farms have become smaller and grow a high diversity of foods, which has improved biodiversity
- Lake shorelines have more vegetation to lessen flooding and help improve water quality
- Lake water quality is worse than in the beginning of the century, due to the legacy of past nutrient pollution, severe runoff events, and land-use changes that are inadequate at removing phosphorus from the soil. However, by 2060, water quality begins to trend toward improvement.



## NESTED WATERSHEDS

THE POSSIBILITY:

***What if the United States reforms how it governs freshwater, shifting to watershed-scale governance, in response to water and climate challenges?***



### CONSEQUENCES BY 2070:

OUR LIFESTYLES	OUR COMMUNITIES	OUR ENVIRONMENT*
<ul style="list-style-type: none"> <li>• People prioritize water conservation and view water as “wealth”</li> <li>• Food comes mostly from local farms; certain foods are more expensive due to impacts on water, such as meat and dairy</li> <li>• People rely more on public transportation</li> <li>• People still use fossil fuels</li> <li>• Programs to improve water management have created jobs</li> <li>• The Yahara is among the watersheds that gets paid to send water to the US Southwestern states experiencing severe water scarcity</li> </ul>	<ul style="list-style-type: none"> <li>• The Yahara Watershed Management Authority designs local water management policies and programs</li> <li>• Urban growth is more controlled</li> <li>• Cities and towns are designed to conserve water and help clean up the lakes (e.g., with “green” infrastructure)</li> <li>• There is better public transportation</li> <li>• Water management has become an important economic activity in both the public and private sectors</li> <li>• Incentives have enabled urban and farming communities to better protect freshwater through infrastructure and land management practices</li> <li>• Communities are still vulnerable to extreme weather, such as flooding and drought</li> </ul>	<ul style="list-style-type: none"> <li>• There are more natural areas to help improve freshwater supplies</li> <li>• Farmland is managed to treat water as a crop</li> <li>• There is less farmland to help improve freshwater supplies; food production remains the same, however</li> <li>• The soil is becoming healthier, which helps protect water</li> <li>• The lakes have become cleaner than in the beginning of the century, but erratic weather can cause setbacks (e.g., floods)</li> </ul>

## ABANDONMENT AND RENEWAL

THE POSSIBILITY:

***What if we don’t do enough in response to water and climate challenges, and an environmental health disaster occurs?***



### CONSEQUENCES BY 2070:

OUR LIFESTYLES	OUR COMMUNITIES	OUR ENVIRONMENT*
<ul style="list-style-type: none"> <li>• People’s main concern is to survive—e.g., most people must grow their own food</li> <li>• People are resourceful and waste nothing, because it is difficult or impossible to get more supplies of material goods</li> <li>• Equality has increased; material wealth has decreased</li> <li>• People are generally more reliant on each other</li> <li>• Survival can be difficult</li> </ul>	<ul style="list-style-type: none"> <li>• The population is one-tenth of the size it was before the disaster</li> <li>• People live on subsistence farms or in small and dense urban communities</li> <li>• There is no government or centralized social support systems</li> <li>• People barter goods and services, instead of using money, because of global economic collapse</li> <li>• Some communities see the chance to create a new society</li> </ul>	<ul style="list-style-type: none"> <li>• There are more natural areas, such as prairies and forests; they are growing back due to the lack of people</li> <li>• There is more wildlife</li> <li>• There is less farmland</li> <li>• The lakes are slowly becoming cleaner, but they are still quite polluted with nutrients because of the past</li> </ul>

\*Climate changes are not included here, as the climates depicted in each scenario are not necessarily consequences of the changes that occurred. Each scenario was given a different climate change trajectory to reflect the range of changes that could occur.

## DISCUSSION 1: A LENS FOR THE FUTURE

“

*While the future is uncertain and much of it is beyond our control, we can control many aspects of it. We choose our future: we create it by what we do or fail to do.*

”

– Wendy Schultz, futurist

### PURPOSE

What does long-term thinking mean? This discussion will help your group adopt a long-term lens by exploring some of the key concepts of this approach and how they relate to the Yahara 2070 scenarios.

### TIME SUGGESTED



2 hours

### MATERIALS

- The Yahara 2070 scenario summaries (page 13-14).
- Pens and paper for note-taking
- Pathways of Change worksheet

### OPTIONAL MATERIALS

- A doodle pad—e.g., flipchart or large sheets of paper for participants to draw or write out their thoughts
- Markers

### REMINDER:

It is very important for everyone to read the scenarios or listen to the audio-stories before your first discussion!

### Getting started

10 MINUTES

whole group

- Have everyone introduce themselves, including their names and what brings them to the discussion—for example, why is thinking and talking about the future of water and people important to them, or how do they feel connected to water and its future?

**Suggestion:** Invite participants to also share how they think they contribute diversity to the group. Your group's diversity will be important to your discussions, and it is helpful to know from what perspective people are speaking.

- As a group, set your discussion ground rules (see page 11). Have the scribe write your ground rules on a large piece of paper and hang it up for everyone to see. Do not start the discussion until you all agree on the ground rules.

### Warm-up

10 MINUTES

whole group

Kick off your discussion with these questions:

- What are some first impressions you had when reading or listening to the scenarios?
- Recalling what changes have occurred in the past couple of generations can open our minds to the changes that are possible for future generations.

Over the past 60 years, what has changed about the following aspects of our lives, especially in terms of how they have influenced our relationship with land and water?

- Major technological advancements
- Major laws or policy changes that have affected our land, water, and natural resources
- Social values
- The health and quality of our natural spaces
- How we develop cities and communities
- How we grow, distribute, and eat food
- How people interact with the natural environment

Try to cover at least one change per bullet point. Your group could offer answers via the “popcorn” method, in which individuals voice ideas as they come to mind. **Spend no more than 5 minutes on this question.**

## Part 1: Consider possible changes

**30 MINUTES**

*whole group and in pairs*

1. The Yahara 2070 scenarios explore the potential impacts of four **driving forces** that could influence the future of the Yahara Watershed. A driving force is a set of trends or societal shifts that allow significant changes to occur. In Yahara 2070, these driving forces are, generally, technological innovation, social values, government reform, and environmental disaster.
  - A. What is a real, historical example of a driving force that has had major consequences on our lives today? These could be related to technology, changing values, government reform, or an environmental disaster, or fall under a different theme. What can we learn from the outcomes of these changes?
  - B. There are many driving forces that could shape the future of water and people, in addition to the four in the scenarios. What other driving forces,

or sets of trends, are affecting your region, the United States, and the world? Which of these forces would you like to consider in your vision of a desirable future?

## INSTRUCTIONS

**Have the group use the Pathways of Change worksheet (found on page 21) to answer the following questions. Start by discussing 2a as a group, and then give everyone one time to work through 2b-2d in pairs. Allow time for everyone to share their Pathways of Change with the whole group, if they would like to.**

2. As we progress through time, we reach moments when the collective choices we could make have alternate pathways with different future implications. These moments are sometimes called “**branch points**,” because of the different directions these choices could send us in. Often, several driving forces can lead up to these branch points.
  - A. Thinking about the past 60 years, what are some major branch points, when society was faced with collective choices that could have led to different consequences? It might help to think back to the second warm-up question and the previous question. Brainstorm as a group and then, with a partner, pick one branch point to map out on your **Pathways of Change** worksheet.
  - B. What trends or driving forces led to your chosen branch point? Write your thoughts on your Pathways of Change worksheet.
  - C. What were some consequences of the choices made at the branch point? Were these consequences anticipated when the choices were made?
  - D. What other collective choices could people have made at these branch points? What do you think could have been the consequences of these different pathways?

3. The consequences of the choices we make can be **reversible or irreversible**, for better or worse. A positive example of irreversibility is the end of legal slavery in the United States. A negative example of irreversibility is species extinction.
- A. Were the consequences of the choices you discussed in the previous question reversible or irreversible?
- B. What social or environmental factors seem to make consequences reversible or irreversible?
- When 20 minutes is up, have the small groups share their key takeaways with the whole group, giving each group five minutes.
  - (Optional) Have the scribe record each group's thoughts on flipchart paper or on a chalk or white board, laying the answers out in a grid similar to how the questions are laid out.
  - After each small group shares, if there is time, allow the whole group to discuss additional thoughts for that scenario.

## Part 2: Consider the consequences

## 40 MINUTES

*whole group*

In small groups, answer the questions on page 18 about the consequences of the changes that occurred in the Yahara 2070 scenarios.

## INSTRUCTIONS

- Divide the group into two to four smaller ones, ensuring there are at least two people per group. Assign each group one of the scenarios, or two if necessary, making sure all four scenarios are covered.
- Have one person per small group record the key points from their discussion.
- Read the following to the whole group before they begin their small group work:  
*One purpose of the Yahara 2070 scenarios is to get us thinking about some possible ways things could change for water and people over the next few generations and the potential consequences.*

***In your small groups, answer the questions on page 18 for your assigned scenario(s). You will have 20 minutes total for your discussion. If you are running short on time, you can skip the supplemental question.***

## NOTES

[illegible]

## CHANGE AND CONSEQUENCES

## THE PROS AND CONS

## WHAT WOULD IT TAKE?

## SUPPLEMENTAL QUESTION



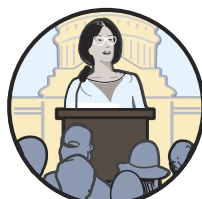
### Accelerated Innovation

How did the Innovation Revolution change the ways people farm, build and live in cities and communities, and interact with nature? What were some consequences of these changes?

What do you think are the pros and cons of relying on technology as a solution to social and environmental challenges?

What do you think it would take for Dane County to become a center for technological solutions to environmental challenges?

How could society anticipate and deal with negative unintended consequences of technological solutions to environmental challenges?



### Nested Watersheds

How did the Reform change the ways people farm, build and live in cities and communities, and interact with nature? What were some consequences of these changes?

What do you think are the pros and cons of government intervention as a solution to social and environmental challenges?

What do you think it would take for a government reform on the scale of Nested Watersheds to happen in the United States?

What are some other solutions you think people could undertake in response to a national water crisis?



### Connected Communities

How did the Great Transition change the ways people farm, build and live in cities and communities, and interact with nature? What were some consequences of these changes?

What do you think are the pros and cons of a values shift as a solution to social and environmental challenges?

What do you think it would take for a broad public values shift like the Great Transition to happen in your community? How about in the United States or worldwide?

How do people in Connected Communities deal with “violators” of the new social paradigm, such as companies who don’t follow sustainability norms? What other ways might people effectively uphold collectively held values?



### Abandonment and Renewal

How did the disaster change the ways people farm, build and live in cities and communities, and interact with nature? What were some consequences of these changes?

What do you think are the pros and cons of a disaster followed by social and ecological renewal?

What do you think it would take to rebuild society in the Yahara watershed or your community if a disaster of a similar magnitude were to occur in the next few decades?

How could the disaster have been prevented? Consider the roles of government, technology, values, or other driving forces of change.



## Part 3: Consider our choices

**40 MINUTES**

*whole group*

### INSTRUCTIONS

**Pick 2 questions you think would be most relevant or beneficial to your group. It may not be possible to cover every question in this part with the time given.**

4. Many choices people make can impact the health of our waters in the future: how we build and manage cities, how and what we farm, how we treat our natural spaces, what people demand from land and water through what they eat, and how we prepare for or respond to climate change. These choices often have **tradeoffs**. For example, in the Yahara Watershed, research has shown there are tradeoffs between water quality and agricultural production—in other words, it would be difficult to have clean lakes while also supporting a lot of manure-producing livestock and row crops.
  - A. What tradeoffs can you recall from the Yahara 2070 scenarios? (They may not all be related directly to water.) Which of these tradeoffs could you live with and which could you not live with?
  - B. What tradeoffs do you think your community faces today, in terms of ensuring healthy waters and communities for future generations? How do you feel about those tradeoffs?
5. Consider this: Changes in the ways we use our land, as well as climate change, affect our waters. We can make choices about how we use our land, which gives us some control over the future, but we cannot choose or control how exactly climate change affects our waters and communities.
  - A. What environmental and social changes or pressures does your community face that seem controllable, and which seem uncontrollable? Think especially about the changes or pressures that might impact your vision of a desirable future.

- B. How might we account for the things we can't control when making choices about the future?

6. The scenarios are meant to help us discuss how to build a resilient and desirable future for water and people. **Building resilience** involves coming up with new, transformative ideas for solving the challenges we face today. It also requires us to identify the great ideas and qualities we already have, or humanity's "**bright spots**," that we should carry with us into the future, while also considering the ideas we want to leave behind.

Answer the following questions in the context of building a resilient and desirable future for water and people. Your ideas don't need to be reflected in the Yahara 2070 scenarios.

- A. What does resilience mean to you?
- B. What new, transformative ideas do you think are needed to build resilience?
- C. What bright spots should we maintain and carry forward?
- D. What ideas or practices should we leave behind?

### Supplemental Questions

*whole group or small groups*

If your group has more time and energy, here are some additional questions. Either the whole group could discuss them together, or you could break up into small groups and each one could take on a different question.

- In every scenario, a major change happens in response to social and/or environmental crises. Do you think it is possible for humans to make changes to the ways they live without the threat of a crisis? What do you think it would take to make changes without the threat of a crisis?
- Sometimes changes that set things on a different

course are unanticipated or surprising. Did any of the scenarios contain changes that surprised you? How do you think your community could prepare for or deal with such surprises? What are some examples of surprises in the history of your own community or region?

- How might different populations—e.g., wealthy versus poor, different ethnic or cultural groups—be affected by the changes that occur in the four scenarios? How might this inform your vision of a desirable future?

## Wrap-up

**10 MINUTES**

*whole group*

- How did this discussion make you feel?  
*Tip: Provide the opportunity for folks to respond with a “weather report,” if they are uncomfortable sharing their feelings. This means that they use a weather metaphor to describe how they feel about the discussion.*
- How have the major ideas that this discussion addressed—controllability, branch points, reversibility/irreversibility, and tradeoffs—influenced your thinking? How could they influence your group’s vision of a desirable future?
- How could you integrate more long-term thinking into your everyday lives, both individually and as a community?

Before closing, read the next discussion’s preview and “homework” to the group.

## PREVIEW OF DISCUSSION 2

In the next discussion, we will start to create our own vision of a desirable future. We will consider what is desirable or undesirable about the futures portrayed in the Yahara 2070 scenarios and begin constructing a vision we would want to work toward.

## HOMework

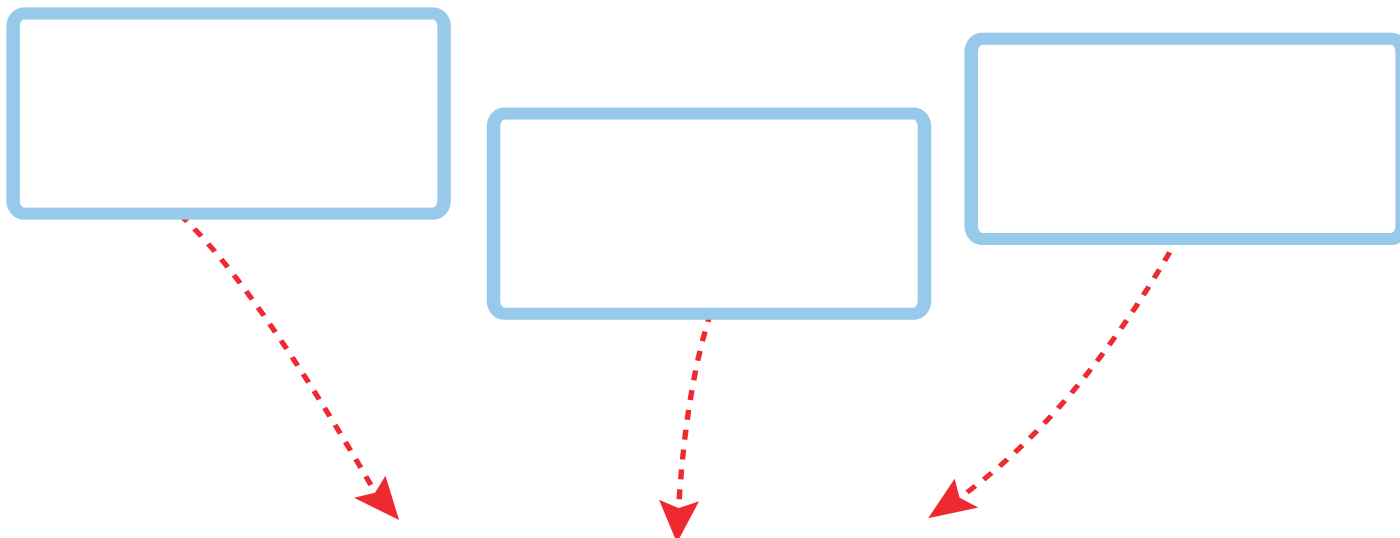
To prepare for Discussion 2, take a few minutes to think through the following question for each scenario, jotting down ideas you want to bring up in the discussion:

*Imagine a loved one that might be alive in 2070. What would their life be like in each scenario? In what ways does life seem better or desirable, and in what ways does it seem worse or undesirable?*

To refresh your memory of the scenarios, you could review the scenario summaries on pages 13-14 or watch the video trailers on [yahara2070.org](http://yahara2070.org).

## PATHWAYS OF CHANGE

### TRENDS



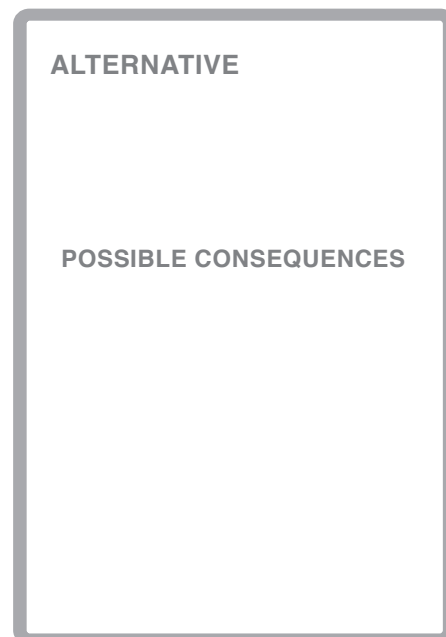
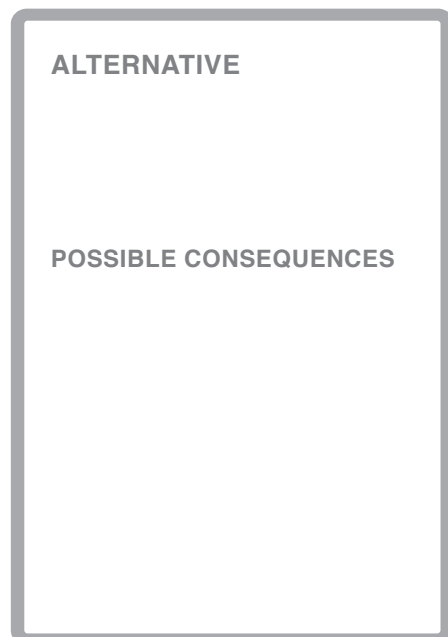
### BRANCH POINT

What was the result of these trends?



### ACTION

What are possible solutions?



## DISCUSSION 2: “WHAT IFS” FOR THE FUTURE



*Conversation is at the heart of what we know and how we know it. It is central to both constructing the future and learning how to act on it.*



– **Andrew Curry**, The Futures Company

### PURPOSE

This discussion will help your group “inhabit” the worlds of the scenarios to think about what could be desirable or undesirable for the lives of future generations. It will also help you gather some “building blocks” to construct your own vision for the future. In doing so, your group will share ideas and make new connections with each other over what you want for the future. This exercise is a first step to identifying ways you can work toward a desirable future.

### TIME SUGGESTED



2 hours

### MATERIALS

- Flipchart or other large sheets of paper
- Markers
- Pens
- Post-it notes
- The Yahara 2070 scenario summaries (p. 13-14)
- The Constructing Our Vision worksheet

### Warm-up

**10 MINUTES**

*whole group*

- What difference do you think creating a vision of a desirable future for water and people could make in our community and lives?
- What is or could be our group's role in shaping a desirable future for water and people in our region?

### Part 1: The possibilities

**60 MINUTES**

*whole group or small groups*

Focusing on one scenario at a time, discuss the following question for 15 minutes each scenario.

***What elements of life in 2070 in this scenario do you perceive as “desirable” and as “undesirable”?***

**Tip:** Imagine a loved one that might be alive in 2070 and what their life would be like in each scenario. In what ways do you think their life would be better than today? In what ways do you think it would be worse? What would you want or not want for them?

### INSTRUCTIONS

- **IMPORTANT:** Before everyone begins, read the text box entitled “Don’t get stuck in the likelihood trap!”
- If your group is larger than 8 people, you may want to divide it into smaller groups of 4-8 to make it easier for everyone’s voice to be heard. If you do so, have one person per small group volunteer to be the scribe.
- Regardless of whether you divide up, it is still your job to direct the discussion. This means you will need to keep time, directing the group(s) to move on to the next scenario when 15 minutes is up. Also make sure they have enough time to talk about both desirable and undesirable elements.
- On flipchart paper or other large sheets of paper, and using one sheet per scenario, the scribe should draw columns for “Desirable” and “Undesirable” in which

to record the group's thoughts accordingly. If you broke up into small groups, each group should have their own paper.

- At the start of discussing each scenario, give everyone five minutes to silently brainstorm a few desirable and undesirable elements and write them on sticky notes (one idea per note). This will help group members to collect their thoughts, especially those who are less outspoken.
- Next, have individuals present what they wrote on their sticky notes to the whole group or, if you have divided up, to their small groups. To prevent repetition, have one person present one of their ideas, and then everyone else with a similar idea will give their sticky notes to the scribe, who will then cluster and stick them to the appropriate column on the flipchart paper. Then ask the next person to present one idea and collect similar ideas from others. Go around the circle like this until everyone runs out of sticky notes.
- When the group(s) has run out of sticky notes, continue with a group discussion of any other desirable or undesirable features they want to record for that scenario. Then, move on to the next scenario.

## Part 2: The best ideas and worst threats

**30 MINUTES**

*whole group*

Now you will pull together some building blocks to help you construct your vision of a desirable future for water and people based on Part 1. These building blocks will include the best ideas from the scenarios that your group thinks should happen in the future and the worst threats they think should be avoided. Your group can add ideas not reflected in the scenarios, too.

Use the **Constructing Our Vision worksheet** on pages 25-26 to guide your discussion, placing your "building blocks" in the appropriate categories. For each category, discuss the following questions as a whole group.

- What are the best ideas from the four scenarios that must happen in the future?
- What are the worst threats from the four scenarios that must not happen in the future?
- What other great ideas or terrible threats must or must not happen, respectively, in our desirable future?

### Tips:

- Remind the group to try not to get bogged down (yet) in how they will achieve this future. The focus here is on creating the foundation for your vision.
- To help the flow of the discussion, you could lead the group through the categories on the **Constructing Our Vision** worksheet.

## DON'T GET STUCK IN THE LIKELIHOOD TRAP!

The Yahara 2070 scenarios reflect futures that are plausible. They are not predictions or projections of what is likely to happen. There is a difference between plausibility and likelihood. Plausibility has to do with what is possible based on the scientific understanding of the world. It is not *necessarily* the same as what seems likely, which is often based in what we are experiencing in our lives today. Put another way, plausibility is tied to the rules of nature, while likelihood is tied to social or political conditions. A lot is plausible in the natural world, even if it doesn't seem likely given today's culture or politics.

Long-term thinking requires us to break free from the "likelihood trap," which can stifle our creativity. The scenarios challenge us to look beyond what seems likely or unlikely given the current state of affairs and, instead, keep our minds open to a wide range of plausibility.



## Wrap-up

**10 MINUTES**

*whole group*

Take a few minutes to share impressions on the following questions.

- How did this discussion make you feel?

***Tip:** Provide the opportunity for folks to respond with a “weather report,” if they are uncomfortable sharing their feelings. This means that they use a weather metaphor to describe how they feel about the discussion.*

- What is considered desirable for the future can differ between people, based on individual preferences, cultural norms, ideologies, or socio-economic status, for example. How might our society or community find consensus on what is desirable, while also respecting this diversity of perspectives?

**Before closing, read the next discussion’s preview to the group.**

## DISCUSSION 3 PREVIEW

In the next discussion, we will complete our visioning process by turning our building blocks into our own scenario of a desirable future.

## NOTES

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## CONSTRUCTING OUR VISION WORKSHEET

*Imagine that, 60 years from now, future generations enjoy a high quality of life with resilient ecosystems and communities. What does that look like?*

As you imagine your desirable future, consider the aspects listed in the chart below—e.g., What will \_\_\_\_ be like compared to today?

In addition to the best ideas for the future, consider what threats have been minimized or avoided in your vision.

Also consider how each of the following may or may not play a role:

- Technology
- Government
- Human values
- Economy
- Non-profit/grassroots organizations
- Land-use decisions
- Climate change
- Other forces of change

	BEST IDEAS FOR THE FUTURE	THREATS AVOIDED
<b>FOOD &amp; AGRICULTURE</b> (what do we eat, how do farmers farm, what do farmers grow or produce, etc.)		
<b>WATER AND ECOSYSTEMS</b> (what is the state of fisheries, wetlands, wildlife habitat, water quality, etc.?)		

	BEST IDEAS FOR THE FUTURE	THREATS AVOIDED
<b>DEVELOPMENT AND LAND USE</b> (housing, urban areas, agriculture, natural areas, etc.)		
<b>INFRASTRUCTURE AND TRANSPORTATION</b> (what structures exist for moving people, supplies, water, energy, and waste?)		
<b>SOCIAL ORGANIZATION</b> (socio-economics, politics, etc.)		
<b>OTHER</b>		

## DISCUSSION 3: ENVISIONING OUR DESIRABLE FUTURE

“If you want to build a ship, don’t start with collecting wood, cutting the plank and assigning work, but awake in people the longing for the wide and open sea.”

— Antoine de Saint-Exupery (Citadelle)

### PURPOSE

To create a desirable future, first you need a motivating vision of what that looks like, as alluded to in the opening quote. This discussion will help your group develop your own “scenario” of a desirable future for water and people. Since many issues in Wisconsin are connected to water—food, economic development, etc.—we encourage you to design your vision around your group’s water-related priorities.

### TIME SUGGESTED



### MATERIALS

- Flipchart or other large sheets of paper
- Markers
- Pens
- Post-it notes
- The completed Constructing Our Vision worksheet and notes from the previous discussion
- From Vision to Action worksheet

### OPTIONAL MATERIALS

- Drawing materials, such as markers, crayons, colored pencils (for Part 1)
- Sticky dots or other stickers for voting (for Part 2)

### Warm-up

10 MINUTES

whole group

- Before you begin, revisit the **Constructing Our Vision** worksheet you completed in the previous discussion. Invite the group to add new ideas they think are important but are still missing.
- Discuss: What are our water-related priorities that are important to focus on in our vision of a desirable future?

### Part 1: Articulate your vision

50 MINUTES

whole group or small groups

Develop a story that articulates your vision using the **Constructing Our Vision** worksheet and the **Scenario Writing Script** on page 31.

### INSTRUCTIONS

- If your group is larger than 8, consider dividing up into two smaller groups. If you do so, each group should designate a scribe and a storyteller, which could be the same person.
- If you are leading the whole group, use the **Scenario Writing Script** on page 31 to guide the storytelling process. If you broke up into small groups, suggest that they follow the script.
- The group(s) could also draw their vision. Provide large sheets of paper and colored pencils, crayons, or markers to allow them to do so.

- Instruct the scribes to record ideas that not everyone agrees with separately, so they don't get lost. Different perspectives are also important to the process.
- Before they begin, read to them the text box entitled "A shared vision" on page 29. Also, remind them to avoid getting caught in the likelihood trap (see page 23).

#### WRITING TIPS:

- Be creative! Engaging stories can be very powerful.
- Develop a main character that is relevant to your community and describe their life.
- Focus on at least 5 elements from your **Constructing Our Vision** worksheet as starting points. For example, you could pick one idea per category that everyone in your group supports. Your story could certainly incorporate more than these 5 elements, but it helps to have a few focal points to build a story around.
- See also "Scenario Narrative Writing" for suggested writing techniques.
- Make sure to give your scenario a name that evokes your vision—if your vision were a movie, what would it be called?

**IF YOU DIVIDED INTO SMALL GROUPS:** When about 35–40 minutes have passed, or when groups have otherwise had enough time to develop their visions and confirm it is shared, use the remaining time to allow the storytellers from each small group to share their stories with the whole group.

#### IF YOU ARE WORKING AS JUST ONE GROUP:

Once you have confirmed your vision is shared, you are ready to move on to Part 2.

## SCENARIO NARRATIVE WRITING: TELLING YOUR STORY OF A DESIRABLE FUTURE

If your group is having trouble getting the story started, these methods might help.

### A DAY IN THE LIFE

Describe your main character. What kind of job does s/he have? What does her/his neighborhood look like, and why does it look like this? How does s/he get around? What kinds of things does s/he eat, and how is the food grown? Why does s/he eat this way? How does s/he interact with lakes, rivers, and other natural spaces? When s/he walks around a city, what does s/he see? When s/he walks around a farm, what does s/he see? Who has power over land and water decisions? Who are the winners and losers of the major land and water decisions that have been made? What decisions and tradeoffs did people need to make to get this point? Elaborate as much as you would like.

### RESPONSE TO A SURPRISE

Describe the effects of a surprise—such as a massive flood, the emergence of a new disease, or an economic recession—that impacts communities and ecosystems in your vision. Consider how several different hypothetical individuals may respond to the surprise—for example, a business owner, a person experiencing homelessness, a student, a farmer, or other types of individuals relevant to your community or organization. How would these people cope with the surprise?

### HEADLINES OF THE FUTURE

Provide a journalist's perspective of the future by focusing on a key event or newsworthy moment in that world. Structure your story like one you would read in a newspaper or magazine, including a catchy headline.

### FUTURE BACKWARDS

Construct your vision of the future, and then consider the key turning points that happened to get there. Imagine you are telling a history of this future.



## Part 2: Choose your priorities

**20 MINUTES**

*whole group*

**IF YOU DIVIDED INTO SMALL GROUPS:** There is likely both overlap and diversity between the small group's stories. The next step is to identify shared and unique elements that the whole group would like to incorporate into a common vision, which will help you focus on your priority action areas. The following steps will help you find these elements. *\*There is no need to create a whole new story based on these elements; this exercise is intended to help you identify only your shared priorities.*

1. As a whole group, identify elements and themes that appear across all of the small groups' stories, recording them on flipchart paper. Then identify unique elements from individual stories that the whole group agrees should be part of the shared vision.
2. When the list is complete, confirm with the group via a thumb vote whether they are satisfied with the elements of their shared vision. If there is disagreement, allow time for discussion and modification. Again, a scribe should record the areas of disagreement.
3. As a whole group, choose 2-3 elements from your list that you think should be priority action areas, for which you would like to develop an action plan—in other words, what elements must happen in the future, regardless of timescale and difficulty? Refer to the section "How to determine your priority action areas" on the next page.

### **IF YOU ARE WORKING AS JUST ONE GROUP:**

As a whole group, choose 2-3 elements of your vision that you think should be priority action areas, for which you would like to develop an action plan—in other words, what elements must happen in the future, regardless of timescale and difficulty? Refer to the section "How to determine your priority action areas" on the next page.

## A "SHARED" VISION

Your group will likely possess diverse views of what is desirable for the future, and that's ok. Be open to each other's differences. When writing your vision, complete group consensus is not necessary. Instead, look for common ground, or priorities you can all agree on.

When your group finishes your story, a simple way to make sure it adequately reflects a shared vision is to conduct a "thumb-vote." Thumbs up indicates you fully agree that the scenario reflects a desirable future; thumbs parallel to the floor indicates you can live with the scenario, even if you don't fully agree with it; thumbs down indicates you disagree that the scenario reflects a desirable future. If anyone disagrees, allow them to voice their reasons, and then discuss modifications to the scenario that would eliminate thumbs-down votes.

## NOTES

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## HOW TO DETERMINE PRIORITY ACTION AREAS:

First, ensure everyone uses similar criteria in choosing priorities. Decide as a group what the prioritization criteria should be. Examples include the following:

- Which elements do we really like?
- Which elements seem easy to do?
- Which elements will have the biggest, most positive impact on future quality of life?
- Which elements are most fruitful for collaborations with other groups or communities?
- Which elements would need a large investment in energy and resources to achieve, but their importance makes them worth starting to invest in now?
- Which elements would have the potential to spread beyond our community or organization?

Here are a couple of methods to then help the group determine their priorities.

- **Dot polling:** Provide participants with 6 sticky dots or other stickers. They will place their sticky dots by the areas of most importance to them individually. (If you don't have sticky dots or other stickers, each person could instead draw a star or other mark by their priorities.) They could put as many of their dots as they want to on an element; for instance, if they have one main priority, they could put all of their dots by that element. Once everyone is done, review the prioritized areas as a group—the areas with the most dots are the group's highest collective priorities. If a priority action area does not receive many dots, this does not mean it will be discarded, only that it may not be an initial focus for action.
- **Go with the energy:** What priority action areas is the group really enthusiastic about? Is there enough agreement on a few elements to spark and sustain action?

Before concluding, confirm there is consensus on the priority action areas via a thumb vote.

## Part 3: From vision to action

**30 MINUTES**

*whole group*

Discuss as many of the following questions as you can to begin identifying what your group can do today to work toward your priorities for the future. In addition to the scribe's notes, individuals can write their answers on the **From Vision to Action** worksheet. This part will help prepare your group for Discussion 4.

- What is our group already doing—meaning, what we've been doing together previous to these discussions—that could help us move toward our priority action areas?
- How must our group or community change to achieve our broader vision?
- What new actions or next steps could we undertake today—as individuals and as a group—to work toward our priority actions areas?
- What research is needed to know if we can achieve our priority actions areas?
- What resources do we need to achieve our priority action areas?
- How can we ensure follow-up on our priority action areas?
- Who else should be involved in ways to achieve the vision and/or priority action areas?

**Note:** Keep in mind that your vision is not static. Think of it as a canvas that the group or other groups can revise or enrich.

## Wrap-up

**10 MINUTES**

*whole group*

- How did this discussion make you feel?

**Tip:** Provide the opportunity for folks to respond with a “weather report,” if they are uncomfortable sharing their feelings. This means that they use a weather metaphor to describe how they feel about the discussion.

- How could focusing on our priority actions areas help us achieve a desirable future more broadly?
- Mathematician Bruce Cooperstein said, “A vision is not a list of values, goals, objectives, or principles. Rather, it is a clear and integrated proposal for the future. ... To be effective, a vision should be bold, daring, exciting, and generate hope.” Does our group’s vision give you hope, and why?

Before closing, read the next discussion’s preview and homework to the group.

### DISCUSSION 4 PREVIEW

Now that we have our vision, in our last discussion we will begin brainstorming how we can work towards our priority action areas. This will entail an approach called backcasting.

### HOMEWORK

How can we achieve our desirable future? To prepare for the next discussion, brainstorm on your own about some new projects, connections, steps, or other changes you think will be necessary to achieve our priority actions areas.

## NOTES

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## SCENARIO WRITING SCRIPT

The following questions can help your group develop a story for your scenario of a desirable future. You do not need to go in the order in which they appear, but it is best to at least start with describing your character and your water-related priorities. If your group is having a hard time answering a question or seems to have run out of things to say in response to one, throw out a different question for them to tackle. Enrich your story as much as needed to bring it to life and make your vision clear.

### YOUR CHARACTER

- Develop a character that might represent your community or water-related priority in 2070. What is this character's age, ethnicity, career, etc.?
- Where does the character live, and what does the neighborhood or community look like?
- What does your character care most/least about?

### YOUR WATER-RELATED PRIORITIES

- What water-related priorities does your group want to develop a story around?
- Describe the conditions of your water-related priority by 2070.
- What social or environmental factors could have an impact on the future of your water-related priority?

### YOUR CHARACTER'S LIFESTYLE

- How does your character think about water?
- How is your character connected to your water-related priority in his/her everyday life? What impacts does your character have on your water-related priority?
- What does the character eat, how does s/he get food, and from where does the food come?
- How does your character get around?

### THE LANDSCAPE

- If the character visits an urban area, what does s/he see?
- If the character visits a rural area, what does s/he see?

### THE COMMUNITY

- What energy sources does the character's community rely on?
- What freshwater or environmental **successes** has your character's community achieved, and how did they achieve them? What social conditions contributed to these successes?
- What freshwater or environmental **challenges** does your character's community face? What social conditions are contributing to these challenges?

### THE SOCIETY

- Who holds the power over decisions related to land and water in your desirable 2070?
- Has anything transformative happened to bring about your desirable future? What turning points have occurred?

## FROM VISION TO ACTION WORKSHEET

What our group is already doing...

How our group or community must change...

New actions or next steps we could undertake today as a group...

New actions or next steps we could undertake today as individuals...

What research is needed...

Resources we need...

How we can ensure follow-up...

Who else should be involved...

## DISCUSSION 4: BUILDING OUR DESIRABLE FUTURE

“ *We are called to be architects of the future, not its victims.*

– Buckminster Fuller

”

### PURPOSE

With a vision for where you want to go, now you can figure out how to get there. One way to do this is called backcasting, an approach to identifying the critical steps or actions needed to work toward your desired future, working backwards from this future. This process also entails determining how to avoid or respond to undesirable future conditions.

There are several ways to go about backcasting. This method is relatively simple and doesn't require expert guidance or facilitation.<sup>1</sup>

### TIME SUGGESTED



### MATERIALS

- Flipchart or other large sheets of paper
- Markers
- Pens
- Post-its or small paper scraps
- Notes from your previous discussion: the shared vision and priority action areas

<sup>1</sup> This discussion is a modified version of this workshop method: [webarchive.nationalarchives.gov.uk/20130802230407/http://hsctoolkit.bis.gov.uk/Methodology-1.html](http://webarchive.nationalarchives.gov.uk/20130802230407/http://hsctoolkit.bis.gov.uk/Methodology-1.html)

### BACKCASTING IN BRIEF

In contrast to forecasting, which is about adapting to trends that are projected from the present day into the future, backcasting is about creating the future that is desired. Today's trends should influence only the initial scale of the transition, not its directions.

Backcasting can be an iterative process. It can help you analyze what consequences and conditions are necessary for the desired future to materialize. It can also reveal the implications of different goals. In doing so, you may find that certain steps are not feasible or that certain future conditions become no longer desirable, leading you to reevaluate that component of your desired future.

### Part 1: Now and 2070

**30 MINUTES**

*whole group*

- First review your shared vision and confirm the priority action areas. As a group, choose one action area to backcast in this discussion, as it could get overwhelming to try to tackle all of them at once.

**Note:** If your group cannot decide on just one priority action area to focus on, you could break up into smaller groups, and each group could tackle a



different one. In which case, each small group would follow this discussion together. This route is not recommended, as it may be more difficult, but it is an option, if your group feels open to it.

- Have the scribe draw two columns on a large sheet of paper, one labeled “Today” and one labeled “2070.”
- Describe the key differences between the state of your group’s priority action area now and in your vision of 2070. Consider important factors that are internal, or related to your group or community, as well as external, or those occurring outside of your group or community, such as at the national or global scales.

## Part 2: A pathway backwards

**30 MINUTES**

*whole group*

- Have the scribe label a large sheet of paper with the terms “long-term,” “medium-term,” and “near-term” in columns, as a rough timeline.
- As a group, identify the key long-term, medium-term, and near-term steps that you think must occur to achieve the desired future state of your priority action area. **Begin with the long-term steps, as knowing these will help you better imagine what needs to happen in the near term to get there.** These steps can be both within your control and outside of your control. And don’t be afraid to think of ideas that would be truly transformational.

**Tip:** Allow five minutes before you start for everyone to brainstorm steps individually.

- Have the scribe capture the group’s ideas on the large sheet of paper.

**Note:** Your group could potentially come up with more than one pathway to achieve your priority action area.

## Part 3: Trends, drivers, and events

**30 MINUTES**

*whole group*

As a whole group, brainstorm the following and capture your ideas on post-its notes:

- What **present-day trends** could have a positive or negative impact on our ability to achieve our priority action area? An example of a trend from Yahara 2070 is the movement toward renewable energy, which shows up in Accelerated Innovation and Connected Communities.
- What **drivers** might have a positive or negative impact on our ability to achieve our priority action area? Drivers are the forces that you think will decide the nature of the future and typically fall into one or more of these categories: social, technological, economic, environmental, political, and values. Drivers are often the sum of a set of trends. One example from Yahara 2070 is land-use change, a driver that is both social and environmental in nature and is the sum of many trends, such as how farmers farm and what they farm, urban development policies, and social preferences and needs.
- What major **events** could have a positive or negative impact on our ability to achieve our priority action area? A negative example from Yahara 2070 is a natural disaster, such as the toxic algal bloom in Abandonment and Renewal. A positive example is the R&D breakthrough that made switchgrass a viable biofuel in Nested Watersheds. Think also about potential “wildcards,” or low-probability, unexpected events that could have a significant impact on the future, such as a massive storm or national economic crisis.

**Tip:** Placing these trends, drivers, and events on a timeline may be helpful for your group to visualize the exercise.

## Part 4: Barriers and enablers

**45 MINUTES**

*whole group or small groups*

As a whole group, brainstorm some potential barriers and enablers to achieving your priority action area. Barriers are the factors that could slow progress or prevent your desired future state from happening, while enablers are factors that would help push things in the right direction. These factors could be within your control, outside your control, or a little bit of both. Think about near-term barriers and enablers that will need more immediate attention, as well as longer-term ones you may encounter on your pathway forward. Take into consideration the trends, drivers, and events you discussed in Part 3. Discuss for no more than 15 minutes.

**Tip:** If you created a timeline in Part 3, the scribe could also write the barriers and enablers onto the timeline, where the group thinks is appropriate.

- Either as a whole group or in two breakout groups, discuss the following questions. If you discuss them as a whole group, use the remaining time to discuss all the barriers and enablers together. If you break up into two groups, allow about 20 minutes for the discussion and 10 minutes, total, for the two groups to share their ideas with the whole group. After each group shares, give the other group an opportunity to add more thoughts.

### GROUP 1: BARRIERS

- How will these barriers affect our ability to achieve our priority action areas?
- Over what aspects of these barriers do we have control?
- Which of these barriers are we willing to or must we do something about?
- What can we do to remove the barriers or minimize their impact?

### GROUP 2: ENABLERS

- How will these enablers affect our ability to achieve our priority action areas?
- Over what aspects of these enablers do we have control?
- Which of these enablers are willing to or must we focus on?
- How do we harness them to strengthen our efforts?

## Part 5: Next Steps

**30 MINUTES**

*whole group*

Discuss the following as a whole group. Have the scribe record the answers.

- What are possible next steps? By when should these be completed, and by whom?
- What research is needed for us to know if we can achieve our priority action area and/or vision for the future?
- What resources do we need to work on our priority action area?
- Who else do we need to engage with to begin working toward our priorities?
- How can we ensure follow-up on our priorities?

## Wrap-up

**15 MINUTES**

*whole group or small groups*

Close the discussion by taking some time to reflect on how this entire process has influenced you. This can be done in pairs, triads, or as a whole group. Here are some questions to get you started:

- How has this process of envisioning a desirable future affected you?
- Did anything surprise you? Why or why not?
- How has this process made you feel about your influence on the future?
- How can we have conversations about the future with others in our lives?

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You might now be wondering how you can share your vision with others. Here are some ideas for how you could share it and get input from community members who were not involved in your discussions.

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## NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.