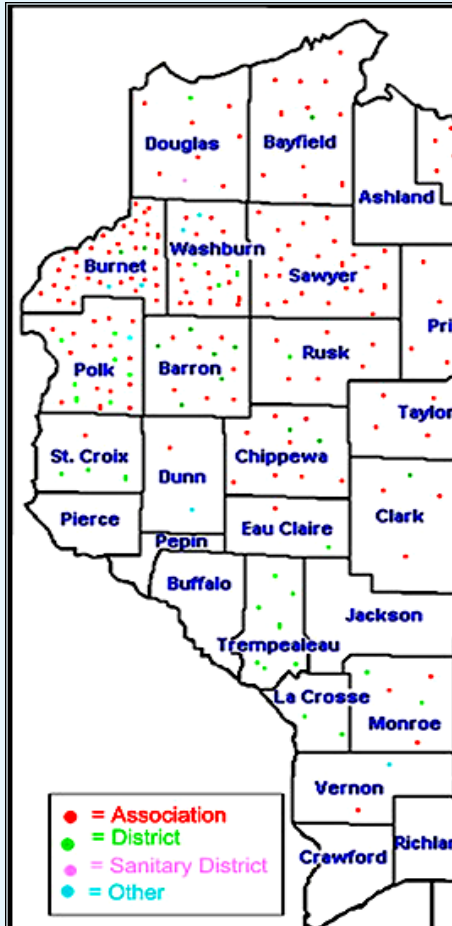


Lake Association and Lakeshore Owner Survey – Burnett County, WI 2006



Study Team



- Mike Kornmann, Community Development Agent, UW-Extension Burnett County, Siren, WI
- Jacob Blasczyk, Evaluation Specialist; Environmental Resource Center, UW-Madison Extension
- Josie Biedermann, Evaluation Assistant; Environmental Resource Center, UW-Madison Extension

Advisory Team

Critical Role In Survey Development

- Ken Genskow, Director, Basin Educators, UW-Extension Madison, Environmental Resources Center
- John Haack, UW- Extension, Basin Educator-St Croix River, Spooner, WI
- Robert Korth, UW-Stevens Point, College of Natural Resources
- Tiffany Lyden, UW-Stevens Point, College of Natural Resources

Objectives

- A. Compare property owners from lakes *with* associations to those *without* on:
- Use of land management practices supporting healthy lakes.
 - Awareness of available information sources for supporting healthy lakes.
 - Opinions on select topics.
- B. Identify methods Burnett County lake associations use to engage property owners in efforts to achieve healthy lakes.
- C. Explore how lake associations contribute to awareness of conditions impacting lakes, how owners learn about those conditions, and how associations contribute to the adoption of certain management practices.

Guiding Questions

- Do lake associations play a significant role in supporting healthy lakes in Burnett County?
- What methods of delivering information are most useful for lakeshore property owners?
- What issues face Burnett County lakeshore owners? How can UWEX help lake organizations with these issues?

Data Collection Methods

- Mailed survey: 720 randomly selected lake residents with dwellings
- 499 returned (69% response rate)
- 21 randomly selected lakes stratified by size.
- 11 with associations/10 without: matched according to vulnerability scores and size

Data Collection Methods

- 30-36 randomly selected residents per lake
- Interviews: Lake association leaders
- Burnett County Lake Classification study data

Four Levels of Analysis

1. All survey responses
2. According to *lake status*: those from lakes with associations compared to those from lakes without associations
3. According to *membership status*: members compared to nonmembers from lakes with associations
4. Study of alternative explanations

Survey Topics

- Knowledge
- Practices
- Member ranking of effectiveness
- Opinions
- Motivations
- Information Sources

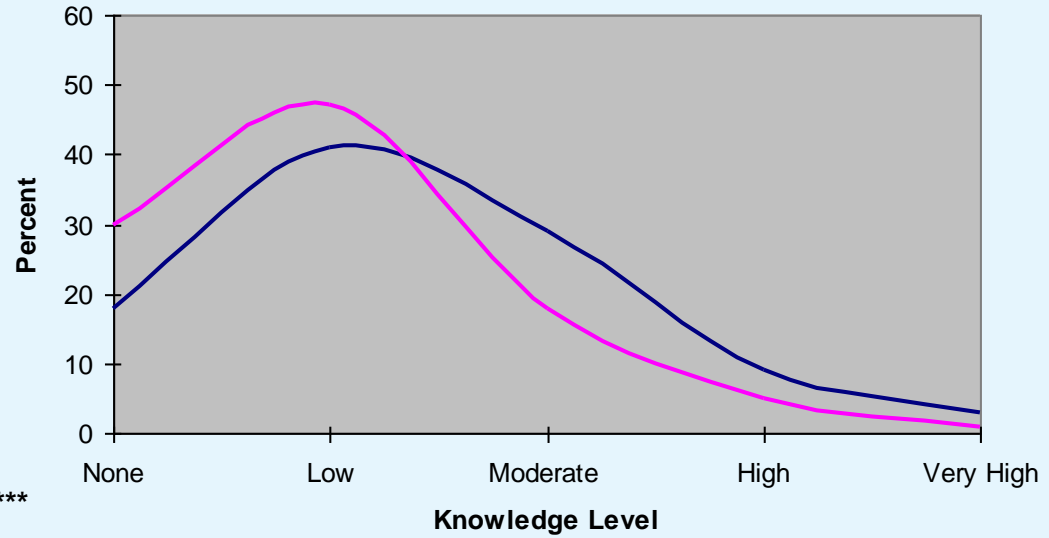
Analysis Categories

- Overall Level (N=499)
- Lake Types
 - Lakes with Associations (N=262)
 - Lakes without Association (N=233)
- Member Statues
 - Members (N=192)
 - Non-Members (N=66)

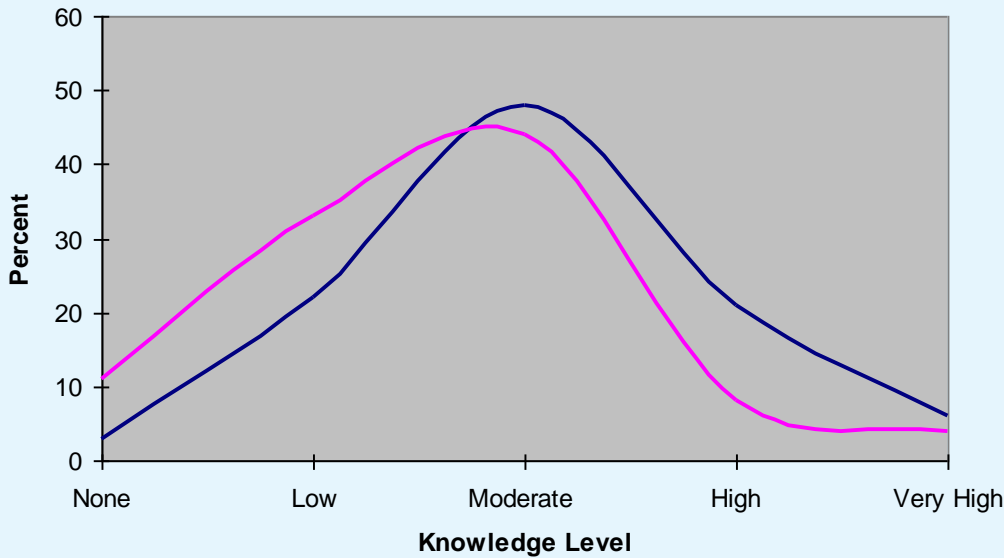
Differences in Knowledge On Some Measures

Significant Differences Between Lake Types

Studying the Science of Lakes ***



Ways to Manage Recreational Use of Lakes ***

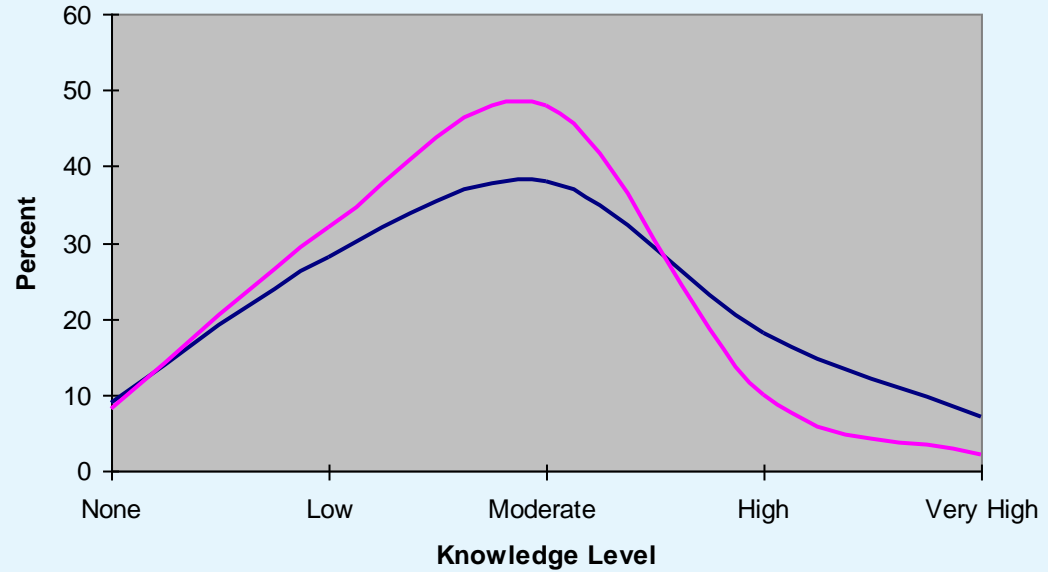


— Lake w/Association — Lake w/o Association

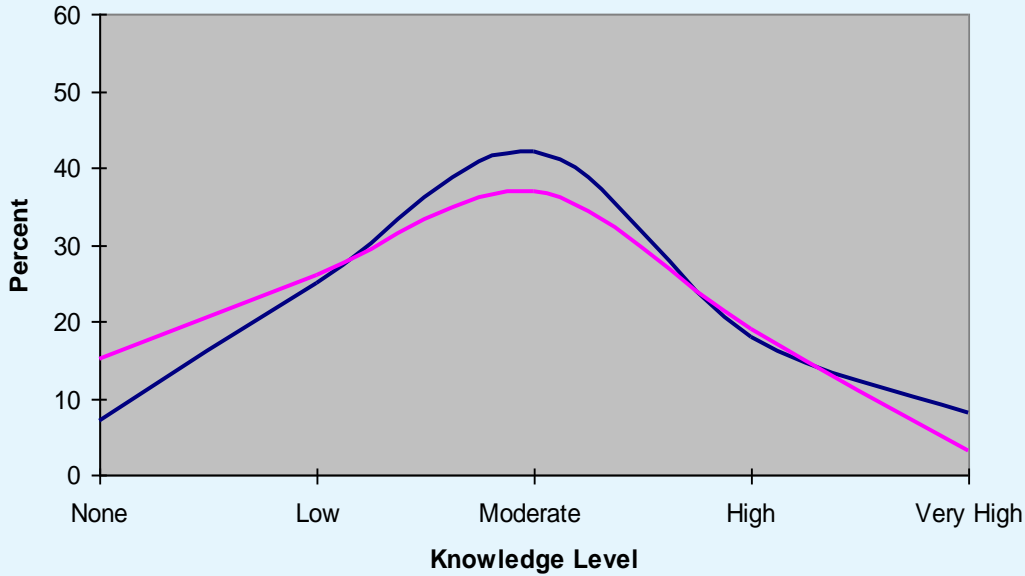
— Lake w/Association — Lake w/o Association

Significant Differences Between Lake Types

Aquatic Plants **



Controlling Rain Water Runoff *

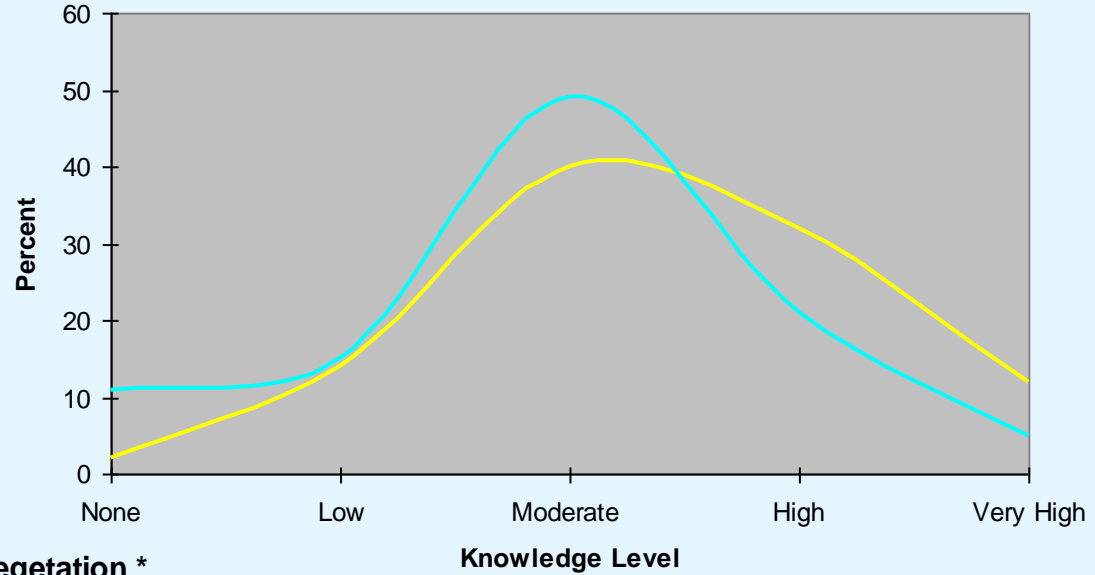


— Lake w/Association — Lake w/o Association

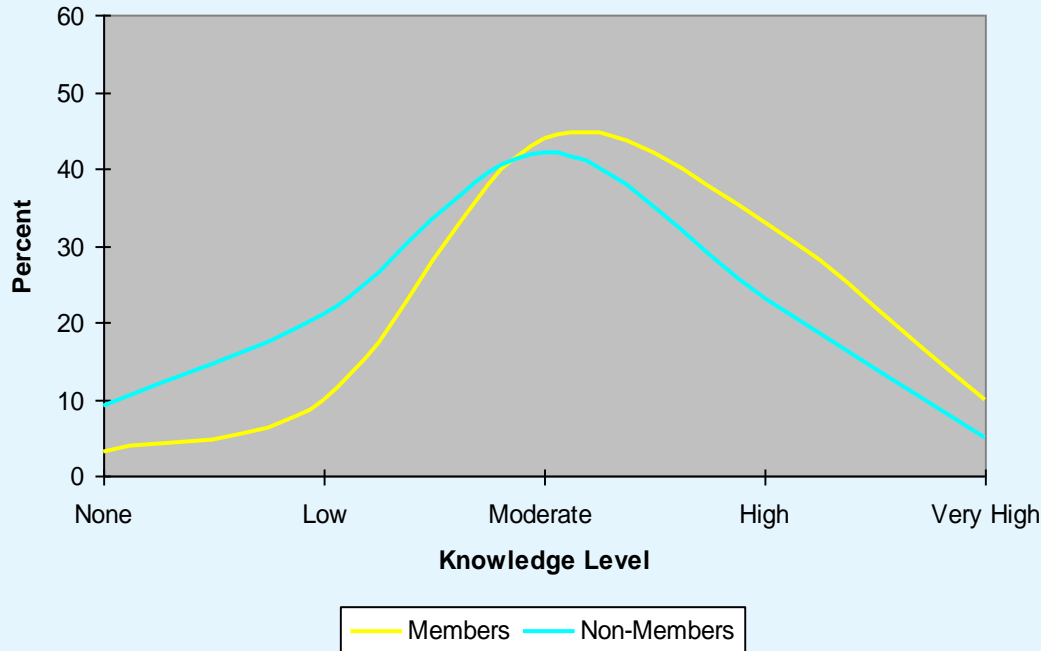
— Lake w/Association — Lake w/o Association

Significant Differences Between Member Types

Aquatic Invasive Species **



Preserving or Restoring Natural Shoreline Vegetation *

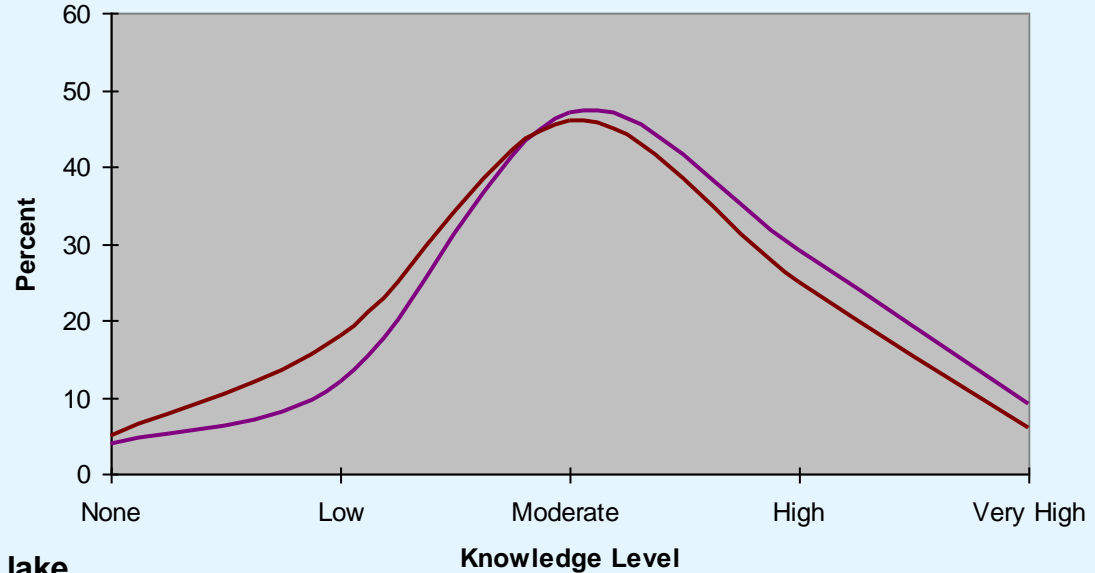


Members Non-Members

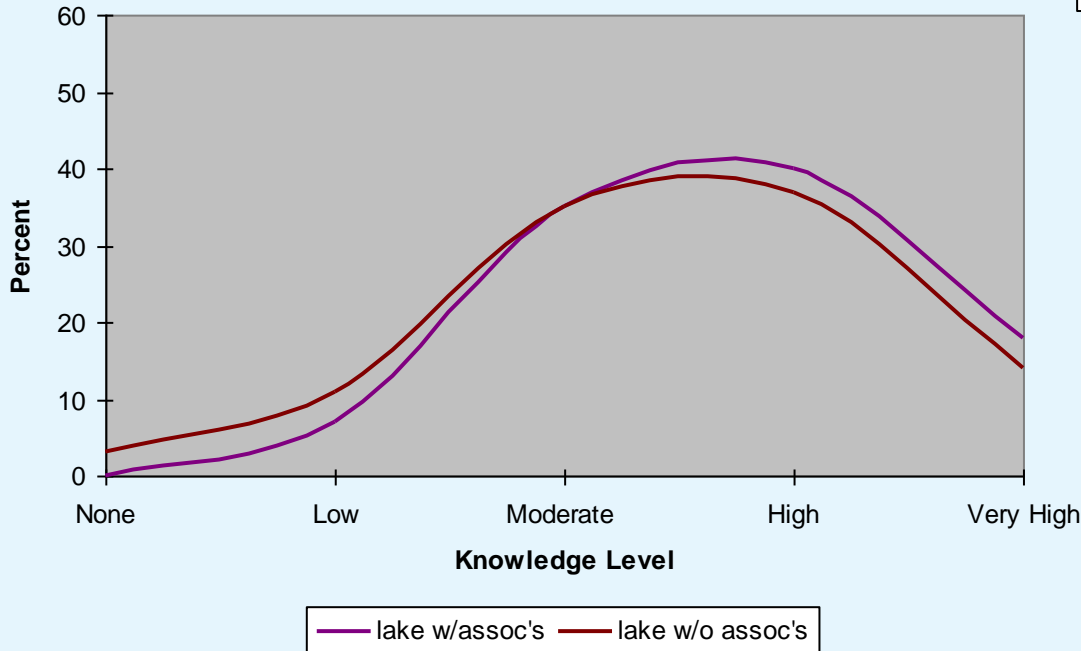
Members Non-Members

Non-Significant Differences Between Lake Types

Maintaining fish and wildlife habitats

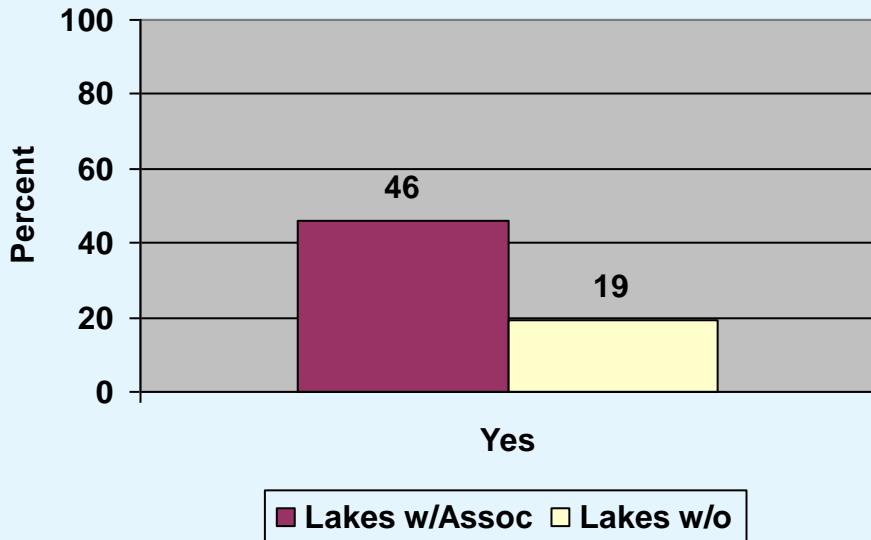


Effects of fertilizers / pesticides on lake

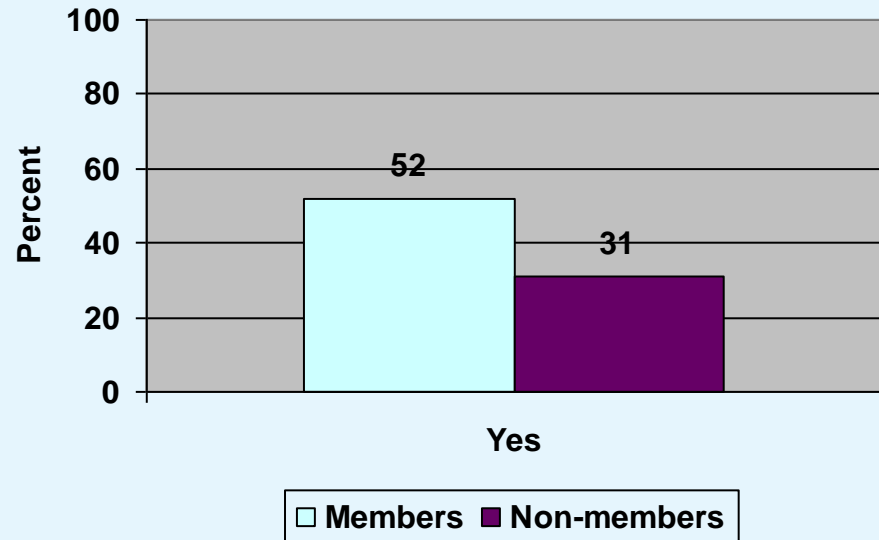


Members: Done More Activities to Acquire Conservation Knowledge

Done an activity in previous 2 yr's to learn about conservation practices ***



Done an activity in previous 2 yr's to learn about conservation practices **



Minimal Differences in Property Management Behaviors

Shoreland Alterations: Minimal Differences

| <i>Changes To Shoreline (Values in Percent)</i> | | | |
|---|--------------------|--------------------|------------------|
| | <i>Category A*</i> | <i>Category B*</i> | <i>No Action</i> |
| Retaining wall | 2 | 18 | 80 |
| Rock/Riprap | 0 | 23 | 77 |
| Plants growing out of water | 62 | 18 | 20 |
| Man made beach | 3 | 32 | 65 |
| <i>Lakes w/out association***</i> | 2 | 25 | 74 |
| <i>Lakes w/ association***</i> | 5 | 38 | 58 |
| Natural shoreline w/native vegetation | 79 | 12 | 9 |
| Dead trees in or below water | 28 | 14 | 59 |
| <i>Members*</i> | 21 | 13 | 66 |
| <i>Non-members*</i> | 39 | 12 | 49 |

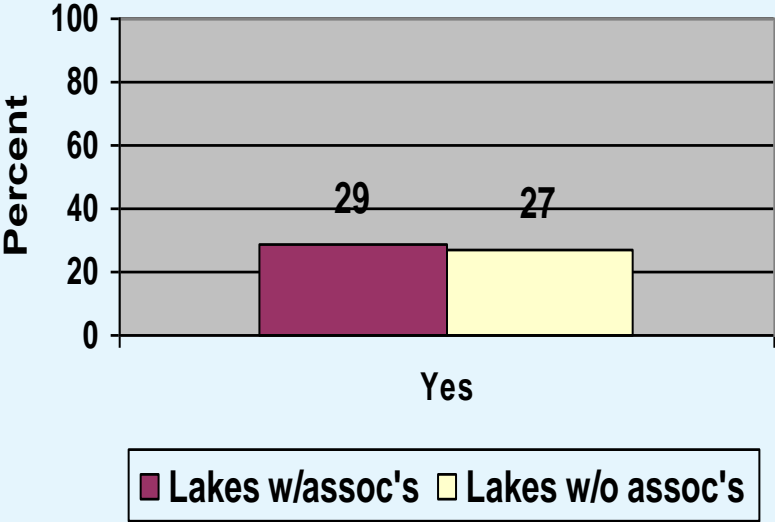
*Category A represents changes that are consistent with conservationist recommendations and Category B includes changes which go against such recommendations.

35 Foot Zone Preceding Shoreline: Minimal Differences

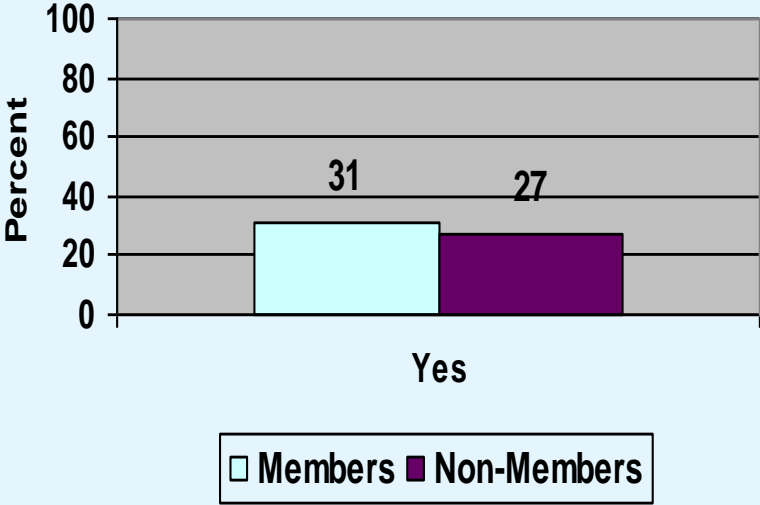
| <i>Changes to 35 foot zone preceding shoreline</i> | |
|--|---------------------------|
| | <i>% that made change</i> |
| No Changes | 54 |
| Planted native plants | 11 |
| Removed underbrush | 12 |
| Removed trees | 11 |
| Trimmed trees | 16 |
| Planted flower beds | 8 |
| Planted or expanded a lawn | 4 |
| Planted trees (a frequent 'other' response) | 5 |
| <i>Lakes w/out association*</i> | 3 |
| <i>Lakes w/ association*</i> | 7 |

Use of Rain Water Filtering Method: No Differences

Use of Rain Water Filtering Method by Lake Status



Use of Rain Water Filtering Method by Member Status

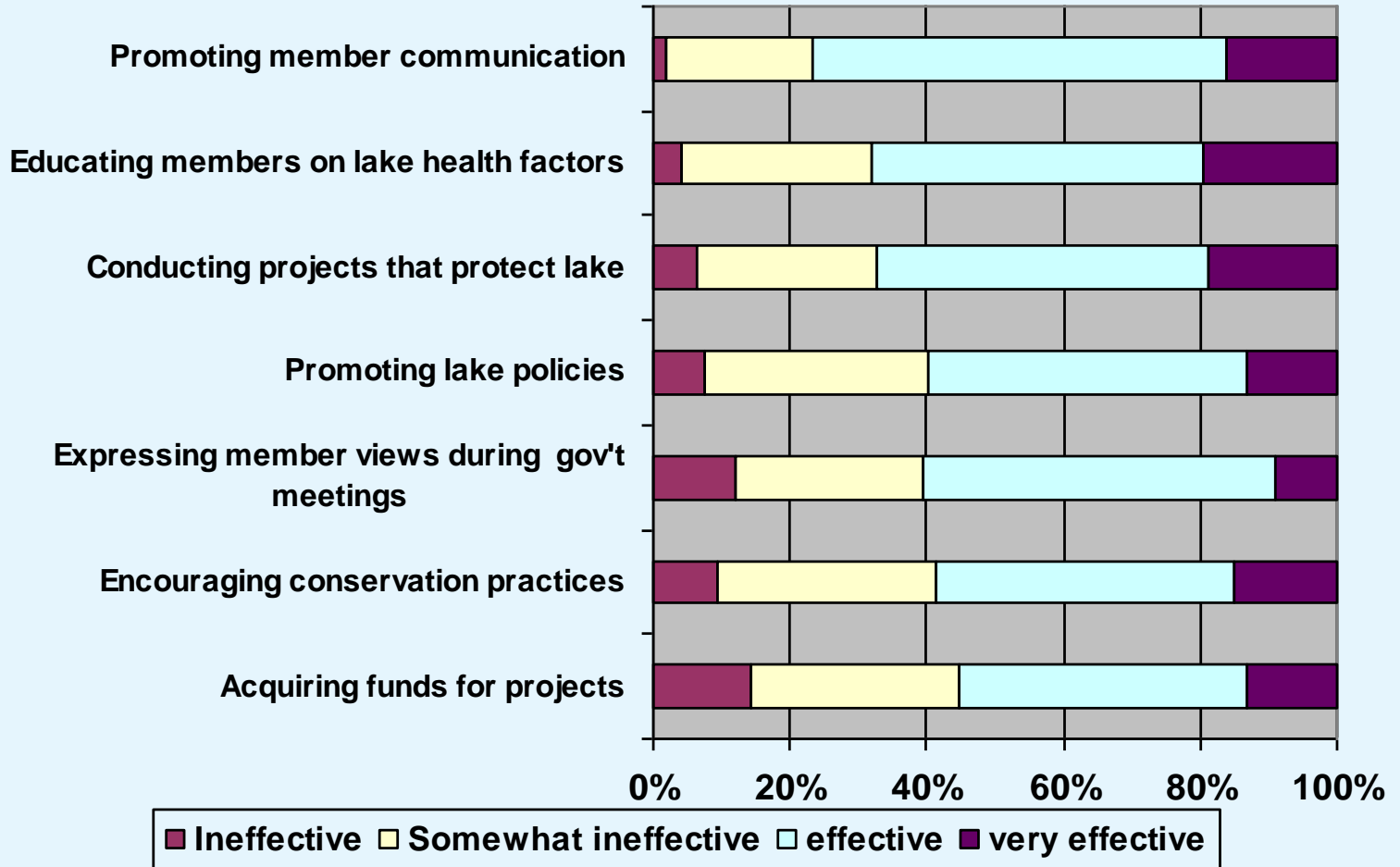


Lawn Care Practices: Minimal Differences

| <i>Lawn Care Practices (Values in Percent)</i> | |
|---|--------------------------------|
| | <i>% that practices method</i> |
| No Lawn | 41 |
| Use a mulching mower | 38 |
| Use mower w/bag & compost clippings | 10 |
| Use a regular mower (frequent write-in) | 8 |
| Rake and compost clippings | 13 |
| <i>Lakes w/out association**</i> | 17 |
| <i>Lakes w/ association**</i> | 10 |
| Test soil and fertilize accordingly | 1 |
| Don't test soil; fertilize per directions on bag | 5 |
| Regularly use products to eliminate weeds | 2 |

Ranking of Lake Association Efficacy by Members

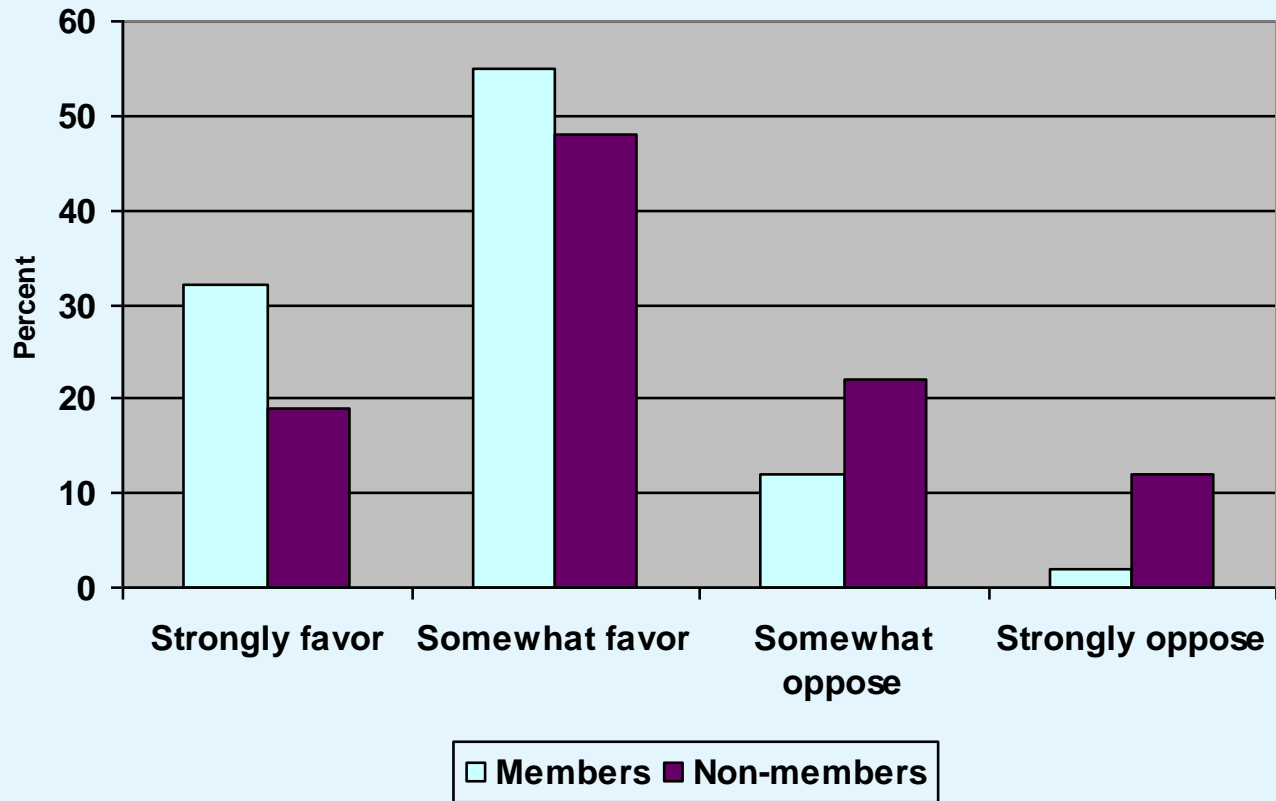
Lake Association Efficacy Ratings



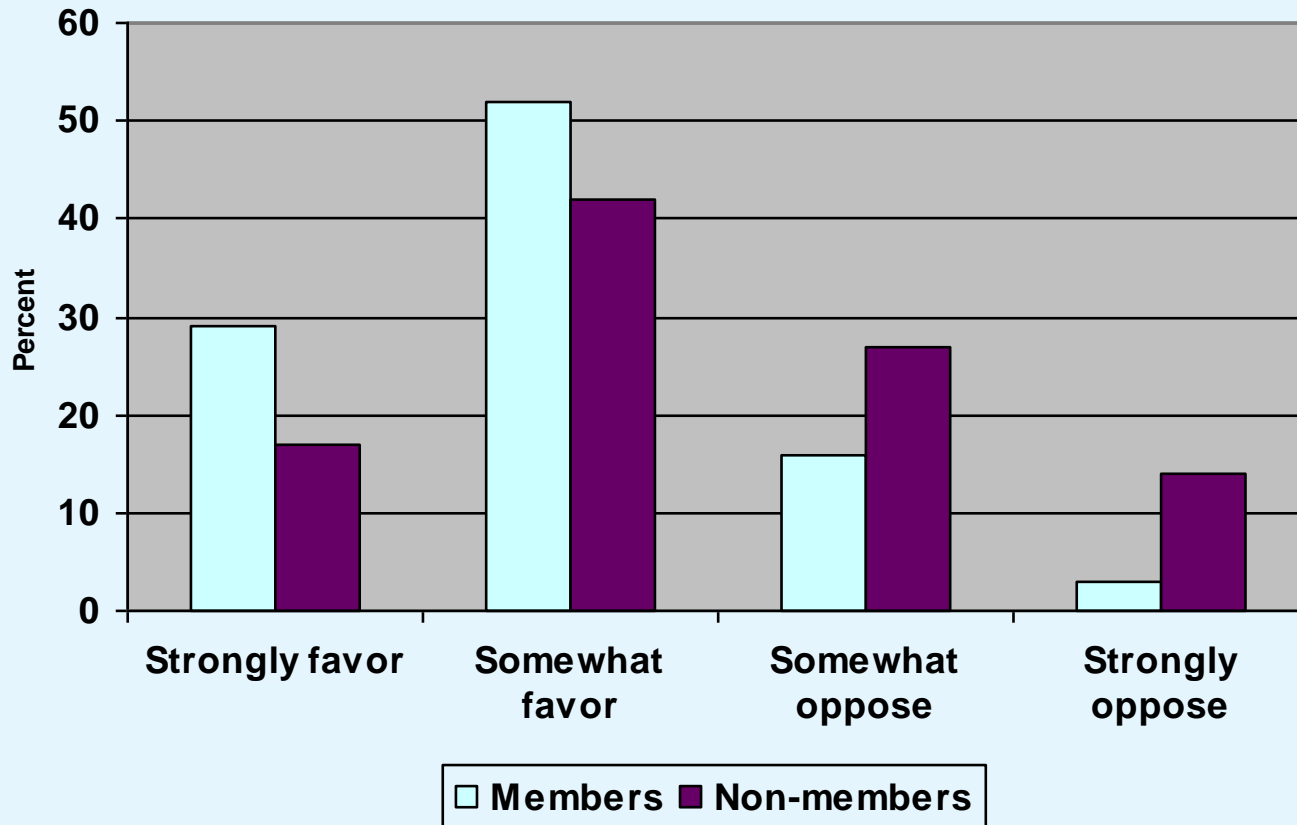
Opinion Differences

- No differences between Lake types
- Differences between Member statuses
 - Members favor both organizing and zoning for lake health purposes

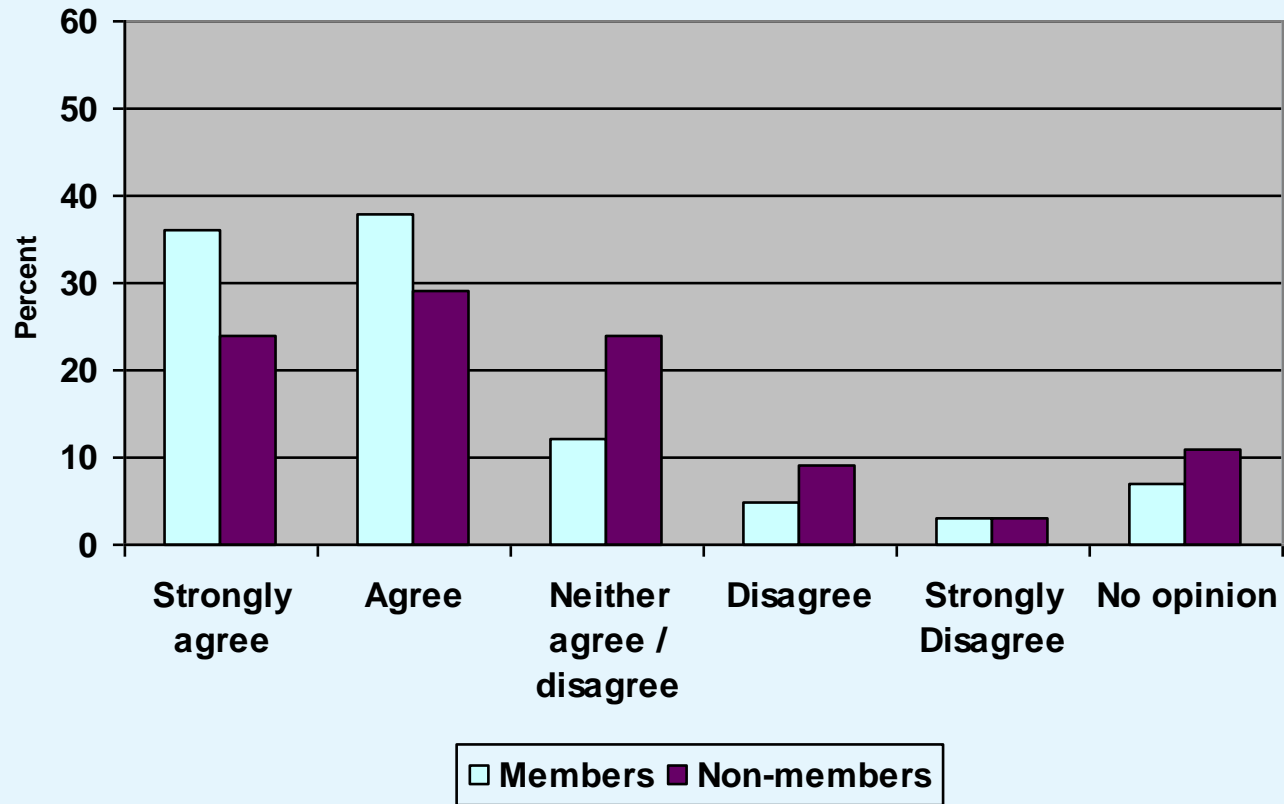
Organized Efforts at Citizens to Adopt Lake Conservationist Practices ***



Zoning Ordinances as a Way to Preserve Shorelands**



Neccessity of Preserving Shoreline Vegetation for Imporved Lake Water*



Motivation Differences

- In survey 10 reasons that may affect one's land altering decisions and 4 identified as collective motivations
- Members consistently ranked collective reasons as being more important

Collective Motivations to Change Property (values in Percent)

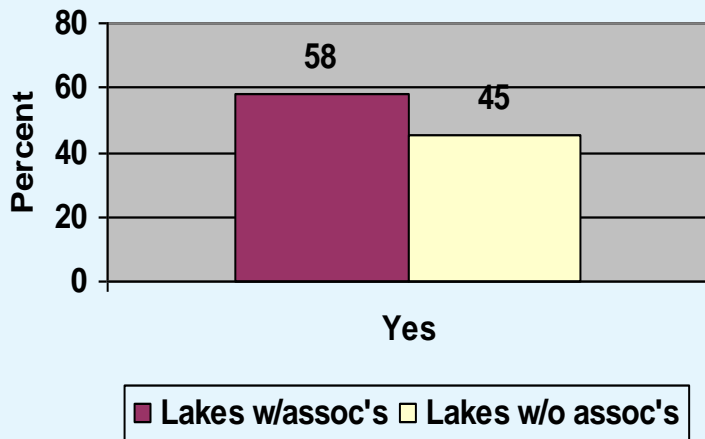
| | <i>Less Important</i> | <i>More Important</i> |
|---|-----------------------|-----------------------|
| Effects on other lake properties | 38 | 62 |
| <i>Members **</i> | 32 | 68 |
| <i>Non-members **</i> | 56 | 44 |
| Effects on water quality | 6 | 94 |
| Members | 4 | 97 |
| Non-members | 11 | 89 |
| Effects on fish and wildlife | 6 | 95 |
| Members | 5 | 95 |
| Non-members | 8 | 92 |
| Effects on natural areas | 12 | 89 |
| <i>Members *</i> | 7 | 92 |
| <i>Non-members *</i> | 20 | 80 |

Information Sources

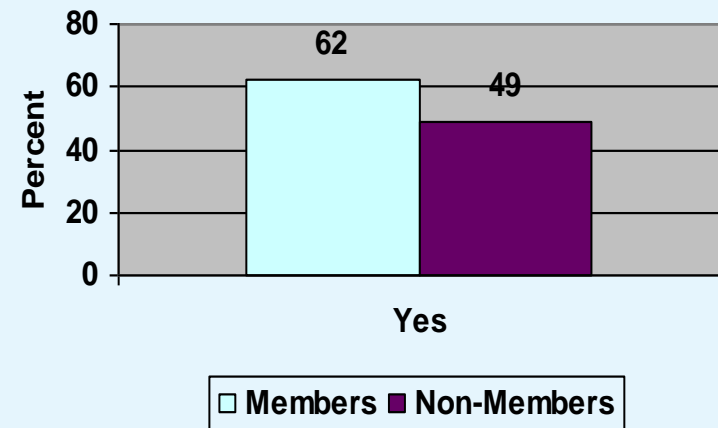
- Residents on lakes with associations and their members use more information sources
- Members use more formal sources while non-members use more informal sources

Members: Tend to Use More Information Sources

Used any Info Sources in last 2 yr's **



Used any Info Sources in last 2 yr's



Members: Tend to Use Formal Sources

| <i>Information Sources Used in last 2 years (values in % of total)</i> | |
|--|-----------|
| A Lake Organization | |
| <i>Members ***</i> | 34 |
| <i>Non-members</i> | 6 |
| DNR | |
| <i>Members *</i> | 23 |
| <i>Non-members</i> | 12 |
| Burnett Co. land and water conservation dept | |
| Members | 19 |
| Non-members | 11 |
| Planning Office | |
| Members | 8 |
| Non-members | 12 |

Members: Tend to Use Formal Sources, cont...

| <i>Information Sources Used in last 2 years (values in % of total)</i> | |
|--|-----------|
| Burnett Co. lakes and rivers association | |
| <i>Members **</i> | 11 |
| <i>Non-members</i> | 0 |
| Local Officials | |
| <i>Members *</i> | 6 |
| <i>Non-members</i> | 0 |
| UW-Extension | |
| Members | 4 |
| Non-members | 0 |
| Other University faculty | |
| Members | 2 |
| Non-members | 2 |

Nonmembers: Tend to Use Informal Sources

| <i>Information Sources Used in last 2 years (values in % of total)</i> | |
|--|-----------|
| Neighbor | |
| Members | 21 |
| Non-members | 20 |
| Internet | |
| Members | 12 |
| Non-members | 14 |
| Family | |
| <i>Members *</i> | 7 |
| <i>Non-members</i> | 15 |
| Friend | |
| Members | 7 |
| Non-members | 14 |
| Public Library | |
| Members | 1 |
| Non-members | 5 |

Observations about Lake Associations:

- Residents with associations consistently display higher conservation *knowledge* levels on some measures.
- Few *practice* differences on most measures.
- Members report more collective land change *motivations* and favorable *opinions* towards organizing.
- Residents on lakes with associations and their members access more *information*, particularly formal sources.

Major Finding

Burnett County lake associations impact knowledge levels of their lake residents, however there is little to no impact on the individual conservation practices that were measured. Those measured focused on practices effecting property.

Implications

- Lake associations in Burnett County have considerable potential even though currently they may be less influential on individual lake conservation behaviors.
- Points to need for additional strategies based on principles of environmental responsible behavior change (focusing on direct behavior change).

Implications

- Points to the need for organizational development/support to associations to maximize education and outreach.
- Possibilities of associations assisting the formation of new associations.