

## Workshop Description

Workshop attendees brought a diversity of perspectives and experience to the meeting (Appendix 1). Viewpoints included those from federal and state resource management agencies, lake associations, out-of-state owners of lakeshore property, realtors and Native Americans. In addition, academic experts were present from around the world, bringing expertise in fields such as ecology, human demography, economics, and mathematical models of social-ecological systems. Prior to the workshop, participants were given access to background materials on the internet, including the preliminary assessment by Peterson et al. (2002) and the results of the course in March 2002. Several of the attendees at the scenarios workshop had previously attended the short course.

There is no fixed recipe for building scenarios, although there are some generally-accepted goals for productive scenario exercises (Peterson et al. 2003). At the Kemp Station meeting, scenarios were developed through the following steps.

1. Talks from stakeholders describing the region's history, key issues, and hopes and fears for the future of the region
2. Talks from experts summarizing the human demography and ecology of the region, results of prior assessment exercises and the short course, the relationship of the NHLD process to other studies of regions in transition, and examples of previous scenario exercises
3. Rapid development of prototype scenarios in breakout groups, leading to 8 scenarios
4. Plenary discussion of the first set of scenarios
5. Rapid development of a second set of 10 scenarios in breakout groups
6. Analysis of selected scenarios in breakout groups, to assess the implications of the scenarios for particular groups of people in the NHLD
7. Analysis of the scenarios to identify a small number of key themes, by the workshop organizers plus international experts, during a half-day session the day after the scenarios workshop. Discussions leading to condensation of the scenarios asked questions such as:
  - a. What are the critical contrasts among scenarios?
  - b. What are the recurring themes?
  - c. What trends or events are plausible?
  - d. What trends or events are useful for illustrating key themes or contrasts?

## Process for Developing Scenarios

### Pathway to the Draft Scenarios

Although the future is not predictable, it is created, in part, by actions of people, founded upon their expectations of what the future may bring. Thus the future depends on the resilience of social and ecological systems, and the vulnerabilities of these systems, as well as outside forces, shocks and surprises. The external drivers, vulnerabilities, and types of resilience of the NHLD were discussed by participants, and then used in discussions to imagine scenarios for the future.

The first round of scenarios derived from three groups of six to nine people each, meeting for about 45 minutes. The eight scenarios that emerged from this process were dubbed Water Kingdom, Tribal Renaissance, Engineered Northwoods, New Migrants/ New Settlement, Orlando North, Lake Power, Invasive Disease, and Chicago Dirty Bomb.

After plenary discussion of the first round of scenarios, workshop participants reorganized into four groups of four or five people each to design a second round of scenarios. The ten scenarios from the second round were named Individualism / No Trespassing, Ecologists Rule, Loon World, Green Tech, Madison Luvs U, Local Control, Nasty North, Grey Lake Power, Engineered North Woods, Tourism Decline. Written descriptions of the 18 scenarios from Rounds 1 and 2 have not been prepared, although unedited transcripts of notes from the oral presentation of the 18 scenarios have been filed.

The scenarios present a number of patterns and contrasts. Some of those identified in plenary discussion include:

- Community to individual decision-making
- Northwoods to Orlando development scenarios
- Increase or decrease in tourism
- Increase or decrease in population
- Increase or decrease in infrastructure
- Communication versus conflict
- Control by incentives versus regulation [versus self-organized?]
- Heterogeneous lakes versus homogeneous lakes
- Eco-tourism versus non-eco-tourism
- Polyvocal versus monovocal (does the scenario incorporate diverse knowledge as a resource, or is only one view-at-a-time in play?)
- Learning versus conflict
- Trust and cooperation versus conflict and division
- Clustered versus leapfrogging development

Key discussion points raised by workshop attendees are presented in Table 1.

**Table 1.** Comments from workshop participants about the “Round 2” scenarios. These comments were paraphrased by S.R. Carpenter as he took notes during the discussion on 5 September 2002. They are not quotes.

It's very difficult to get something like a jet-ski ban on a lake. And all it takes is one jet ski to shatter the silence. Building community values and social capital is important, and difficult when people are transients. This is a significant barrier.

Diversifying the economy beyond tourism is a key to sustainable growth of this area.

"Northwoods versus Orlando" captures the overarching debate ongoing in the community right now.

How much will decisions be driven by residents versus outside forces?

Does control reside locally or at the state level?

All the communities want to grow their economy, and are willing to grow their populations slowly. So the key question is "are their ecologically sustainable ways to grow?".

Collective good (trust in community and collective decision making) versus rugged individualism is a key contrast.

Learning from change, or not (adaptive versus reactive, forward looking versus assuming status quo) is a key difference among scenarios.

What about spatial pattern? Does it matter whether development is clustered, or spreading?

On the day following the workshop, a small group from the Resilience Alliance attempted to condense the scenarios into a minimal set that seemed to capture the key points. This group consisted of Doug Beard, Elena Bennett, Jeff Cardille, Steve Carpenter, Graeme Cumming, Marco Janssen, Jon Norberg, Yarden Oren, and Garry Peterson. This group identified five key contrasts that seemed to cut through the scenarios presented at the workshop. These key contrasts were:

1. Tourism versus new economic opportunity
2. External versus local/regional control
3. Ecological development versus non-ecological development
4. Community ethic versus "rugged individualism"
5. Adaptive versus reactive decision-making

Discussions toward a minimal set of themes led to the following points. One scenario should show the unintended consequences that may come from development, such as loss of resilience, loss of "Northwoods spirit", and decline in living resources, the environment, and quality of life. This scenario should be contrasted with one in which development occurs at the same time resilience is increased. This pair of scenarios would explore role of flexibility and innovation in the future of the NHLD. Both of these scenarios assume growth, which is a common assumption about the future of the NHLD. This assumption may prove false. Therefore it is important to consider a third scenario in which the resident and tourist populations decline. Finally, it is useful to consider a scenario in which a massive surprise exposes the vulnerability and resilience of the NHLD.

## Appendix 1. Participant List

NAME	EMAIL	DEPT./ AGENCY
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## **Appendix 2. NHLD Meeting Agenda, September 4-5, 2002**

### September 4

8:30-9:00 Participants arrive Kemp

9:00-9:30 Steve Carpenter--Statement of challenges and introduction  
Participants discuss the top 3 issues facing NHLD with neighbors

9:30-10:45 Presentations from multiple perspectives on the future of the NHLD

9:30-9:45 Gloria Cobb, Great Lakes Inter-Tribal Council, Inc.

9:45-10:00 Jerry Parker, Lakeshore Realty

10:00-10:15 Mary Platner, Vilas County Lakes Association

10:15-10:30 Matt Dallman, The Nature Conservancy

10:30-10:45 Gene Likens, Institute of Ecosystem Studies

10:45-11:15 Break, coffee and assorted baked goods from Save More Deli

11:15-12:00 Breakout groups—Discussions on the history and perspectives of NHLD, how does it fit together, who and what is missing?

12:00-1:00 Lunch catered by Save More Deli

1:00-1:30 Roger Hammer, University of Wisconsin, Madison—Demographic History of the NHLD

1:30-2:00 Tim Kratz, Trout Lake Station—Ecological Dynamics and Surprises

2:00-2:30 Garry Peterson, University of Wisconsin, Madison—Presentation of MAPLE Data

2:30-3:00 Elena Bennett, University of Wisconsin, Madison—Global to Local Perspective, the Millennium Assessment and Trinidad

3:00-3:30 Break

3:30-3:45 Steve Carpenter—Recap and charge to breakout groups; provide examples and the framework to create three futures for NHLD

3:45-4:15 Breakout groups work on three interesting (but not necessarily complete) future scenarios for NHLD

4:15-4:30 Presentations of scenarios

4:30-7:00 Wine, beer, sodas and socializing

7:00 Dinner catered by Save More Deli

### September 5

7:00 Breakfast catered by Save More Deli

8:00-8:30 Reflections on yesterday

8:30-9:00 Garry Peterson—Overview of today, provide the framework to design scenarios, what are the tools and charge to breakout groups

9:00-10:00 New breakout groups present scenarios

10:00-10:30 Break

10:30-11:30 Presentation of scenarios; need a few note takers during this session (write buzz words on notecards)

11:30-12:00 Cluster scenarios—need a few note takers during this session

12:00-1:00 Lunch catered by Save More Deli

1:00-1:30 Plenary—Who are the major actors in the NHLD?

1:30-2:15 Charge to breakout groups—How should the actors respond to these scenarios?

2:25-3:00 Breakout groups report

\*\*Start thinking about reflections\*\*

3:00-3:30 Tom Hrabik—Recap and reflections

4:00-4:05 Evaluation—Participants write down reflections on the meetings.

4:05-5:00 Plenary, Wrap-up and Scenarios Victory!

5:00 “Northwoods” dinner catered by Save More Deli