



# **Hickory Grove Lake Watershed Citizen Awareness Campaign**

Prepared by Jacqueline Comito, Aaron Andrews, Carol Brown,  
Ann Staudt and Nathan Stevenson

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# **Hickory Grove Lake Watershed Awareness Campaign**

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## **Background**

A 98-acre man-made lake located in Story County, Iowa, Hickory Grove Lake is an important recreational resource for Iowa citizens and travelers through the state. The lake flows into East Indian Creek, which is a tributary of the Skunk River. Hickory Grove Park is the largest and most popular park maintained by Story County Conservation. This recreational area receives more than 70,000 visitors each year. Some attractions of this lake and park include hiking trails, camping, hunting, boating and canoeing, fishing and cross-country skiing.

The Hickory Grove Lake Watershed is a sub-basin of the HUC 8 South Skunk River Watershed - 07080105. It has a drainage area of 4,035 acres and the land use is dominated by cropland (84.7%); major crops are corn and soybeans.

A review of the 2010 U.S. Census showed that 89,542 people live in Story County. The watershed population is quite small with approximately 15 farms and nearly the same number of landowners and operators involved in row crop production on these farms. Additionally, there are 28 residences located within the watershed. Not all of the landowner/operators live within the watershed. While there are no communities in the watershed itself, there are several small towns within Story County and adjacent Marshall County in which the lake serves as a popular recreational area.

According to the Iowa Surface Water Classification, the lake is designated for primary contact recreation, aquatic life and human health uses. In 2008, it was listed on the 303(d) Impaired Waters Listing for elevated bacteria levels. Hickory Grove Lake is experiencing event-driven water quality problems. Surface runoff related to precipitation events has led to gully erosion as well as debris and nitrogen spikes immediately after these events. The eastern end of the lake is now sediment filled, limiting boat access. The fishery is healthy, however, carp have destroyed much of the vegetation and IDNR considered a lake drawdown after the fish population estimate in the fall of 2010.

## Goals and Strategies

The primary goals of this campaign are to promote an appreciation of Hickory Grove Lake and Park and to generate pride in local water quality, which ultimately will require changes in habits and practices. Also important in this project is education about bacteria and how high levels harm water quality, and in turn animals and humans. The changes made can eventually remove the Hickory Grove Lake Watershed from the U.S. EPA 303(d) impaired water bodies list.

Hickory Grove Lake Watershed contains farmland, park property, roads and rural acreages but people come from all around central Iowa to utilize the lake and park. This campaign must have components that reach out to watershed residents as well as lake and park users. The materials suggested in this proposal were created with this in mind and the goal of reaching multiple audiences. In addition to any immediate action generated by this project, this outreach campaign should create *lasting* tools to promote water quality messages to continually generate pride of Hickory Grove Lake and Park.

## Audience I: Landowners and Operators

Due to the fact that there are so few landowners and operators within the watershed, personal nurturing of watershed residents is the most appropriate approach to garner trust and ultimately change.

During spring 2012, watershed coordinator Aaron Andrews conducted one-on-one interviews with 80 percent (12) of the producers in the watershed. The purpose was to gain a better understanding of landowners' perceptions of water quality issues within the watershed and to assess their willingness to participate in a watershed improvement project.

Prior to these conversations, most of the landowners did not have a strong understanding of the water quality issues in the watershed. Andrews informed landowners of the elevated bacteria levels in the lake that are likely due to a combination of factors including; the resident geese population, unrestricted cattle access to a stream feeding the lake and contributions from one or more faulty/outdated septic systems in the watershed.

### Preliminary outcomes with watershed residents' interviews

- All 12 of the landowners were very agreeable to whatever measures that would be taken to prevent the geese from polluting the beaches.
- Only one out of the 12 landowners interviewed had an unpermitted septic system. This landowner was open to getting more information about the potential for updating their system. Further work is needed to address septic system issues. Andrews will plan to contact the remaining landowners having unpermitted/outdated septic systems in the watershed (eight in total).

- Eleven of the 12 landowners expressed interest in putting additional conservation practices on their land to help improve water quality if significant funding were available to help pay for these practices. They had the strongest interest in installing additional waterways, but the primary impairment of the lake is bacteria. While EPA, Section 319, funds would only be available for those practices that directly address bacteria reductions, there are other programs available for other problems in the watershed that could lead to impairment in the near future.
- Six of the 12 landowners expressed reservations about working with agencies to improve the watershed and restore the lake.
  - One person said he preferred to be as far removed from government as possible. He also “preferred to stay out of the spotlight” and would allow signage on his land only if his name was not included on the sign.
  - Two landowners expressed concern about the quantity of water backing up on their land due to the now shallow silt retention basin located in the south end of the east game area in Hickory Grove Park. Tension over the issue stemmed from an unwritten easement with the previous landowner which allowed water to back up into the field during times when water levels were high.
  - Another landowner was “bitter” about a previous watershed improvement project because he was told his farm did not qualify for the incentives as being outside of the watershed, when in fact, his farm is within the watershed.
  - A landowner complained that during a project in the 1970s, promised cost-share dollars failed to materialize, and when they finally did materialize the incentives only went to those who were poorly managing the land (rewarding those for bad behavior). The landowner also expressed frustration that his increased efforts in conservation were not being met with similar efforts from others managing land within the watershed.

The one-on-one interviews were conducted prior to the controversy in late spring 2012 concerning the installation of a confined animal feeding operation (CAFO) immediately outside the watershed and approximately three quarters of a mile from Hickory Grove Lake. Two public meetings were held in June and hundreds of citizens were in attendance. The meetings were heated because citizens thought the CAFO would be too close to Hickory Grove Lake and Park. Most of the folks protesting the CAFO were from outside of the watershed. Follow-up interviews will be held to see if this controversy had an adverse effect on landowners’ willingness to participate in a watershed improvement project. The manure management plan has been withdrawn but the landowner plans to resubmit in the future. The proposed plan included manure application on a total of 345 acres, of which, approximately 150 acres were within Hickory Grove Lake Watershed. The landowner/operator manages an additional 80 acres within the watershed which were not included in the manure management plan.

The recent CAFO controversy makes it even more important to be aware of the sensitivities of the watershed residents, as well as those living near the park and lake. Given the success of the first round of personal interviews, additional conversations should be conducted by the watershed

coordinator. The watershed improvement project needs the participation of its landowners. Trust needs to be built with the landowners in order to ensure their participation and make changes on the land.

## **Audience II: Hickory Grove Lake and Park Users**

This campaign is aimed at promoting an appreciation of Hickory Grove Lake to regular lake users as well as attracting new lake users. As indicated by the lake usage survey (see page 15), users who were surveyed traveled an average of 26 miles to visit the lake: 14 percent lived in Colo, 11 percent were from Ames and 10 percent from Marshalltown. Fifty-three percent of the people surveyed using the lake were from Story County.

Because the lake users are from communities outside the watershed, the awareness and appreciation campaign must encompass a wider geographical scope. Residents in Story County including Ames, Nevada and Colo should be included. Also the campaign should expand to the east to include the Marshalltown area.

Water quality matters a great deal to the people using the lake. Respondents were asked to rank a list of issues concerning the lake as to whether it was *not important* to *very important* (see pages 15-17 of this report). The top three rankings as *very important* in the usage survey pertained to water quality: Safety from bacteria contamination/health advisories (80%), lack of water odor (45%) and water clarity (33%). Outreach campaigns should use these issues and explain how they connect to water quality and the plans to improve the overall watershed.

The Hickory Grove Lake Watershed (as all watersheds) is unique. Because there are no communities within the watershed and the majority of the lake users come from further distances, the awareness and appreciation campaign will have a different approach.

## Branding Elements

Core branding elements for the watershed awareness campaign are being created to support this plan.

- Watershed identification logo: this logo was created in December 2011 and is currently being implemented into the marketing materials and signage.



- A campaign slogan is also an important branding tool. An example of a slogan is: “**Protecting today. Preserving tomorrow.**” The slogan can be included on all of the components of the campaign in conjunction with the watershed identification logo.

## Marketing Support

Several different marketing media will be utilized in the campaign. The outreach materials are designed to be complementary, promoting an awareness and appreciation for Hickory Grove Lake.

**Brochure:** A general overview brochure has been developed to inform readers about the watershed, the project and its goals. The language and images used in the brochure, and all appropriate materials, emphasize the importance of water quality for watershed residents and visitors to Hickory Grove Park. The brochure is currently available at the Story County Conservation Nature Center.

Brochures should be placed throughout Hickory Grove Park including the campground, two bathhouses and shelter houses. It should also be available at neighboring businesses including Twin Anchors Campground and Golf Course.

Brochures could be available at all of the local tourism bureaus including Ames Convention & Visitors Bureau, Iowa State University Visitors Booth and the Marshalltown Convention & Visitors Bureau.

**News media:** Regular press releases will be sent to area newspapers and radio stations to support the park’s events and watershed improvement achieved goals.

A weekly radio segment that discusses conservation could be aired on the Ames radio station KASI-1430AM, featuring the watershed coordinator or a locally recognized personality.

**Movie Theater advertising:** Many theaters project local business ads prior to movie previews. Movie theaters are located in the cities of Nevada, Marshalltown and Ames. Ads promoting the watershed project and Hickory Grove Lake as well as why clean water quality is important to everyone can be part of these advertisements, provided the movie theater company participates in this practice.

## Watershed Signage

**Multi-Lingual Signage:** Hickory Grove Lake is visited by a growing number of Spanish-speaking families and individuals. Although the lake usage surveys indicate that only three percent of the groups using the lake spoke Spanish, they should not be overlooked.

According to 2010 U.S. Census data, the nearby community of Marshalltown has a Hispanic



population of 24.1 percent, which has doubled since 2000. Therefore, it is recommended that current warning signage, as well as new marketing signage, be made available also in Spanish. This will help protect the health of all lake users and recognize this segment of the population as important stakeholders in the campaign.

It is also recommended that the signage be moved in front of the beach where the visibility of the signage is most beneficial, especially given that 52 percent of respondents indicated that they used the lake for swimming and 80% of the respondents said it was *very important* to know if there was any safety issues concerning bacterial contamination and/or health advisories.

**Watershed Boundary Signs:** Signage will be created to mark the geographic boundaries of the watershed. The signs will say, “Now Entering Hickory Grove Lake Watershed” and will contain the logo and slogan. The signs will provide a different perspective of the area and introduce the concept of watersheds to those who may not have previous knowledge of it. These signs will increase the visibility of and generate curiosity about the Hickory Grove Lake watershed project.



**Promotional Road Signs:** Small signs will be placed along well-traveled roads within the watershed, such as the entrances to Hickory Grove Park, containing sequential facts, as well as messages about the aesthetics of Hickory Grove. The signs will be reminiscent of the old Burma-Shave advertising road signs and placed in groups of four or five. The first three or four signs will contain the featured message with the last containing the logo and slogan for the watershed project. Each set of signs will be different, to engage people and generate curiosity about the project. Signs can include information about soil and water quality or just encourage those passing by to visit the park.



One example:

It's the beauty we observe   Not to is a mistake   Help us today preserve   Hickory Grove Lake

## **Promotion In and Near Hickory Grove Lake and Park**

Because most people who frequent the park come from surrounding towns, marketing materials need to be placed within the park itself as well as nearby sites where visitors frequent.

Informational posters about the watershed improvement efforts will be placed strategically throughout Hickory Grove Park including the campground, two bathhouses and shelter houses. Additional messaging should be posted to inform the lake users of upcoming events at or around the park using the permanent sign holders shown above.

Other posters could include explanations of park clean-up efforts such as the dogs that have been “hired” to scare away the geese. This would be a fun and interesting way to explain the problems and solutions along the beach at Hickory Grove Lake. A “biography” about the each dog and its work schedule could be posted which may encourage people (especially dog lovers) to make return trips to the park to see the dogs at work.

**Campground:** Sixty percent of those surveyed were camping at the lake. Therefore, informational brochures given to campers upon registering at Twin Anchors and the Hickory Grove Lake campgrounds would be an excellent means of increasing public awareness of watershed and water quality issues. Flyers can be placed in the bathhouses at the beach and the campgrounds with information on events and project progress.

**Golf Course:** Twin Anchors Golf Course is located near the entrance to Hickory Grove Park. To promote the park to golfers, special scorecards could be used that contain details about the watershed, the lake and the park. These scorecards could be made unique by numbering them and offering a daily drawing for a prize. The player with the corresponding number could win a complementary beverage or other prize funded by the watershed project. The intent is to encourage people to read the information more closely. Additional options for the scorecards could be to include a coupon as part of the scorecard to receive a logo'd golf ball or pack of custom golf tees with the project information on it.

## Activities in Hickory Grove Park

**Geocaching:** Geocaching is a real-world, outdoor hi-tech treasure hunting game using GPS-enabled devices. Participants navigate to a specific set of GPS coordinates and then attempt to find the cache (container) hidden at that location. Geocaching is a fast growing activity across the United States. There are hundreds of smartphone applications for GPS and geocaching. Park employees or volunteers could work with the Iowa Geocachers Organization to promote the park as a geocache location ([www.iowageocachers.org](http://www.iowageocachers.org)).

Because 22 percent of lake usage survey respondents indicated that they spent their time at the park for nature appreciation, geocaching would be an activity for those who appreciate nature and would help new users discover the beauty of the park.

Hickory Grove Park could have its own geocaching map so that people could explore the park and learn more about the watershed. The cache locations will be available to download from the Internet. Geocaching encourages people to visit all of the park's amenities; there are many niches in the park to explore.



Each cache will have a fact about the lake, park or watershed. The container's contents could change as watershed improvement progresses and events change at the park. Geocaching can be done as a group or people can venture out on their own. This is also a great family activity, which would be a great addition to Hickory Grove Lake Park due to the fact that 39 percent of lake usage respondents had an average of four children with them.

**Hickory Grove Triathlon** (<http://www.hickorygrovetriathlon.com/>): The Hickory Grove Triathlon is held annually in August. A partnership between the Hickory Grove Watershed Project and the

Triathlon could be established and a general awareness event for the watershed improvement project could be held in conjunction with the triathlon.



The triathlon brings a different audience of athletes who may not utilize the lake any other time outside this event. Because the triathlon participants swim as part of the event (or can't because of high bacteria levels), the campaign could have a distinct impact.

In addition, silicone wristbands, are popular among athletes, could be created and provided to the athletes with their registration packets. The wristbands could contain the slogan of the watershed, the Hickory Grove logo and the triathlon logo.

**Trick-or-Treat Night in the campground:** As 59 percent of lake usage respondents indicated that they spend their free time camping, events that utilize the campgrounds could be promoted in this outreach campaign.

One such already established event is the annual Breezy Bay Campground Halloween Trick-or-Treat Night. The campers who participate are awarded a free night's stay at the campground. To promote the watershed campaign, candy could be given out to trick-or-treaters with messages attached about the Hickory Grove project. Additional park event promotion could also be included. This event could be expanded to include Twin Anchors campground also.

**Appreciation Events:** A Hickory Grove Lake Appreciation Day could be held to celebrate the progress made in the Hickory Grove Lake Watershed campaign. Live music, food, fishing and canoeing demonstrations and geocaching information could be included. Area organizations such as Pheasants Forever, Ducks Unlimited and the Izaak Walton League could have information tables, too. The appreciation day could be held in the spring in conjunction with Earth Day.

The Iowa Learning Farms Conservation Station should be included at the appreciation day. The Conservation Station is an effective tool for demonstrating how conservation practices benefit water and soil quality and for bringing people together around conservation issues. The rainfall simulator component of the Conservation Station has an effective visual display, which demonstrates how different land practices (urban and rural) affect surface and subsurface water quality. The Conservation Station also contains a learning lab with various lessons that can be changed depending on the targeted message and audience at the event.

A fall event can be held to promote the park and its autumn colors such as a “Turkey Trot” 5k or 10k run around the lake. T-shirts with the watershed logo can be given away to participants and project informational brochure and flyers for events can be given to participants and visitors.

**Learning Opportunity:** As part of the campaign, an IOWATER volunteer water quality monitoring workshop could be held. Watershed residents should be encouraged to participate in the workshop with their children or grandchildren of appropriate ages. Then volunteers can conduct the monitoring together, so ownership of the watershed and pride in water quality can be nurtured through multiple generations. The IOWATER program also offers a subsequent workshop on bacteria monitoring, and this workshop could be offered locally if enough interest is generated.

All of the events provide opportunities for watershed residents and visitors to network and learn from one another and unite as a watershed community.

## Expanded Area Promotion

**Restaurants:** Watershed residents and area lake users frequent the Country House Restaurant, located on Highway 30, as well as Niland’s Café in Colo. Printed, paper placemats and table tents could be placed at dining tables in these restaurants. The placemats and table tents will contain information about Hickory Grove Lake Watershed project, the lake and the park to call attention to its amenities.

Other restaurants outside of the watershed should be targeted as well. There are several restaurants in the surrounding area including Ames, Marshalltown, Nevada, State Center, Collins and Cambridge that may be willing to use placemats, display table tents and brochures.

**Colleges and Universities:** Hickory Grove is also unique in that it rests between a major university and an area community college. Iowa State University set a record for enrollment in 2012 with over 31,000 students. Marshalltown Community College enrolls an average of 2,000 students every year. Many students may not know of Hickory Grove Park and would likely take advantage of its close proximity.

There are bulletin boards and places for brochures where promotion about the lake and events could be posted. Table tents are also very common in the dining centers and would be viewed by thousands of students every day. Clubs and student organizations could utilize the shelter houses for meetings and outdoor activities. This may be a good group for creating some type of “friends of Hickory Grove Lake watershed”. This would be a way to engage the fishing club, geocachers and other outdoors clubs that likely already exist at ISU.

**Farmers Markets:** Ames has three farmers markets that operate from May through October. They include the Ames Farmers Market, Main Street Market and North Grand Farmers Market. Colo and State Center also have regular farmers markets.

Those involved with the watershed project could have a booth with information about the project and what community members can do to improve water quality in their area. Handouts at the booth can include the general informational brochure and additional fact cards about water quality and what can be done to improve it (e.g. What is a watershed? What watershed do you live in? What are some of the issues that your community is facing with its water quality/impairments?). The booth should appeal to all ages. Kids can take home a picture to color or a worksheet regarding pollution and water quality.

The farmers market booth is also a great venue to promote upcoming events at the lake.

## People Involvement

### ILF Farmer Partners

Currently there is one resident within the watershed who is implementing several conservation farming practices to curb erosion and slow the flow of water. This farmer will be asked to become an Iowa Learning Farms partner and host a field day for watershed residents and other farmers to discuss his successful operation.

### Youth Groups

**Service clubs:** Involving youth groups, such as Boy and Girl Scouts or 4-H, in the watershed project help bring awareness to the issues involving the watershed to new, younger audiences. This will help engage the next generation who will be taking care of the water quality and the lake. The groups can plan service projects that help the lake such as trash pick up days, painting picnic tables, etc.

**Middle school and elementary students:** Currently the Ames Middle School 6<sup>th</sup> grade class travels to Hickory Grove Lake for their annual outdoor day. Story County Conservation staff are educators for this event, teaching the basics of canoeing, team-building and compass skills.

The Conservation Station and/or a watershed activity could be added to the classes' rotations to learn about their surroundings that day and to learn more about water quality in general.

Other area schools could be invited to participate in their own outdoor classroom, of which Iowa Learning Farms will sponsor. Ideally, there would be five or six different learning stations, each with its own presenter or team of presenters. Iowa Learning Farms will work with the watershed coordinator and Story County Conservation to lead learning stations/group sessions during the day-long event. Examples of such partners may include local ISU Extension and Outreach personnel, local DNR/NRCS staff, local SWCD commissioners and local Farm Bureau personnel.

Students would be bussed to the park then divided into groups to experience the different learning stations. Student groups would rotate to each of the different learning stations, spending approximately 30 minutes at each stop, participating in such activities as nature hikes/scavenger hunts, fish species identification, birds and furs, geocaching, and water quality monitoring.

**High School students:** Another opportunity for youth involvement would be possible through a partnership with instructors and high school student organizations, including:

- Ames High School's 100<sup>th</sup> Green Butterfly Environmental Club
- Nevada High School FFA chapter
- West Marshall High School FFA chapter, which encompasses nearby communities State Center and Colo-Nesco High Schools

These groups could take a field trip to Hickory Grove or conduct an outdoor class and learn about the watershed.

Design and creation of a Hickory Grove Lake Watershed website could become a class project for students, in which the watershed coordinator and/or advisory board would serve as the client and consult with the teacher(s) and student group(s) regularly. In addition to raising students' awareness of local environmental issues, this partnership would be a great learning opportunity for the students and would benefit the watershed project by utilizing students' computer and design skills.

**College students:** A partnership with the Program for Women in Science and Engineering (PWSE) at Iowa State University would be a great way to connect Hickory Grove Park to ISU. Outdoor classrooms could be conducted at Hickory Grove Lake Park or the organization members could be called upon to help with above outdoor activities at the park.

**Church groups:** People often use their church for idea exchange and discussion on a variety of topics, religious and nonreligious. Clean water is a human right and discussing within the church community why and how to clean up local waters would be appropriate. By calling awareness of Hickory Grove Park to area churches and their various groups, the park could be used as a venue for classes, social and youth group activities.

**High School/Community/Sporting Events:** The Hickory Grove Lake watershed project could increase its presence in the surrounding local communities and generate renewed interest in project efforts through sponsorship at local sporting events.

## Time frame

<p>Quarter 1: January-March</p>	<ul style="list-style-type: none"> <li>• General informational brochure (finished)</li> <li>• Establish geocaching</li> <li>• Continue one-on-one conversations with watershed residents</li> <li>• Website creation</li> </ul>
<p>Quarter 2: April-June</p>	<ul style="list-style-type: none"> <li>• Create and erect beach signage and other park signage</li> <li>• Watershed boundary signs</li> <li>• Appreciation Day event</li> <li>• Develop placements for area restaurants</li> <li>• Conduct outdoor classrooms</li> <li>• Continue one-on-one conversations with watershed residents</li> </ul>
<p>Quarter 3: July-September</p>	<ul style="list-style-type: none"> <li>• Create &amp; distribute table tents for college dining halls</li> <li>• Service club projects (cleaning, painting, etc)</li> <li>• Triathlon (August)</li> <li>• Conduct outdoor classroom (Sept)</li> <li>• ILF Field Day</li> <li>• Continue one-on-one conversations with watershed residents</li> </ul>
<p>Quarter 4: October-December</p>	<ul style="list-style-type: none"> <li>• Trick-or-treat night at campground</li> <li>• Turkey Trot 5K run</li> <li>• Continue one-on-one conversations with watershed residents</li> </ul>

## Proposed Budget for Awareness Campaign

Item	Quantity	Budget
Brochures	2000	\$425.00
Custom golf scorecards	1000	\$120.00
Paper placemats	5000	\$1600.00
Table tents	1000	\$65.00
Coloring pages	500	\$225.00
Fact cards	4000	\$65.00
Watershed boundary signs 24x36"	10	\$750.00
"Burma-shave" style signs-5 sets	25	\$450.00
Beach & Park signage	6	\$400.00
Custom-printed golf balls	300	\$437.00
Silicon wristbands	1000	\$300.00
Trick-or-treat expenses (candy and printing)		\$100.00
<b>HGL Appreciation Day</b>		
Promotion		\$200.00
Food/table service		\$350.00
Musician honorarium		\$350.00
<b>Turkey Trot fundraiser</b>		
Promotion		\$200.00
Food/table service		\$350.00
T-shirts	100	\$1050.00
*Registration fees \$25.00	150	+\$3750.00
<b>Memberships</b>		
Ames Convention & Visitors Bureau		\$200.00
Marshalltown CVB		\$200.00
Colo-Nesco Athletic Booster Club		\$100.00
AHS Athletic Booster Club		\$350.00
Movie theatre Advertising Ames Cinemark theaters	30 sec. spot	\$1000.00
Other items of minimal or no-cost Geocaching containers **Website		

\*This is estimated income for the fundraiser. \*\* Story County Conservation has a departmental webpage on the [www.storycountyiaowa.gov](http://www.storycountyiaowa.gov) website, in which Hickory Grove Park is included. This could be expanded at no cost.

### Income-generating ideas:

- Sell wristbands at Triathlon or school functions (i.e. football, basketball games)
- Concessions at school athletic events: portion of purchase goes to HGL (hot chocolate, popcorn)
- Turkey Trot is a fundraiser. Registration fees go to support HGL
- Hickory Grove Lake Charity Golf Outing. Registration fees to go support HGL
- Community Grants through Ames and Marshalltown Convention and Visitors Bureau and/or Chamber of Commerce



# Hickory Grove Lake Watershed

## Lake Usage Survey Results

An important part of mapping a watershed's community is usage surveys to help gain a better understanding of the ways that visitors use Hickory Grove Lake—the main focus of the watershed. Recreational areas, such as Hickory Grove Lake, bring numerous people to the watershed and also make up the fabric of the human landscape for an area.

Lake usage surveys allow the researcher to make observations about how a lake is used at any given time as well as talk with people who are utilizing the lake. Lakes can be a great point of entry for educating people about water quality issues as well as organizing action. Because of the economic and social importance of lake use in Iowa, having good water quality is a salient issue for many communities.

At three different times throughout the year (August 2011 to August 2012), members of the watershed-based community assessment team walked around Hickory Grove Lake conducting lake usage surveys. They started at the beach and campgrounds and worked their way around the lake, asking each group of people they met if they were willing to answer a few questions concerning their use and experience of Hickory Grove Lake. The survey was also administered in Spanish because of the significant number of native Spanish speakers recreating at the lake. The team conducted 88 group interviews representing 379 visitors to the lake.

This section of the watershed-based community assessment reports the results of a lake usage survey conducted for Hickory Grove Lake. This project is a collaboration between Iowa State University Extension and the Hickory Grove Lake Watershed group. Funded by Hickory Grove Lake Watershed planning group and Iowa Department of Natural Resources Section 319 funds, the purpose of this project is to develop and test a community assessment tool that can be used by watershed action teams and coordinators to better understand the community understanding of watersheds. Effective community assessments will allow watershed groups to develop goals, outreach and education regarding water quality challenges based on the values of the people living in the watershed.

# Hickory Grove Lake Usage Survey (n=88 groups)

*\*3% of groups surveyed were native Spanish speaking (6% of the people)*

## 1. How often do you visit the lake?

- 17% .....First time
- 3% .....Daily
- 9% .....Every other day
- 6% .....Every week
- 8% .....Bi-weekly
- 16% .....Bi-monthly
- 32% .....2-4 times a year
- 8% .....Once a year

## 2. Which seasons do you visit lake?

- 17% .....Winter
- 32% .....Spring
- 95% .....Summer
- 37% .....Fall

## 3. How many years have you been coming to the lake?

average of 12 years (range 1 to 50 years)

## 4. Where do you live?

- 14% .....Colo
- 11% .....Ames
- 14% .....Nevada
- 10% .....Marshalltown
- 8% .....State Center
- 53% .....Inside Story County
- 47% .....Outside Story County

## 5. How many miles do you drive to come to the lake?

Average 26 miles; 60% drive 20 miles or less

## 6. Please indicate the types of activities you do while you are visiting Hickory Grove Lake and what percentage of the time you do that activity.

<i>Activity</i>	<i>Percentage of time</i>
Fishing .....	59%
Camping .....	59%

Recreational boating ..... 18%  
 Swimming/ beach use ..... 52%  
 Nature appreciation..... 22%  
 Picnicking..... 42%  
 Snowmobiling or winter activities..... 8%

**Please indicate the importance of each of the lake characteristics.**

<b>Lake characteristic</b>	<b>No opinion</b>	<b>Not important</b>	<b>Somewhat important</b>	<b>Important</b>	<b>Very important</b>
Water clarity		12%	18%	37%	33%
Hard, clean, sandy lake bottom in swimming area	7%	13%	11%	38%	31%
Lack of water odor	1%	7%	15%	32%	45%
Diversity of wildlife	9%	15%	29%	30%	17%
Diversity of fish species	8%	15%	15%	39%	23%
Quantity of fish caught	9%	22%	23%	30%	16%
Safety from bacteria contamination/health advisories		5%	2%	13%	80%

**52% Male**

**48% Female**

(approximate breakdown of sex by all folks represented with survey)

**Age:** 43 years (primary respondent)

**Number of people in your group at lake:** average group size is 4

39% of groups had an average of 4 children with them