Rice Creek Water Trail
Recreational Analysis for Upper Rice Creek

Report #2/6 Prepared for:
Anoka County Parks and Recreation, Ramsey County Parks and Recreation,
Rice Creek Watershed District, and the National Park Service

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Executive Summary

The Rice Creek Water Trail is an urban waterway north of Minneapolis and Saint Paul, Minnesota that provides a unique blend of natural and human made environments. This report provides recommendations about ways to enhance the recreational experiences available on Rice Creek. We evaluated the creek’s potential for recreation through visual analysis, expert interviews, user surveys, and the literature, seeking to assess this unique location, landscape, and potential recreational opportunities. Through these methods we provide a review of the insights and desires land managers have for the creek as they move forward to make Rice Creek navigable and an active water trail. We analyzed current and potential user preferences and concerns about the water trail. Our own visual assessment of the creek gave us knowledge about the on-water conditions and the tremendous variability that can affect a Rice Creek experience. Finally, the recreational literature provided us with a foundation for our recommendations.

Based on the unique qualities of Rice Creek and information gathered, we recommend creating typologies to fit the needs of families who desire to spend quality time together along with recreationists seeking the opportunity to view and experience nature. To do this we suggest that more amenities and readily available information for the public will support a safe and enjoyable experience. Finally, we recommend maximizing Rice Creek’s potential as a resource for education, stewardship, and a natural green way connecting recreational opportunities, neighborhoods, parks, and communities.
# Table of Contents

List of Figures .................................................................................................................. ii
List of Tables ................................................................................................................... iii

Introduction ...................................................................................................................... 1
   Vision Statement .......................................................................................................... 2
   Goals and Objectives ................................................................................................. 2

Methods ............................................................................................................................. 2
   Site Description ........................................................................................................... 2
   Research Techniques ................................................................................................. 7

Findings .............................................................................................................................. 10
   Upper Rice Creek Characteristics ............................................................................. 10
   Upper Rice Creek Benefits ......................................................................................... 12
   Partner’s Visions and Concerns ................................................................................ 21
   Water Trail Characteristics ......................................................................................... 22
   Water Flow and Quality ............................................................................................. 23

Recommendations .......................................................................................................... 25
   Recommendation 1: Provide Opportunities for Multiple User Groups Through Diverse Recreational Typologies ........................................................................... 25
   Recommendation 2: Support the Recreational Experience with Information and Amenities ........................................................................................................... 27
   Recommendation 3: Inform Users and Residents about Water Levels and Water Quality .................................................................................................................. 29
   Recommendation 4: Increase Connectivity between Existing Recreational Opportunities .................................................................................................................. 30

Conclusions ....................................................................................................................... 31

References ......................................................................................................................... 31

Appendix A: Standards for Rice Creek Observations ......................................................... 33
Appendix B: Core Interview Questions Asked ................................................................... 35
Appendix C: Other Interview Questions Asked .................................................................. 36
Appendix D: Rice Creek Recreationist Survey Results ....................................................... 37
Appendix E: Rice Creek Nonrecreationist Survey Results ............................................... 46
Table of Figures

Figure 1. Map of Twin Cities metro area of MN .............................................................3
Figure 2. Map of Rice Creek Project Area .................................................................4
Figure 3. Map of Upper Rice Creek project area .....................................................6
Figure 4. Map showing designated sections for VAW ..........................................8
Figure 5. Average Benefits Rating by Subzone for Upper Rice Creek .................13
Figure 6. Responses to “What sorts of activities have you participated in on
the Rice Creek waterway? (select all that apply)” (n= 85) .................................15
Figure 7. Responses to “What outdoor recreational activities would you like
to participate in on Rice Creek? (select all that apply) (n= 57) ............................15
Figure 8. Responses to “What length of time would you most likely participate
in an activity on Rice Creek? (select all that apply)” (n=93) .............................16
Figure 9. Responses to “What length of time would you most likely participate
in an activity on Rice Creek? (select all that apply)” (n=56) .............................16
Figure 10. Response to “When you do use the Rice Creek Water Trail, what
type of trip(s) would you be likely to take? (select all that apply)” (n=97) ..........17
Figure 11. Response to “If you would use the Rice Creek Water Trail, what
type of trip(s) would you be likely to take? (select all that apply)” (n=58) ..........18
Figure 12. Response to “How did you first hear about recreation opportunities
on Rice Creek? (select all that apply)” (n=58) ..................................................19
Figure 13. Response to “What is your preferred way to get news about Rice
Creek recreational opportunities? (n=41) ..........................................................20
Figure 14. Map of water trail characteristics .............................................................24
List of Tables

Table 1. Average benefit rating by subzone for Upper Rice Creek.................................13
Table 2. Featured characteristics of American Canoe Association recommended water trails........................................................................................................23
Table 3. Individual responses to question 1 in recreationist survey ................................37
Table 4. Responses to question 2 in recreationist survey ................................................37
Table 5. Responses to question 3 in recreationist survey ................................................38
Table 6. Responses to question 4 in recreationist survey ................................................39
Table 7. Responses to question 5 in recreationist survey ................................................39
Table 8. Responses to question 6 in recreationist survey ................................................40
Table 9. Responses to question 7 in recreationist survey ................................................40
Table 10. Responses to question 10 in recreationist survey (age/sex).............................44
Table 11. Responses to question 10 in recreationist survey (ethnicity/race)...................44
Table 12. Responses to question 10 in recreationist survey (city/town)..........................45
Table 13. Responses to question 1 in nonrecreationist survey ........................................46
Table 14. Responses to question 2 in nonrecreationist survey ........................................46
Table 15. Responses to question 3 in nonrecreationist survey ........................................47
Table 16. Responses to question 4 in nonrecreationist survey ........................................47
Table 17. Responses to question 5 in nonrecreationist survey ........................................48
Table 18. Responses to question 7 in nonrecreationist survey ........................................49
Table 19. Responses to question 9 in nonrecreationist survey ........................................50
Table 20. Responses to question 10 in nonrecreationist survey (age/sex).......................50
Table 21. Responses to question 10 in nonrecreationist survey (ethnicity/race).............51
Table 22. Responses to question 10 in nonrecreationist survey (city/town)....................51
Human beings have always had a special connection to nature, but as we increasingly become an urban civilization this connection is harder to find. In Minnesota we are lucky to have many natural resources available, but it is still important to provide opportunities for Minnesotans to access and enjoy natural areas. The Rice Creek Water Trail project could provide a perfect junction to expand the recreational opportunities for Twin City residents who wish to explore and enjoy the great outdoors. It is an opportunity for Twin City citizens to connect with their surrounding environment in a fun, easy, and accessible way.

In the fall of 2007, students in ESPM 4041W: Problem Solving for Environmental Change at the University of Minnesota joined a partnership composed of Anoka County Parks and Recreation Division, Ramsey County Parks and Recreation Division, The National Parks Service and Rice Creek Watershed District to develop the Rice Creek Water Trail. During the class, six student groups worked to provide recommendations for the proposed Rice Creek Water Trail. These six groups assessed vegetation analysis, risk assessment, access point planning, environmental education, and recreational planning; together making a complete and cohesive project plan.

This report focuses on an assessment of the upper portion of Rice Creek from the Chain of Lakes Regional Park Reserve to the creek’s intersection with Interstate 35W. We make recommendations to enhance the recreational experience along this section of the creek based on an assessment of the opportunities, constraints, mixed-use, resources, and visual characteristics.

In making these recommendations we ascribed to the idea that “natural resource managers should be prepared with a management strategy which allows the greatest degree of resource protection, environmental education, and enjoyment possible” (Uunila, 1999). Our recommendations are based on an integration of these three aspects while also providing a recreational opportunity that citizens wish to take part in.

People recreate for many different reasons and as a result have a variety of needs that to be met for a beneficial recreational experience. Numerous people choose outdoor recreation as a means to escape urban life and to get a break from their usual routine of work and home (Manning, 1999). Rice Creek is in a perfect location for users who want an escape but who may not have much spare time to recreate. Users can float Rice Creek for a few hours or a short day trip.

Another popular reason people recreate is to experience and be immersed in nature (Chirgwin, 2005). As Minnesotans, we are known for valuing and protecting our natural resources. This value becomes more important in an urban setting where open space is limited and subject to pressures from development.
The Rice Creek Water Trail provides an opportunity to connect to nature in such an urban landscape.

Finally, people often recreate for the social benefit gained from their recreational activity in groups. Recreation provides them a chance to gain a sense of community, experience nature with their family, and/or participate in a social event with friends (Hornig, 2005). In order to achieve multiple benefits for the Rice Creek Water Trail, we focused this project on the following vision and goals.

**Vision Statement**
*To develop a public water trail on Rice Creek offering multiple recreational opportunities for a diverse range of users while fostering connectivity amongst neighboring communities and promoting environmental stewardship.*

**Goals and Objectives**
To create informed recommendations with accompanying analysis regarding recreational opportunities throughout the Upper Rice Creek area while producing and disseminating this information in a manner that will enhance a Creek users’ experience.

- Conduct a detailed visual analysis to assess what current opportunities exist
- Determine what recreational opportunities Rice Creek users would like to see available on the creek
- Survey potential users to generate ideas for improving the water trail experience
- Work with a communications group to make information available regarding recreation opportunities on the creek
- Create a detailed map and recommendations for the different recreation opportunities available for Upper Rice Creek users

**Methods**

**Site Description**
Rice Creek is located in Minnesota; a Midwestern state that is full of lakes and waterways due to its glacial history. Rice Creek can be found northwest of the Twin Cities (Minneapolis and St. Paul) located near the southwest corner of Minnesota (Figure 1). The Twin Cities area is the largest and most important urban center in Minnesota, ringed with suburbs in an expanding metropolis. Rice Creek begins in the city of Lino Lakes in Anoka County, and flows southeast down through Ramsey County and the City of Arden Hills, eventually emptying into the Mississippi River (Figure 2). Rice Creek is fed water from a large watershed, including portions of four counties: Ramsey, Hennepin, Washington and Anoka.
Figure 1. Map of Twin Cities metro area of Minnesota and the location of the Rice Creek Project area (Source: MN DNR Data Deli 10-11-07)
Anoka County was formed from Ramsey County in 1857 and today has grown to become the fourth most populous county in Minnesota, with an estimated 327,005 people living there in 2006 (US Census Bureau, 2000). Just northeast of the Twin Cities, Anoka County is home to rich racial diversity as well as a variety of ethnic populations such as Hispanic or Latino, German, Norwegian, Swedish, Hmong, Irish, and Polish. As well as being home to a diverse population, Anoka County has a wonderful park system for its populace to enjoy. They have several regional
and county parks which are a host to many bodies of water including Lake George, Rice Creek Chain of Lakes, Rum River and the Mississippi River. The Upper Rice Creek section is approximately 11.6 miles long beginning in the north at George Watch and ending where the stream flows under Interstate 35W (Figure 3). Rice Creek Chain of Lakes begins in the suburb of Lino Lakes, which holds the Rice Creek Chain County Regional Park, an area of native prairie and campgrounds which surround the chain of lakes. Lino Lakes has a population of 16,791, with a 90.7% increase in the past ten years (US Census Bureau, 2000).

Ramsey County was named after Alexander Ramsey who was the first governor to the Minnesota Territory before Minnesota became a state. Ramsey has a population of approximately 511,000 people, with demographics similar to Anoka County. The county also has an extensive park system with parks and trails covering over 3,774 acres. There are nine county parks that generally hold lake front properties and host a wide variety of recreational opportunities. Some of the activities available to park goers include swimming, boating, playground equipment, and cross-country skiing.

The Chain of Lakes flows into a stream running through the city of Arden Hills. South west of Lino Lakes, the city of Arden Hills has a population of 9,652, with a 4.9% population growth rate between 1990 and 2000 (US Census Bureau, 2000). In Arden Hills the creek is not protected by parklands, but runs through residential areas. Further south, the creek passes through the Twin Cities Army Ammunition Plant, (TCAAP) an abandoned munitions factory. The area is a four square mile restricted toxic superfund site (MPCA 2006), restoration activities are underway, and the city of Arden Hills is attempting to purchase the land and convert it to urban use. In its current condition the TCAAP area has compromised water and soil, however its status as a super fund site has kept the area secluded and undeveloped so far. Arden Hills has purchased the TCAAP area, however the city is still formulating its master plan. The city's framework vision includes a park reserve around Rice Creek and an adjacent wildlife corridor.
Figure 3. Map of Upper Rice Creek project area (Source: MN DNR Data Deli, 10-11-07)
Research Techniques
To fully evaluate all aspects of the Upper Rice Creek, we used four research techniques to develop findings on which to base our recreation typologies and final recommendations. These included a visual analysis, user survey, expert interviews and a literature review.

Visual Analysis
In an effort to measure the physical characteristics and recreational opportunities Rice Creek presents to current and potential users, we designed a Visual Analysis Worksheet (VAW) which was used to carry out our actual visual analysis (Appendix 1). We floated the Upper Rice Creek, including all of the lakes, on six separate dates over approximately one month in the fall of 2007. Each trip took approximately 4-6 hours. As we progressed along the Water Trail in kayaks, or walking on surrounding paths, we paused after designated sections to record our observations (figure 4). We recorded observations on the VAW regarding physical variables such as areas of low water, areas of risk and areas with visible anthropogenic infrastructure, as well as recreational benefit opportunities such as experiencing nature, using equipment and risk taking. Three separate benefits observations were recorded for each designated section. An average rating was then calculated to represent the section’s perceived benefits rating. The multiple visual assessments were tabulated and subsequent criteria developed to support diverse typologies based on the supporting information.

Expert Interviews
We conducted expert interviews during late September and early October of 2007. Each of the interviews was between 30 to 60 minutes and covered topics relating to current physical conditions and recreational opportunities, the expert’s vision for the future water trail, and how they feel we can reach set goals. We chose six interviewees based on their professional knowledge of the project and recreational opportunities in general. We conducted interviews in-person or over the telephone according to availability of both the interviewer and interviewee. Each interviewee was asked the same seven general questions addressing current opportunities and their visions for the future (Appendix 2). Following the general questions, we proceeded to ask additional questions specific to each expert’s background knowledge and personal experiences (Appendix 3). We interviewed Dawn Pape, Environmental Education Coordinator at the Rice Creek Watershed District over the phone for information regarding Watershed District Projects and environmental education information. We also interviewed Rich Bruns, Regional Operations Supervisor at the Minnesota Department of Natural Resources over the phone for information regarding campsites and campsite feasibility. During the interviews, we took brief notes, highlighting key points and summarizing main ideas while keeping the conversation moving forward. Following the interview, we combined our information into a synthesized format which we were able to use to better understand the objectives of our clients, increase our knowledge of the history and future of the project, and to act as the base for the
formation of our initial ideas for recreation typologies and experience opportunities.

Figure 4. Map showing designated section breaks for VAW (Source: MN Data Deli)

**Surveys**
We conducted current and potential user surveys to collect a variety of information about who uses the Rice Creek Waterway, why they use it, how they use it, and what changes they would like to see implemented. In addition, we asked how they had heard about the Rice Creek Water Trail and how they would
like to learn about activities going on around the creek for future communication and marketing purposes (Appendix 4 and 5).

We created the surveys online through the use of the free website SurveyMonkey.com. This online survey allowed us to reach users, current and potential, within the constraints of our time and resources. We distributed the surveys to the email list for the Friends of the Mississippi and the Wargo Nature Center e-mail list. We choose these two lists because we felt these individuals would be interested in and likely to use the new water trail. Our email message asked the individual to partake in the survey with a message introducing its purpose and a direct link to the survey. In the email, respondents selected one of two options: Rice Creek Recreationalist or Non-Rice Creek Recreationalist. We received n=158 responses out of a total of n=1920 email addresses sent out (response rate = 8.2%): Rice Creek Recreationalist (n=100) and Non-Rice Creek Recreationalist (n=58). One influence on the number of responses was that the recreationalist survey collected the maximum number of responses (100) allowed through the free Survey Monkey account. We created each survey for a maximum of 100 respondents so that there is no charge. If respondents attempted to complete the Recreationalist survey after 100 respondents had visited the site, Survey Monkey would not allow them to complete the survey. This means that the responses gathered are only from the first 100 respondents, possibly creating a bias in our data. Unanswered or skipped questions also affected the results of our survey because it is unclear whether the respondent did not understand the question or did not have an opinion of the question. All responses were tabulated in Excel and descriptive statistics calculated to inform the report recommendations.

**Literature Review and Secondary Sources**

To supplement our knowledge and research results, we drew information from several books, scientific journals, agency reports, and various internet sources. We used literature covering a wide range of topics: examples of water trails, information on park systems, water resources, society and the environment, recreational opportunities, census information, and market feasibility.

When evaluating water trail characteristics, we drew information from the American Canoe Association (ACA) website. Each summer since 2005, the ACA has selected twelve water trails from the US and Canada as ACA-Recommended Water Trails. The ACA provides links to each of these water trail’s websites. We went to each of these websites, and briefly scanned for any recreational opportunities mentioned. Rather than doing extensive searches for each trail, we looked for the highlighted opportunities provided by the website. For example, some trails have “wildlife” mentioned, and others do not. This is not to say that the trails with no check under “wildlife” actually have no fauna in the water trail, but that they did not promote wildlife as an opportunity on their website or map.
Findings

Upper Rice Creek Characteristics

The upper section of Rice Creek is characterized by a large flatwater lakes section followed by a creek experience flowing through natural land with little evidence of human impact. The flatwater lakes section consists of four lakes, connected by narrow channels which more closely resemble the Lower Rice Creek section. Due to this variation, we have divided the Upper Rice Creek into nine subzones (Figure 4).

Subzone 1

Subzone 1 consists of George Watch Lake, a 528-acre open body of water within Rice Creek Chain of Lake Regional Park Reserve, is surrounded by cattails and other aquatic vegetation, with no visible human developments. The Wargo Nature Center (Wargo) is located near the north end of the lake, and offers recreationists the opportunity to rent canoes and kayaks for use on the Water Trail. A large bird-nesting pole is also located at the southern point of the peninsula on which Wargo is located. There is a humanmade dam located at the northeast end of the lake, creating a barrier between George Watch and Lake Peltier. Just below the dam is access point that is actively used by recreationists. The lake’s average depth is 4 ft.,1 which enables paddlers to use the lake regardless of fluctuations in water level. A campground exists just to the south of the lake which could be accessed and used by water trail paddlers if a path was cut through the shoreline vegetation. The major challenge for paddlers in this subzone is wind, which can dramatically increase travel time and difficulty level.

Subzone 2

Subzone 2 consists of a channel flowing through the Chomonix Golf Course (Chomonix), connecting George Watch Lake to Marshan Lake (Marshan) and is entirely within the Rice Creek Chain of Lake Regional Park Reserve. The channel is very wide in the beginning (estimated at more than 30 ft) and narrows to 10-12 ft before it enters Marshan. There are three humanmade bridges spanning the length of the channel, all in use by Chomonix golfers. The current flowing through the channel is gentle; however, at times of high water use of this section may become difficult as the distance between the third bridge and the water can require paddlers to duck very low against their watercraft. This section presents multiple views of Chomonix, which include auxiliary buildings and manicured golf holes, while also displaying some beaver induced damage and social trails used by golfers to access the creek’s shoreline. Low levels of trash were visible along the edge of the creek.

Subzone 3

Subzone 3 consists of Marshan Lake, a 312-acre open body of water with housing developments along its northwest shore, and the Rice Creek Chain of Lake

1 http://apps.ricecreek.org/lakes/8/
Regional Park Reserve along its southern shore. The water trail enters the lake at its southeast corner and exits at its southwest corner. With a max depth of five feet, and an average depth of much less (exact information unavailable), Marshan can at times present difficulties for paddlers due to low water levels, which can be compounded by high winds making paddling very difficult. This subzone presents opportunities to view wildlife, as we viewed multiple species of duck along with high numbers of fish and mammals which live along the shoreline. Waterfowl hunting occasionally occurs throughout the lake.

**Subzone 4**

Subzone 4 consists of the channel connecting Marshan with Rice Lake and is entirely within the Rice Creek Chain of Lake Regional Park Reserve. Near its beginning, the channel flows underneath Aqua Lane, along which recreationists have created a social access point for watercraft. After flowing under the bridge, the channel meanders its way through cattails and tall grasses before entering into the north end Rice Lake. More trash was visible throughout this section in the form of plastic bottles and shopping bags. Near the point where the channel enters Rice Lake a large windsock becomes visible. This is used by floatplane pilots from the nearby flying club. The water depth in this section is deep enough that it should not present problems at times of low water levels.

**Subzone 5**

Subzone 5 consists of Rice Lake, a 598-acre open body of water with an average depth of four feet. Land use features a high degree of suburban housing development, especially along its northern/western shore, while its southern/eastern shore is within the Rice Creek Chain of Lake Regional Park Reserve. A floatplane pilots club is located in the northwest corner of the lake, with planes landing primarily along the western shore. Rice Lake will likely be the location where water trail users encounter the greatest number of other recreationists. It is open to motorboat traffic which can lead to increased chop on the water, creating difficulties for paddlers in smaller crafts. The water depth in this section is deep enough that it should not present problems due to low water levels.

**Subzone 6**

Subzone 6 consists of the channel connecting Rice Lake to Baldwin Lake and is completely within the Rice Creek Chain of Lake Regional Park Reserve. It features relatively natural vegetation with few signs of anthropogenic influence. Vegetation along the banks consists of a mix of trees, cattails, and tall grasses. Little human development is visible from the water. Some places along the channel may present difficulties to paddlers during times of low water.

**Subzone 7**

Subzone 7 consists of Baldwin Lake, a 312-acre body of open water with a maximum depth of five feet, with private ownership on the southern shore and the northern shore bordering the Rice Creek Chain of Lake Regional Park Reserve.
There are multiple islands throughout the lake, creating aesthetically pleasing scenery for paddlers. The Water Trail cuts straight across the lake, which may result in difficulties for paddlers if winds rise above 10 mph. Little human development is visible from the water. Opportunities for viewing nature are numerous in this area. We viewed multiple species of duck, marsh birds, aquatic mammals, and deer.

Subzone 8
Subzone 8 extends from the end of Baldwin Lake to the beginning of the retired Twin Cities Army Ammunitions Plant (TCAAP), following Rice Creek as it meanders through natural appearing vegetation, including a section which was recently re-meandered by Emmons & Oliver Resources (website reference). This stretch is within the Rice Creek Chain of Lake Regional Park Reserve until it reaches County Road J, at which point it enters county-owned land. A beaver dam is present near the halfway mark between County Roads I and J, stretching across nearly the entire creek, which may snag passing watercraft. During times of low water, paddlers will still be able to continue downstream, yet at times they may have to either pole through by pushing on the bottom, or they may have to step out of the watercraft and walk it a short distance downstream. At times of average or high water, paddlers will have no problems proceeding downstream. Bridges at County Roads I and J remind users that they are still in a metropolitan area. The existing parking lot and bike paths at County Road I present an excellent opportunity to create a rest stop for paddlers. Trash was visible at multiple points, especially near bends in the creek, where it would often snag on downed vegetation. Old-growth trees along both sides of the stream provide for a very scenic paddle. Rocks at the entrance to and exit from tunnels in this section cause difficulties for paddlers during times of low water.

Subzone 9
Subzone 9, consists of the stretch of the creek flowing through Twin Cities Army Ammunitions Plant (TCAAP). This section offers paddlers the opportunity to experience a stretch of the creek that has been nearly untouched over the past few decades. Large metal gates are located at the entrance and exit to the subzone; however they will be removed by summer 2008. Multiple locations exist within this subzone where tree and debris removal will be necessary for easy paddling, unless there is extraordinarily high water. There are multiple places where paddlers will not be able to continue downstream and will be required to exit the creek and portage their watercraft. Buildings associated with the Ammunition Plant are visible from the creek no matter the water level. Old-growth trees along both shores provide a very scenic paddle.

Upper Rice Creek Benefits
While on the creek, we conducted a benefits ranking for each subzone based on observed characteristics (Table 1. and Figure 5). The results are as follow, with an explanation for the ranking system found below the table (See Appendix 1 for a complete description).
Table 1. Average benefit rating by subzone for the Upper Rice Creek.

<table>
<thead>
<tr>
<th>Upper Rice Creek Zones</th>
<th>Human Presence</th>
<th>Environmental Degradation</th>
<th>Anthropogenic Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subzone 1</td>
<td>4.3</td>
<td>2.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Subzone 2</td>
<td>3.8</td>
<td>2.3</td>
<td>5.0</td>
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<tr>
<td>Subzone 3</td>
<td>3.8</td>
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<td>Subzone 4</td>
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<td>Subzone 5</td>
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<td>3.8</td>
<td>6.3</td>
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<td>Subzone 7</td>
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</tr>
<tr>
<td>Subzone 8</td>
<td>1.7</td>
<td>2.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Subzone 9</td>
<td>1.7</td>
<td>3.7</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Legend:
Human Presence: 0 = no presence 10 = extremely high presence
Environmental Degradation: 0 = no evidence of degradation 10 = high levels of degradation
Anthropogenic Influence: 0 = pristine conditions 10 = high levels of Influence

For a creek flowing through a highly populated region of Minnesota, Rice Creek offers users incredible opportunities to experience nature in a near natural setting. The range of perceived human presence, environmental degradation and anthropogenic influence are all relatively low.

**Human Presence**
We evaluated human presence throughout the nine subzones, finding average ratings ranging from 1.7 to 4.8, meaning in fall 2007 we did not see high numbers of other recreationists while on the upper section of the Water Trail (Figure 5). As we proceeded from subzone 1 to 9 there were fewer people. A spike exists in subzone 5 (Rice Lake) due to the increase in recreational use by nonpaddlers such
as airplanes and motor boats. We saw the lowest numbers of users once we exited Rice Lake, as access to the area becomes limited and fewer users choose to venture downstream that far.

**Environmental Degradation**
We evaluated environmental degradation throughout the nine subzones, finding average ratings ranging from 2.0 to 3.8, meaning that we did not experience high levels of environmental degradation, natural or humanmade, while on the upper section of the Water Trail (Figure 5). As we proceeded from subzone 1 to 9 there was an overall increase in environmental degradation. The highest rating occurred on subzone 5 (Rice Lake) possibly due to high levels of use and in subzone 9, possibly due to the large metal gates at both ends which collected large amounts of trash. These gates are due to be removed which may result changes in a ratings in the future.

**Anthropogenic Influence**
We evaluated anthropogenic influence throughout the nine subzones, finding average ratings ranging from 3.0 to 6.0, meaning we experienced both areas of near natural appearance and those which while still appear natural but display higher levels of anthropogenic influences such as housing developments or tunnels (Figure 5). While generally maintaining a perceived rating between 4-6 there is a dramatic decrease in subzone 7 (Baldwin Lake). This low rating can in part be contributed to the trees surrounding the lake which shield roads and development from the user, while also being affected by the lake being nearly completely surrounded by public lands.

**User Preferences**
The completed online surveys provided insights about the users and potential users of the Rice Creek Water Trail. Based upon the results we received from the Rice Creek recreationist respondents, they enjoy a wide variety of activities. Respondents indicated that swimming was the recreational opportunity that the most people enjoyed on Rice Creek. The least frequent activity was hunting. The majority of the activities that fell in the *other* category included: sailing/motor boating, picnicking, homeownership and even scuba diving.

The nonrecreationist respondents’ answers to a similar question indicated that they liked walking and biking trails as, the activity they would most like to participate in (74%) and hunting again was the least (9%).

The majority of people who responded as recreationists indicated that there was plenty of information available to them to create their desired recreational experience (68%). Those who made comments on this question responded saying there was not enough information about: boat landings (canoe/kayak), water levels of the creek, paddle distances, and floatability of the creek (water levels, weedy portions, portages). Often times the recreationists first heard about the Rice Creek Water Trail and its recreational opportunities from mailing lists (50%) or
friends and family (39%). The three most frequent responses in the other category were living in close proximity to Rice Creek, the Minnesota Canoe Association, and self-discovery (drove by or saw signs for the creek).

Figure 6. Responses to “What sorts of activities have you participated in on the Rice Creek waterway? (select all that apply)” (n= 85).

Figure 7. Responses to “What outdoor recreational activities would you like to participate in on Rice Creek? (select all that apply) (n= 57).
When queried as to the length of time the recreationists were likely to spend on Rice Creek, the majority wanted to spend less than four hours. Many people were interested in even shorter trips lasting less than two hours (44%). Of those who responded in the other category, they would be likely to spend a weekend camping along the creek or a full day once the arsenal gate has been opened.

**Figure 8.** Responses to “What length of time would you most likely participate in an activity on Rice Creek? (select all that apply)” (n=93).

**Figure 9.** Responses to “What length of time would you most likely participate in an activity on Rice Creek? (select all that apply)” (n=56)
The nonrecreationists answered a similar question as to how long they were likely to spend on Rice Creek and their responses were similar to those of the recreationists. Here 44% responded that they would be likely to spend two hours around Rice Creek. The responses in the other category were that people did not know what they could do at Rice Creek and therefore were unable to determine how long they would spend on the creek.

The recreationists were asked the number of times they had visited the Rice Creek Water Trail in their lifetime. They responded with a wide range of answers (n=99). The average number of visits was 63 and individual responses ranged from 0-4,000, but most responses were in the range of 1-100 (82%).

When questioned about the services they would like to see provided on Rice Creek, a strong majority replied that they would like to see expanded walking/biking trails (79%, n=95). The least frequent response was pre-planned trips (11%). The majority of respondents (51% or more) would also like to see picnic/rest areas, swimming beaches, and nature/environment information markers provided to them. Respondents were able to select all that apply from the following list: picnic/rest areas, swimming beaches, fishing piers, historic information markers nature information markers, preplanned trips, expanded walking/biking trails, and camping opportunities.

![Figure 10. Response to “When you do use the Rice Creek Water Trail, what type of trip(s) would you be likely to take? (select all that apply)” (n=97).]
Figure 11. Response to “If you would use the Rice Creek Water Trail, what type of trip(s) would you be likely to take? (select all that apply)” (n=58).

Both the recreationists and the nonrecreationists were queried as to what type of trips they would be likely to take and their responses were quite similar. The most frequent response was with my kids/family for both recreationists (81%) and nonrecreationists (76%). No other responses gained a majority but with a few friends was the next highest response. Of those who replied other they stated that they would go with their dog, they did not know what was available, and “photo opportunities.”

When asked “what recommendations would you make to improve the Rice Creek waterway for recreationists,” the recreationists had several thoughts on how to improve the waterway. A few of their main concerns revolved around the walking/biking trails. Several respondents would like to see more access points onto the trail and continuing to connect the current trails so that they can follow the full length of the creek. But there were concerns brought up about the trails as well. One respondent was concerned about the invasiveness of adding more paved trails. Another respondent was concerned about the safety of walkers when bikers share the same path.

Many respondents would like to see improvements in the water quality. For example, one respondent felt very strongly about this issue and stated “Improving water quality and both aquatic and terrestrial habitat along the waterway would be biggest way to improve the experience.” Other concerns about the water quality included: invasive species (both plants and animals), algae growth, fish die-offs, and weed issues. (Responses can be found in full in Appendix 4).

The recreationists were also questioned as to what strengths of Rice Creek would they like to see retained for further recreational enjoyment. The most common response to this question was the beauty and natural setting of the creek or as one
respondent described it, an “environmental jewel”. Many respondents commented on protecting and maintaining a natural shoreline, helping to promote the growth of native species, and preserving the undeveloped sections for their natural beauty. Water quality was another aspect that respondents would like to see retained. (Responses can be found in full in Appendix 4).

The nonrecreationists were asked how they first found out about recreational opportunities on Rice Creek. Not surprisingly the majority of respondents replied that they had not previously heard about Rice Creek recreational opportunities (54%). The range of responses for the other categories varied from 0% to 16%. Respondents who choose the other category first heard about Rice Creek by: living on the creek, email, a town meeting, other regional parks, and volunteer watershed clean ups.

![Figure 12. Response to “How did you first hear about recreation opportunities on Rice Creek? (select all that apply)” (n=58).](image)

Nonrecreationists were queried as to why they had not used the creek for recreational purposes. Again the majority responded by saying that they were not aware of the opportunities (67%, n=58). A few respondents said that there was not enough information (28%) or time constraints (20%) where the reason why they had not pursued recreational opportunities on Rice Creek. Three respondents choose to comment in the other category and replied that they lived too far from the creek or other recreational areas were closer to them. One person listed time constraints due to his/her family and suggested, “it would be great to do a family class”, perhaps in reference to a nature program or family oriented activity.

When questioned as to what outdoor recreational activities do you enjoy outside of Rice Creek the nonrecreationists generally gave very similar responses to the question asking what recreational activities would they like to participate in on
Rice Creek. The most frequent response was walking or biking on the trails (84%, n=56). The least frequent response was other, including cross-country skiing, walking their dog, and gardening as recreational activities that they participate in (5%).

The nonrecreationists were also asked what concerns they had with the future development of Rice Creek. The most common response was that of wanting to ensure eco-friendliness and protecting its natural resources. One respondent sums up the general feeling of most of the respondents’ concerns about protecting the creek’s natural resources by saying, “the biggest concern that I have is how to effectively grow the park system with the community, but not damaging the park.” (Responses can be found in full in Appendix 5).

When asked what was the nonrecreationists’ preferred method to receive news about the Rice Creek Water Trail, 83% preferred the internet as a means of communication, whether through email or through a website. Email was the most frequently mentioned preference (71%). The second most preferred method to receive news was through newsletter or mailings sent out to residents (22%).

![Figure 13. Response to “What is your preferred way to get news about Rice Creek recreational opportunities?” (n=41).](image-url)
Partner’s Visions and Concerns

Our partners, Anoka and Ramsey County Parks and Recreation Divisions, The National Park Service, and The Rice Creek Watershed District, varied in how they expressed their final vision for the Rice Creek Water Trail. Many of the partners visualized a more connected trail system including hiking and walking paths. Several mentioned the need for more signs, both to provide logistical information, but also to provide educational information. All of the partners agreed that fostering stewardship of the Rice Creek Watershed should be one of the core goals. Part of their final vision included the types of users who could enjoy the Water Trail. Partners expected to see people of varying skill levels, mostly people living in close proximity to the Water Trail. All wanted the creek to serve a multitude of skill levels and experiences. Some specifically mentioned families as a target user group of the creek, especially families with no past experience.

In addition to each partner’s final vision, we also focused on challenges that were identified. When asked about concerns over increased usage of the creek, most partners were not expecting many issues to arise. Each mentioned possible situations such as vandalism, loss of solitude, and increased garbage. Other concerns arose over safety issues with increased usage. A suggestion was made that good stewardship messages may educate the public about positive behavior.

Rocks in the Rice Creek were one of the major safety issues discussed. Many partners found rocks to be unavoidable at certain water levels. One partner suggested the removal of some rocks while still mitigating erosion and protecting creek ecology. Minimal dredging of Marshan Lake was also identified as a possibility to improve navigation. Trees or logs in the creek, loitering, and vandalism of portable restrooms were also mentioned as safety concerns.

Many differing suggestions were made to improve the Water Trail and recreational opportunity. One potential recreational opportunity is the development of additional camping locations along the Water Trail. Many locations along the trail were thought to be unsuitable or unacceptable for the development of water-accessible campsites. Campsite locations were suggested within the Rice Creek Chain of Lakes Park Reserve, where camping is already available. Rich Bruns, Regional Operations Supervisor at the Minnesota Department of Natural Resources (MNDNR), said that he could see the Rice Creek Water Trail having the potential for future water-accessible campsites.

Other suggestions were made to improve access to amenities along the creek. Many partners identified the need for increased rest stops. More visible portable toilets were suggested for County Road J, as well as increased access to the site. County Road I and Aqua Lane were also suggested sites for restrooms. Partners differed in their opinions about the use of a shuttle service and were not inclined to give it a high priority for implementation. Many partners were indifferent about the usage of a shuttle service, expecting it to be an unused resource. Others were against a shuttle, because it would lead to increased time and labor to implement.
A majority of partners said a website with easily accessible information would benefit the public. They also wanted many websites to link to the main Rice Creek Water Trail site. Responses varied about how the final website could be created. Most partners agreed that water levels could be posted on a website as well as a key to interpreting the water levels. Dawn Pape, Environmental Education Coordinator of the Rice Creek Watershed District, found low water levels to be the main hindrance during a day trip on the Rice Creek. She agreed that providing information to the public on current water level would help them plan trips to the Rice Creek.

Partners we interviewed wanted to see a final map and marketing ideas. Maps and brochures have proven to be indispensable tools for the organization of information in a clean understandable way. For future Rice Creek users, the partners agreed that a map would be the best way to combine recommendations so the public could easily access and digest this information. They identified distance as well as biking and walking trails as important features to include. Most agreed that there should be additional signs to display information to the public. Signs could be used to display logistical information, educational information, and also serve to advertise the Water Trail. One partner was concerned about having too many signs along the Water Trail; they may become cluttered or unused.

**Water Trail Characteristics**

Each summer, the American Canoe Association (ACA) chooses several water trails from around the US and Canada to recommend on their website. By noting the highlighted characteristics of each water trail, we gained a better sense of possible recreational opportunities and amenities (Table 2). Each trail had between three and eight highlighted characteristics. Though many opportunities were available at each water trail, we found that these opportunities were not always highlighted on the water trail websites, brochures, and maps. Opportunities available at some of the trails but not mentioned include wildlife viewing, fishing, and hunting. However, many other trails did identify water accessible campsites and wildlife viewing on their website, brochure, or map. The most common features included on maps and websites were the identification of boat launches and campgrounds. Approximately half of the websites included information on fishing, picnic areas, beaches, hotels or restaurants, and risky areas along the creek deserving higher caution. Topics or areas which were not mentioned as often were biking and hiking trails, burial mounds, outfitters, and hunting.
Table 2. Featured characteristics of American Canoe Association recommended water trails.

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<tr>
<th>Water trail name</th>
<th>Allegheny River</th>
<th>Globe Creek</th>
<th>Lake Tahoe</th>
<th>Apalachicola</th>
<th>Big Bend Saltwater</th>
<th>Ohio River</th>
<th>Maine Island</th>
<th>Cascadia Marine</th>
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Water Flow and Quality

Rice Creek Chain of Lakes has extremely variable water levels. A large area drains into Rice Creek, and in addition, Rice Creek drains very rapidly—when the water level has risen it can fall dramatically again within a single day. The county has a water level measuring device that could feed a website to keep current water level information available. In the Chain of Lakes area, rocks have been piled under bridges to control erosion and improve the waterway at the places where the lakes flow into sections of the creek. When the water level is low, paddlers can scrape bottom forcing them to portage over the rocks.

Rice Creek is an impaired waterway due to excess nutrients. The Total Maximum Daily Load (TMDL) has not yet been set and may be published in 2008. A large area drains into Rice Creek and the Chain of Lakes, including many residential areas, with erosion and fertilizer runoff which contributes to the impaired waterway. For example, along the creek south of the Chain of Lakes a few homeowners are tending grass up to the edge of the creek, past the area that is meant to be vegetative buffer. Based on new state laws phosphorus use in fertilizer is illegal without special tests for residential areas. However, a tremendous amount of phosphorus is still in the soil due to previous fertilizer use, and this can drain to Rice Creek. Rice Creek Watershed District encourages better gardening practices that mitigate the effects of nutrient loading through their new website bluethumb.org. Bluethumb does not have enforcement, but it does have incentives, such as grants and cost sharing for garden design and implementation.

In addition, water quality is a concern within the city of Arden Hills; here the creek runs through the Twin Cities Army Ammunition Plant area, which has impaired soil, ground water, and surface water. Much of the area is currently
restricted; however the city of Arden Hills has purchased this land for development. Preliminary plans for the area include a City Hall along with areas zoned for Residential and Commercial use. Plans also include uninterrupted parkland along Rice Creek with a wildlife corridor adjacent to the creek park area.

Figure 14. Map of water trail characteristics.
Recommendations

1. Provide Opportunities for Multiple User Groups Through Diverse Recreational Typologies
2. Support the Recreational Experience with Information and Amenities
3. Inform Users and Residents about Water Levels and Water Quality
4. Increase Connectivity Between Existing Recreational Opportunities

Recommendation 1: Provide Opportunities for Multiple User Groups Through Diverse Recreational Typologies

It is very important for all people to have the opportunity to recreate, especially within a large metropolitan area such as the Twin Cities. Recreation allows people to re-create themselves by avoiding the stress and pressure of everyday life and escaping into the natural world. Because Rice Creek is located in a highly populated area, it has the potential to attract a variety of users differing in expectations and ability. User preferences and expert suggestions indicated that a wide variety of experience opportunities (typologies) should be provided by the Rice Creek Water Trail. This was further supported by visual analysis findings illuminating the diverse opportunities presented by Rice Creek and its surrounding natural area. In order to meet these demands we recommend creating typologies to maximize the recreational benefits for the following uses:

1) Families who wish to spend quality time together
2) Recreationalists interested in spending an entire day on the creek
3) Recreationalists who want a short paddle, spending half a day or less on the creek
4) Recreationalists seeking the opportunity to view and experience nature

Families who wish to spend quality time together
Nearly 80% of the respondents to both the nonrecreationalists and recreationalists surveys stated that they would like to use the water trail with their family or kids. A typology created in order to cater to the needs of families can be tailored to users with low skill levels, emphasizing a half-day trip (4-6 hours). Due to the increasing difficulty on the flowing creek section, family groups with smaller children should be advised to remain on the open water sections and the connecting channels, subzones 1-7, unless they have moderate levels of prior paddling experience (Figure 4). Throughout these sections families will be able to experience a near natural setting, while also feeling secure in the fact that other recreationalists and in some places homeowners are around should the need for help arise. To facilitate ease of use for these less experienced paddlers, we recommend that the rocks located directly in front of and directly behind existing culverts be removed to whatever extent possible.

Recreationalists interested in spending an entire day on the creek
Nearly 30% of the respondents to the recreationists survey stated that they would like to spend an entire day or more on the water trail. Having the opportunity to
spend an entire day or more recreating on a water trail, while not having to leave the Twin Cities metro area, has an appeal to many recreationalists. Furthermore, for many water trail users, the planning and preparation involved in a trip to the water trail will result in an expectation to spend an entire day on the creek. For these users, we recommend creating a typology extending from the top of George Watch Lake all the way to Locke Park. The estimated trip time would be between 10-12 hours. Furthermore, through spending an entire day or more on the creek, recreationalists will have the opportunity to experience the entire spectrum of benefits the Rice Creek Water Trail offers, including experiencing nature, solitude and being with others, fishing, swimming, camping, and more.

Recreationalists who want a short paddle, spending half a day or less on the creek

A majority of the respondents to the recreationalists survey and a strong majority of the respondents to the nonrecreationalists stated that they would like to spend a half day or less on the water trail. To meet these user’s needs, we recommend creating a typology in which users access the water trail at Aqua Lane in subzone 4 and exit the water trail at County Road I (Figure 4). This stretch of the water trail measures approximately 6.5 miles in length, and the time involved should be between 2-3 hours. This typology could cater to a variety of users, including those wanting to get a quick paddle in after work, those looking to spend a nice afternoon out on the water, or educational groups whose participants may not have the attention span or stamina for longer paddles. By paddling this stretch users will get the benefit of an open water and a creek experience. As users proceed further downstream they will also experience lower levels of environmental degradation and have the opportunity to experience greater solitude.

People seeking the opportunity to view and experience nature

Viewing and experiencing nature allows recreationalists to reconnect with the natural environment, thereby providing incentives to support stewardship and land management efforts. We recommend creating two separate typologies for users seeking the opportunity to view and experience nature, the first encompassing the lakes George Watch and Marshan, the second extending from the southern end of Rice Lake to Highway 35W (Figure 4). We do not recommend that recreationalists seeking the opportunity to view and experience nature paddle Rice Lake, as it has the highest levels of anthropogenic influences.

Recreationalists paddling through Lakes George Watch and Marshan will have the opportunity to access the area at the north end of George Watch and either paddle back to that access point or exit the creek at Aqua Lane just south of Marshan. This area had very low (good) perceived ratings for anthropogenic influences while also being comprised of excellent bird habitat. We estimate that to paddle directly through this stretch would take approximately 1-2 hours, however recreationalists will have the opportunity to spend as much time as they would like viewing wildlife in this area.
Recreationalists paddling from the southern end of Rice Lake to Highway 35 will have the opportunity to access the water trail at access point 4 and exit the water trail at access point 8. This area is unique in that it passes through the ammunitions plant, which at times was rated high for anthropogenic influences, yet also contains stretches natural in appearance and highly untouched by man, thereby providing a very unique experience within the metro area.

Recommendation 2: Support the Recreational Experience with Information and Amenities

A water trail includes not only a waterway for the public to enjoy, but also should be supported by a range of information and amenities. Providing information is a vital way to introduce new users to a water trail who may not otherwise use this resource. To protect the recreating public, safety information can also be provided. Information can also be for educational purposes, and to foster stewardship of the resource.

Amenities are necessary for the comfort of the recreating public, including rest stops, restrooms, or any other conveniences for public use. Through our compilation of water trail characteristics found on American Canoe Association (ACA) recommended trails, we gained valuable insight as to what conveniences are offered on the highest rated water trails. All ACA recommended water trails provided users with information and amenities. These additional aspects of the water trail play a key role in the user’s enjoyment of the natural resources. We have provided several options for the adaptation of these aspects into the Rice Creek Water Trail.

Information can come from a variety of sources, and include recreational, logistical, and educational content. When users are on the Creek, one critical communication tool is a trail map with all the recreational opportunities highlighted, so the user has the necessary information to plan an outing of their choice. They would benefit from logistical information including the length of the water trail, access points, surrounding hiking and biking trails, and nearby roads. When the map is created, there could be a view of the entire creek so the public can orient themselves and be able to see some of the surrounding area. This type of map would assist recreationalists when planning a trip; especially if they are unfamiliar with the area.

One problem that could arise with only one map is the lack of detail that can be provided. We suggest several maps of the creek, broken into sections. Several maps provide the detail the public needs to plan their trips and easily navigate the Creek. These sections may have varying difficulties, making it easier to inform the public about the skill levels required. For example, the Chain of Lakes provides users with a unique experience for beginners when compared to the more challenging paddle of the meandering creek. These sections could be included on separate maps due to the varying skill levels required.
While the recreationist is on the creek, signs could be used for navigational assistance or as educational tools. Though beneficial if used correctly, too many signs may prove to be wasteful, time consuming, and unappealing in a natural area. We recommend using the minimal number of signs and carefully adding signs as needed. At a minimum for navigation, we suggest posting road names on the major bridges crossing over Rice Creek. These would let recreationists follow along on a map, as navigation of the upper lakes can become confusing at times. Navigational signs, or “you are here” signs, should be placed at major entry and exit points and include the water trail, hiking and biking trails and roads. Educational signs should be limited to rest stops or entry points, where people will have the time to absorb and appreciate this information.

Maps and signs provide users with on-site information, but other information sources could be used to plan a successful trip. Websites can be used as a means to convey information to the public before they visit the creek. The partners interviewed all agreed that the Rice Creek Water Trail should be featured on websites. Our survey also indicated that users wanted to be able to access information online. The website’s purpose can be to provide information to users who are already aware of the creek, but also to provide information to people who have never been to the area before. In this sense, the website acts as a tool to inform and advertise to the public. We suggest one main website be used to provide all the information to the public, with several others linking to the main page. Websites that could post information about the Rice Creek Water Trail include sites hosted by Anoka and Ramsey counties, the MNDNR, Rice Creek Watershed District, and the Wargo Nature Center. Other organizations could be contacted to create links, such as the ACA, which collects water trail information from around the US and Canada. By branching out to other organizations, the information will be easier to locate, and these sites provide a way to market the Rice Creek Water Trail.

There are several types of information we recommend be provided on the website. Not all those who visit the website may have experience on Rice Creek. For this reason, we suggest the website provide information that would be useful for a Rice Creek recreationalist and non-recreationalist. For the creek users, water levels should be posted real-time with a key to understand what the water levels mean for the recreational experience. Creek length and the average speed a person can canoe or kayak would help beginners be able to plan the length of their trip. Educational and emergency information should also be included.

Once the public is aware of the Rice Creek Water Trail, they may want to access additional information. Through our survey, the public showed interest in email communication to inform them of upcoming events. Already, some of our partners use mailing lists to reach the interested public. We recommend a Rice Creek Water Trail mailing list be created. This list would provide the public with a way to receive updated information on the creek, trails, and educational programs without checking back to the site regularly.
In addition to information, amenities are a necessary addition to any water trail. Amenities provide the public basic necessities as well as a means to relax and take a break from paddling. All of the Partners interviewed agree—paddling Rice Creek will not be an enjoyable experience for anyone without access to restrooms. With increased usage of the Rice Creek, this will be an even greater need for the public. Partner suggested that Aqua Lane is one of the best possibilities for a restroom. This site has an established parking lot, and is a node for other recreational opportunities—hiking and biking trails. County Road I is another excellent location for a restroom. Much like the Aqua Lane site, there is already a parking lot, as well as access to other trails. Other suggested sites are County Road J or Lexington Avenue. These sites are not currently accessible or developed, but are a possibility depending on the development of new access points. Portable toilets could be added initially, and depending on the demand and location, more permanent restrooms could be developed.

Finally, campsites provide a unique experience for recreationalists. Through one expert interview, we found that though they are expensive to establish, they can be easily and affordably maintained. Future campsite locations are limited to the Chain of Lakes section of the water trail because it is primarily public land—residential development and land ownership downstream limit options in other areas. Adding campsites near the already established campground may be a feasible first location. The current campground is not adjacent to the creek, preventing campers from seeing the Chain of Lakes from their campsites. We recommend campsites be discussed as a future amenity for the Rice Creek Water Trail.

**Recommendation 3: Inform Users and Residents about Water Levels and Water Quality**

Potential users can have access to up-to-date information on water levels using technology the counties already have. Rice Creek has a water level gauge that can feed a website up-to-the-minute data of a single water level at one point in the creek. An application or a simple graph can be used to interpret the water level at one place in the creek into a total picture of water levels in the different zones of the creek as shown on a numbered map. These water levels could be associated with simple qualitative assessments or floatability ratings, like "very shallow water" and "very high water, bridge not passable" that would be specific to given sections and hazards on the creek. Potential recreationists accessing the water level information should also be aware that water levels change daily on Rice Creek.

Maintaining or improving water quality on Rice Creek is essential for an enhanced recreational experience. Homeowners living along Rice Creek can be given information on creating or maintaining buffer areas and suggested gardening choices that will protect the creek, and they can become better informed on the vegetative buffer Rice Creek partners recommend for the health of the creek.
Recommendation 4: Increase Connectivity Between Existing Recreational Opportunities

Rice Creek is located on the north edge of the ever-expanding Twin Cities urban landscape. At the northern point of George Watch Lake it is surrounded by a Rice Creek Chain of Lakes Park Reserve which provides near pristine natural beauty. As it flows southward it slowly makes its way into an increasingly populated area until recreationists will be passing directly past homeowner’s back yards.

Throughout this area there are already recreational opportunities, such as playgrounds, walking and biking paths, the many opportunities provided by the Wargo Nature Center, dog parks, and more. The social benefits of such an urban waterway are important aspects of the creek that we should not ignore.

One of the primary suggestions from the user surveys was to expand the current paved walking and biking trails. Of those surveyed who had previously used Rice Creek to recreate, 79% said they would like to see expanded walking and biking trail. There are currently sections of trails in this area, but we recommend expanding these trails to connect the length of the creek. Proposals have been made to make additional trails in the Anoka County land gained from the army ammunitions plant that could become an important part of a Rice Creek trail system.

Trails for walking and biking will not only allow for another type of recreation in this area, but the trails will also raise awareness about the opportunities to canoe or kayak the Rice Creek Waterway. The trails can connect different recreationists, neighborhoods, parks, and even schools to the opportunities available at Rice Creek.

When implementing these trails it is important to maintain the natural beauty of the area. The user surveys showed this was a top concern of all who participated. Erosion, loss of wooden areas, pollution of the waterway, and excess development were all listed concerns. These issues can be addressed through less invasive trails, alternative trails such as gravel, maintaining distance between the trails and the creek, and effective planning. In addition, cooperation between Anoka County and Ramsey County will be essential in making an expanded and connective trail system an important and beneficial part of the community.

Overall, the Rice Creek Water Trail has the opportunity to provide a wide variety of experiences to different user groups. Connecting these recreational experiences will help make Rice Creek a cohesive part of the Twin Cities community.
Conclusions

As Twin Cities development continues to push outward, the importance of green space embedded in the growing urban environment is becoming more important. The demand for land increases the significant need to develop recreational opportunities that can coexist while providing green space. One such opportunity is the Rice Creek Water Trail.

While maintaining the natural environment, this water trail will provide for the increased popularity of opportunities to experience nature. By providing a great experience to users on Rice Creek, not only will the demand for such recreational green space grow but maintenance of and concern for these spaces will increase as well.

By providing a wide variety of recreational opportunities at Rice Creek you ensure its success. From individuals to families, from school groups to birding enthusiasts, people of all skill levels can enjoy The Rice Creek. These experiences foster connectivity amongst neighboring communities and promote environmental stewardship.

References

http://www.americancanoe.org/recreation/watertrails.lasso

Chirgwin, S. 2005. Can sites formerly subjected to development provide satisfying nature tourism experiences? Two case studies from the top end of Australia's Northern Territory. *Journal of Sustainable Tourism* 13(1).

http://www.ci.ardenhills.mn.us/index.asp?Type=B_BASIC&SEC=%7B2779F066-74CF-422B-98C3-F7592A69DCF9%7D


http://apps.ricecreek.org/lakes


http://proteus.pca.state.mn.us/cleanup/sites/tcaap.html.
Appendix A: Standards for Rice Creek Observations

Date: ______

Weather Conditions:

Temperature:

Wind (Approximate direction and speed)

Other conditions worth noting: _____________________________

Portage- a location on the creek where one must exit and carry their watercraft to a point downstream in order to continue.

Easy: Clear path for transit

Moderate: Negotiable but problematic (i.e. no landing area, vegetation interference, anthropogenic influence)

Difficult: Portage nearly impossible in current condition due to obstruction
- Number of portages (note approximate difficulty level, length (m) and location)
- Number of areas of low water - i.e. portage necessary in dry conditions, places where a canoe runs aground (not approximate location)
- Locations where continuing downstream is physically impossible.

Zonings:
Apply the following ratings to the map below
- Social:
  0: Expect to see no other creek users – Excellent opportunity to experience solitude, enjoy nature and introspection.
  1-4: Expect to see one or two other parties of creek users – Good opportunities for experiencing solitude and enjoying nature while also experiencing family togetherness, and being with similar people
  5-7: Expect to see 3-5 other parties of creek users – Good opportunities for showing leadership, meeting new people, and experiencing social security
  8-10: Expect to see 6 or more other parties of creek users – Great opportunity for experiencing social security, low levels of risk, learning, family togetherness and achievement (social recognition)
- Biophysical:
  0: No evidence of environmental degradation
  1-4: Low levels of environmental degradation (erosion, broken trees, damaged vegetation, etc)
  5-7: Medium levels of environmental degradation
  8-10: High levels of environmental degradation
- Ecological:
  0-1: Pristine environmental conditions, no evidence of anthropogenic influences
  2-4: Natural appearing environment, little evidence of anthropogenic influences
  5-7: Natural appearing environment, some evidence of anthropogenic influences
  8-10: High levels of anthropogenic influences

Noticeable Landmarks (Geographic & Historic)

Stopping / Rest points
  - Note where, approximate area, ease of access and opportunities at each

Areas of heavy development
  - Note infrastructure, including homes, easily seen from creek or stopping points

Developments at Access Points - signage, piers, concrete launches, railings, parking lots, etc.
  - Note spatial relationships, physical condition, quality of information, etc

Areas for risk management investigation (logs, low hanging branches, dangerous manmade structures)
  - Note approximate location

Other:
Appendix B: Core Interview Questions Asked.

What current or new recreational opportunities would you like to see on the Rice Creek?

What types of users do you anticipate, or would like to see, coming to recreate on Rice Creek.

What are the current means for recreationists to gain information about Rice Creek and activities taking place on the waterway?

Are there other means of gathering information about the waterway you would like to see made available to recreationists?

Do you have any concerns regarding the water trail and increased usage?

Do you have any recommendations or questions for us?
Appendix C: Other Interview Questions Asked

What is typically at a water-accessible campsite?

I know many times there is no charge for use of the campsites—are they sustainable?

What kind of upkeep do campsites need?

What types of problems do you face with campsites?

What is your opinion about water-accessible campsites being implemented at Rice Creek?

What are the initial plans for restroom locations and types along the creek?

When I was canoeing the Rice Creek, I found no obvious places for campsites to be developed due to the cattails. What are your thoughts, and is the island on Peltier a possibility?

I noticed a pole in the water used for measuring water depth. It was located right after the entry point at George Watch. Do you know anything about that?

What does the Watershed District do?

Who originally came forward to start the Watershed District?

What do you know about the Rice Creek?

Tell me about the restoration project along the creek.
Appendix D: Rice Creek Recreationist Survey Results

Question 1: How many times have you visited the Rice Creek waterway?
Answered: 99
Skipped: 1

Table 3. Individual responses to question 1 in recreationist survey.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>1</td>
<td>7</td>
<td>1</td>
<td>15</td>
<td>9</td>
<td>200</td>
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<td>40</td>
<td>1</td>
<td>15</td>
<td>25</td>
<td>2</td>
<td>1</td>
<td>20</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>5</td>
<td>25</td>
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<td>5</td>
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<td>10</td>
<td>20</td>
<td>0</td>
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<td>50</td>
<td>25</td>
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<td>30</td>
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<td>3</td>
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<td>4000</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>20</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>25</td>
<td>2</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>200</td>
<td>10</td>
<td>25</td>
<td>12</td>
<td>2</td>
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<td>5</td>
<td>20</td>
<td>12</td>
<td>200</td>
<td>10</td>
<td>0</td>
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<td>1</td>
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<td>4</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>3</td>
<td>10</td>
<td>60</td>
<td>2</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>15</td>
<td>10</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>500</td>
<td>NA</td>
</tr>
</tbody>
</table>

Question 2: How did you first find out about recreation opportunities on Rice Creek? (select all that apply)

Table 4. Responses to question 2 in recreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends or Family</td>
<td>39</td>
<td>39.0%</td>
<td>Skipped</td>
<td>0</td>
</tr>
<tr>
<td>mailing list</td>
<td>5</td>
<td>50.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>website</td>
<td>13</td>
<td>13.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anoka county park and rec</td>
<td>33</td>
<td>33.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramsey county park and rec</td>
<td>2</td>
<td>2.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>brochure</td>
<td>11</td>
<td>11.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wargo nature center</td>
<td>23</td>
<td>23.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>27</td>
<td>27.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:

- I live close by - I use the paths a lot
- I started working for the park district and did my park tour to visit.
- bike ride from coon rapids
- drove by & saw the sign, and rode bike and discovered it
- volkssport walk
- we live near by
- don't remember
- none
- Live close
- live near by.
- Grew up in Fridley, and lived their after I got married.
- near my house and like to bird watch
- 0
- self discovery
- Asked friends and family. I sought out the park opportunity
- Live near it.
- I live by it
- Exploring the chain of lakes near Centerville by canoe ~20 years ago.
- Minnesota Canoe Association
- I live nearby
- newspaper
- FMR
- I live very near the west end of the trail in Fridley
• Maps and came across trails while driving in the area.
• FMR
• MN Canoe Association
• Found the trail when we moved to New Brighton and were looking for bicycle trails

Question 3: What sorts of activities have you participated in on the Rice Creek waterway? (select all that apply)

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
<th>85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canoeing</td>
<td>28</td>
<td>32.9%</td>
<td>Skipped</td>
<td>15</td>
</tr>
<tr>
<td>Kayaking</td>
<td>17</td>
<td>20.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td>28</td>
<td>32.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunting</td>
<td>1</td>
<td>1.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird watching</td>
<td>22</td>
<td>25.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping</td>
<td>26</td>
<td>30.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>47</td>
<td>55.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trails (walking, Biking)</td>
<td>28</td>
<td>32.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>20.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:

• walking the paths
• Biking
• boating
• Water Skiing on Centerville Lake
• I schedule the picnic pavilion for the season. Also I would like to get our boat on the lake.
• picnic
• bike riding, playing at park
• biking, hiking
• walking the trails
• rollerblading
• none
• rollerblading, biking
• Running, Bike riding, 5K rookery run
• biking and walking the trails
• boating
• scuba diving
• running on path next to waterway
• Hiking
• walking and hiking and biking around trails along the creek
• picnic, playground, biking
• walking
• Running

• 0
• Biking trails
• hiking, biking
• Nature Camp
• hiking
• Hiking
• Homeownership
• Biking
• walking
• Hiking
• Hiking
• Hiking and Geocaching
• Walking, Cycling
• Have also jogged, hiked, and biked along the trails that follow the creek in Fridely (Locke Park area) and New Brighton. Have also visited the Wargo Nature Center once, not likely to go back however.
• walking
• sailing
• Hiking
• nature watching and biking on the trail
Question 4: Was there plentiful information available to help you create your desired experience on Rice Creek?

Table 6. Responses to question 4 in recreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>68</td>
<td>73.1%</td>
<td>Skipped</td>
</tr>
<tr>
<td>no</td>
<td>25</td>
<td>26.9%</td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:

- never looked
- It was pretty weedy. I would like to have known that a head of time
- We don't remember any information being available between Locke Lake and the Mississippi River where we went for recreation.
- I didn't have any information
- With two small children, we have not been able to canoe at Rice Creek yet, but we will look into this in the future.
- the web page was incredibly helpful in picking out campsites
- Possibly, but I've never researched it.
- There was information, but I don't know that I would call it plentiful.
- There are some great parks to gather info. at and plenty of online info.
- map would have been a great addition.
- Need more info. on put-ins and take-outs and water levels.
- I had to figure out were to put in and take out on my own. Wargo N.C. did have a map available which help some.
- I wish there was more communication with homeowners in the watershed.
- Most of the information I had to gather myself from numerous websites and other people who have conoed Rice Creek
- You can never tell if there will be trees blocking the creek for a canoe trip. Marked portage / access points would be helpful for people unfamiliar with the creek. People seem to wonder if it is OK to enter the Arden Hills TCAAP site via the creek.
- My experience was a long time ago (10 years), and there was very little info.
- I'd like to find out more about paddling opportunities on the creek.
- It wasn't brochures or other published information so much that brought me to the creek, but looking for waterways on maps, or seeing the trails while driving past them.
- We heard about the path from a friend, and then we walked it.
- I know the area.
- Difficult to find info on canoe landings/paddling distances

Question 5: What length of time would you most likely participate in an activity on Rice Creek? (select all that apply)

Table 7. Responses to question 5 in recreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 hours</td>
<td>41</td>
<td>44.1%</td>
<td>Skipped</td>
</tr>
<tr>
<td>3-4 hours</td>
<td>45</td>
<td>48.4%</td>
<td></td>
</tr>
<tr>
<td>half day</td>
<td>27</td>
<td>29.0%</td>
<td></td>
</tr>
<tr>
<td>full day</td>
<td>20</td>
<td>21.5%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>7.5%</td>
<td></td>
</tr>
</tbody>
</table>
Comment Text:
• 2-3 days
• Camping Weekends
• i don't know
• depends on the activity
• camping weekend
• full day when it opens through the arsenal to the Mississippi River
• 30-45 minutes a day; twice a month

Question 6: What services would you like to be provided? (select all that apply)

Table 8. Responses to question 6 in recreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Count</th>
<th>%</th>
<th>Answered</th>
<th>95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picnic/Rest Areas</td>
<td>65</td>
<td>68.4%</td>
<td>Skipped</td>
<td>5</td>
</tr>
<tr>
<td>Swimming Beaches</td>
<td>53</td>
<td>55.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing Piers</td>
<td>26</td>
<td>36.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historic Information Markers</td>
<td>34</td>
<td>35.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preplanned Trips</td>
<td>10</td>
<td>10.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded Walking/Biking Trails</td>
<td>75</td>
<td>79.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping Opportunities</td>
<td>38</td>
<td>40.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature Information Markers</td>
<td>52</td>
<td>54.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 7: When you do use the Rice Creek Water Trail, what type of trip(s) would you be likely to take? (select all that apply)

Table 9. Responses to question 7 in recreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Count</th>
<th>%</th>
<th>Answered</th>
<th>97</th>
</tr>
</thead>
<tbody>
<tr>
<td>solo</td>
<td>33</td>
<td>34.0%</td>
<td>Skipped</td>
<td>3</td>
</tr>
<tr>
<td>with a few friends</td>
<td>41</td>
<td>42.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>with my kids/family</td>
<td>79</td>
<td>81.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>with an organized group (church, outdoor club, etc)</td>
<td>22</td>
<td>22.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:
• Photo opportunities

8. What recommendations would you make to improve the waterway for recreationists?

Answered: 51
Skipped: 49

Comment Text:
• The dump station for Anoka residents should be free. We pay for it in taxes. Anoka resident seniors should be provided camping discounts like State Campgrounds.
• More restrooms and also drinking facilities - with possibly some venting options.
• more full camp site with electric
• plenty of benches with trashcans to take breaks near, especially on the trails
• Better road markers where to enter the park and what particular services are available at that site.
• Less motorized access.
• A fishing pier for adults and children to use on the beach side.
• I have not yet been out on that lake yet.
• more trail access around lake drive and hodgeson rd.
• fishing docks, deeper swimming area for bigger kids and adults
• I'd like to see more hiking trails.
• More bike paths out of campground!
• completed trail around Centerville Lake. The road on the north side is treacherous.
• Not sure
• Hunting should NOT be allowed Bow hunting at Bunker is stupid.
• Open the road. We tried to go there last Sunday and the road was closed due to the bridge being out. This was a very disappointing experience.
• Boats and motors must be cleaned in order not to spread any milfoil or other weed issues.
• More info--- lot's of people don't know what is out there.
• more canoe landings
• clear the weeds
• Continue to improve trails and access points along the waterway. It would be helpful to increase the seasons time of access to bathrooms in the parks alone the waterway. The bathrooms are locked starting early Oct when it is still warm.
• I would like to see a foot bridge in the water. Control walking traffic and biking traffic, it's always easier to keep it separate or have a few rules. Have some more secluded spots for walkers were the views are pretty, perhaps a step off from the main trail or a small picnic area were the traffic may be less. I really enjoy unpaved walk ways were the natural surroundings are best seen. Perhaps more bird houses or bird feedings area's where wild life will come more readily.
• We are only acquainted with the western end of Rice Creek and where it empties into the river so at that point it seems that there is not much room for any expansion. I suspect that east of the residential areas it could be much improved.
• shaded areas - maybe some permanent umbrellas like Elm Creek in Maple Grove/Osses has.
• better trails: In my area they are not well marked and are broken up into short segments because of housing and roads around the creek.
• It would be nice to have a fishing pier not too far away from the beach so I can watch the kids at both places at the same time.
• more things for the kids to do on the beach area and in the water. More of a snack shop.
• Fix your rest rooms and showers. Out of all the ones I have seen in other parts of the country and state, these have to be the worst ones.
• more care in the restrooms at the campground
• More public access points. Help clean the water. Provide trash recepticles for those that can't carry their trash out with them. Fine the people that trash up the beaches and recreation spots.
• Better maps/signage
• More shades areas at the beach.
• get out even more info. to potential users through community newsletters, flyers & schools.
• map
• having a way to check water levels before because if low makes it a hard day of paddling, but if too high can be more dangerous. more improved put-ins and take-outs. maps.
• Improve the put-ins and take-outs.
• Having no landing areas is great. This is one of the few places close to the twin cities where it is not designed for group gatherings and allows one to be in a nice quiet area. The carp are out of control but other than that seeing the wildlife from a small boat is easy because few people use it at one time - no big scout or church groups. I would like to have easier access into Reshanau. The closing of the road through the golf course I believe was a mistake it already goes through most of the park and when it went 100 more feet the road was similar to Theodore Worth Parkway. I have watched docks being built and the elimination of them would give it a nice astetic appeal.
• Improved water quality. Removal of downed trees across the creek. Designated launch sites with parking for canoes/kayaks. A complete biking/walking trail the length of the watershed. I realize this would not be able to follow the creek in areas where the shoreline is private.
• East side bike trail running north from Long Lake Regional Park along the creek. Improved put in area off Old Highway 8 by County 10. Improved take-out at Locke Lake. Paved bike trails along river between Highway 65 (Central) and 47 (University).
• Remove trees that have fallen into the creek. They can prevent a hazard to inexperienced canoeists and worry me when I take our children.
• The less invasive the better. Trails should be dirt or wood chips not asphalt or gravel. Enough cement/asphalt exists already. I like to run along the creek, I ran on dirt trails and they keep paving more and more of these.
• The less invasive the better. Trails should be dirt or wood chips not asphalt or gravel. Enough cement/asphalt exists already. I like to run along the creek, I ran on dirt trails and they keep paving more and more of these.
• Keep the creek clean.
• Add Rice Creek to the DNR mapped water trail routes, if it is not already included.
• Perhaps detailed mapping resources, like the Minnehaha Creek Watershed District has.
• Reduce the number of exotic rough fish to improve water quality.
• Although I have not tried it, I would be interested in paddling Rice Creek through the Fridely area down to the Mississippi River. Not sure this is possible. Water quality is a big issue. I assume you are including the Lino Lake's chain as part of the waterway, and I have kayaked through the chain. Water quality in the lakes was terrible and a distraction from going back. Issues include extremely high turbidity, algae, dying fish. The water quality in the lower reaches of the creek in Fridely has also been quite poor with creek flowing green at times. Improving water quality and both aquatic and terrestrial habitat along the waterway would be biggest way to improve the experience. I also would not encourage more development along the waterway. More trails, structures, etc. are not what make the waterway attractive to me, but more that it is a place to get away from all the development that already exists in the watershed. There seems to be plenty of ways to access the waterway as it is. Another distraction for me is the existence of the golf course operated by Anoka County adjacent to the creek in the Lino Lakes Chain Area. Fairways, golf cart bridges, etc. distract from what is an interesting place to paddle along the creek.
• State on a marker the length of the walk and the difficulty
• Connect all bike trails. Enforce all regulations! This has been lacking! Make sure power boats do not interfere with canoeing, kayaking, fishing and other activities. Push for a no-wake zone for 150 feet from all shores! Push for a no interference zone of at least 200 feet to separate speed boats from fishermen, canoeists, kayakers, and similar activities. A person should not be allowed to have a dedicated slalom water-ski course "permanently" occupying almost 1,000 feet of Peltier Lake. It interferes with fishing and other activities.
• More hiking trails both paved and wild. Trails to connect more stretches of Rice Creek. More canoe access points
• I have not been in the creek for recreation. My experience is using the trail from Long Lake to Central Ave. It would be very nice if the trail could go UNDER Central, rather than those steep hills on the path. The trail on the west side of central going down/up the hill is AWFUL.

Question 9: What strengths of Rice Creek would you like to see retained and protected for further recreational enjoyment?

Answered: 50
Skipped: 50

Comment Text:

• I like it just the way it is.
• It was a treasure of solitude so close to the city with a beautiful swimming beach and a fun lake to waterski on. Camping sites were private. A great place to be!!!
• BEAUTY!!!
• Playground Camping swimming nature center ad walks
• The size and rustic nature.
• The swimming beach is wonderful, especially with the playground right on the water. We also really enjoyed this aspect when we were camping.
• We have great success with our large group pavillion there. I feel that we should have another small one.
• the trees and the size of the sites in the campground.
• bike trails, good play ground
• What you have is great and enjoyable
• Beach, picnic area & campgrouns are fantastic.
• Unspoiled wetlands.
• Not sure
• Hiking and camping
• Clean & clear water!
• Centerville beach and campground, along with the trails
• Service, cleanliness, officials on patrol
• Please continue to keep the paved trails from cutting into the forest area. I love the woods. It's such a shame to see paved trails in wooded area's.
• Water cleanliness and multiple fishing and hiking opportunities. I also think that most Anoka County residents are unaware of the environmental jewel in their midst. I think a public information program would be very beneficial.
• great beach/play area/restrooms.
• Forested areas around the creek should be retained. Excellent bird watching.
• We like the beach for swimming and playground. We use the campground often during the summer as a get away, even though it's not far in miles. We use the walking/bike trails a lot.
• Keep the beach clean as it is and the sand clean without fish or dead animals.
• keep up the wonderful care of the campground sites
• Water condition.
• Keep improving the public access facilities. Keep adding trash containers at various places.
• Regional park locale - would hate to see it diminished or built up
• Play ground, Swimming
• It's always very clean.
• Continue to offer opportunities for recreation and volunteer activities. Keep trails open and cleaned up.
• Keep it as environmentally intact as possible...
• length of trip - nice to have a creek/river that one can paddle continuously; natural areas and wildlife
• biodiversity. remoteness. I would want there to be good put-ins and take-outs but not to the point where this creek is overused and not to the point that there is large boatlandings in place. I am more asking for safer put-ins and take-outs. The natural essence of the river should be maintained.
• The natural beauty, keep the vegetation and tree along the creek, and don't add a lot of signage that could clutter the creek.
• I think I stated that previously. If it has areas where people can get out and picnic and swim it would loose the quiet atmospher it has now. There are numerous areas where that type of atmospher exists but only a few like this close to the cities. I think we all need including the animals a place that is quiet and does not offer the ammaeindtes found in other parts of the park. A beach area is close by which has everything anyone could want for group gaterings. I ran into a family of 4 in canoe and they asked how much farther to the picnic area. They had just come into Marshan lake and already their young children were bored. I explained they would not find any place like that but they could go to the adjacent park and they had a beach and picnic tables. They followed me out and went to the beach. I am glad that the bridge going into Rice has been raised.
• Large undeveloped sections. The local and regional parks providing access. Encouragement of good shoreline management practices by private landowners.
Over the last few years the Rice Creek Watershed District folks have done a great job keeping the riverway clear of fallen trees and debris. 
Less development would be better. 
Minimize future development. Preserve the natural beauty. Plant natural species which help keep the water clean. 
Minimize future development. Preserve the natural beauty. Plant natural species which help keep the water clean. 
Natural settings. 
Habitat Erosion protection. 
That it isn't really all that developed. 
It is quiet. There are nice lake views and beautiful trees. 
The flood plain corridor in the Fridley and New Brighton area is great in that walking through it, it is hard to realize you are in a metro area. 
Natural shoreline No docks No destruction of underwater vegetation Great habitat for birds and fish and amphibians 
Keep it as wild as possible. Protect bird habitat. Protect aquatic vegetation. Improve the water quality. Do not cut vegetation by the water's edge. Preserve shorelines and wetlands. 
Have a seamless waterway and hiking trail from Little lakes to the Mississippi. 
Retail the wild nature of the park lands. 
The mostly natural setting the bike path the walking path. 

**Question 10:** Please fill out the following section to help us to determine who is using the Rice Creek waterway. 

**Table 10. Responses to question 10 in recreationist survey (age and sex)**

<table>
<thead>
<tr>
<th>Age:</th>
<th>Response Count</th>
<th>%</th>
<th>Sex:</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>0</td>
<td>0.0%</td>
<td>Male</td>
<td>45</td>
</tr>
<tr>
<td>11-20</td>
<td>0</td>
<td>0.0%</td>
<td>Female</td>
<td>51</td>
</tr>
<tr>
<td>21-30</td>
<td>5</td>
<td>5.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>29</td>
<td>29.9%</td>
<td></td>
<td>Total Response 96</td>
</tr>
<tr>
<td>41-50</td>
<td>34</td>
<td>35.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-60</td>
<td>21</td>
<td>21.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>61-70</td>
<td>8</td>
<td>8.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71 and above</td>
<td>0</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Response</td>
<td>97</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 11. Responses to question 10 in recreationist survey (ethnicity/race)**

<table>
<thead>
<tr>
<th>Ethnicity/Race:</th>
<th>Response Count</th>
<th>%</th>
<th>Total Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>0</td>
<td>0.0%</td>
<td>94</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>1</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>93</td>
<td>98.9%</td>
<td></td>
</tr>
<tr>
<td>City/Town</td>
<td>Response count</td>
<td>City/Town</td>
<td>Response count</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Andover</td>
<td>6</td>
<td>Ham Lake</td>
<td>2</td>
</tr>
<tr>
<td>Anoka</td>
<td>3</td>
<td>Hugo</td>
<td>2</td>
</tr>
<tr>
<td>Blaine</td>
<td>15</td>
<td>Lino lakes</td>
<td>11</td>
</tr>
<tr>
<td>Brooklyn Park</td>
<td>1</td>
<td>Mendota Heights</td>
<td>1</td>
</tr>
<tr>
<td>Burnsville</td>
<td>1</td>
<td>Minneapolis</td>
<td>2</td>
</tr>
<tr>
<td>Cedar Lake</td>
<td>1</td>
<td>Mounds View</td>
<td>2</td>
</tr>
<tr>
<td>Centerville</td>
<td>3</td>
<td>New Brighton</td>
<td>6</td>
</tr>
<tr>
<td>Champlin</td>
<td>1</td>
<td>Oakdale</td>
<td>1</td>
</tr>
<tr>
<td>Chisago</td>
<td>1</td>
<td>Ramsey</td>
<td>4</td>
</tr>
<tr>
<td>Circle Pines</td>
<td>3</td>
<td>Roseville</td>
<td>1</td>
</tr>
<tr>
<td>Cloquet</td>
<td>1</td>
<td>Shoreview</td>
<td>1</td>
</tr>
<tr>
<td>Coon Rapids</td>
<td>11</td>
<td>Spring lake park</td>
<td>2</td>
</tr>
<tr>
<td>Forest lake</td>
<td>2</td>
<td>Vadnais Heights</td>
<td>1</td>
</tr>
<tr>
<td>Fridley</td>
<td>3</td>
<td>White Bear Lake</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Response</strong></td>
<td><strong>92</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E: Rice Creek Nonrecreationist Survey Results

Question 1: How did you first find out about recreation opportunities on Rice Creek? (select all that apply)

Table 13. Responses to question 1 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have not previously heard about opportunities</td>
<td>31</td>
<td>53.5</td>
<td>Skipped</td>
</tr>
<tr>
<td>Friends or Family</td>
<td>7</td>
<td>12.1</td>
<td></td>
</tr>
<tr>
<td>mailing list</td>
<td>3</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>website</td>
<td>6</td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>Anoka county park and rec newsletter</td>
<td>9</td>
<td>15.5</td>
<td></td>
</tr>
<tr>
<td>Ramsey county park and rec newsletter</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>brochure</td>
<td>3</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Wargo nature center</td>
<td>4</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>7</td>
<td>12.1</td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:
- House backs up to Rice Creek Park
- email
- drove by it one day
- live nearby a regional park
- New Brighton Town Meeting
- I live in an area by Rice Creek
- Volunteer watershed clean-up

Question 2: Why haven't you used Rice Creek for recreational purposes? (select all that apply)

Table 14. Responses to question 2 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was not aware of opportunities</td>
<td>69</td>
<td>67.2</td>
<td>Skipped</td>
</tr>
<tr>
<td>time constraints</td>
<td>11</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>availability of equipment (canoes/kayaks/paddles etc)</td>
<td>1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>not interested</td>
<td>1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>too close to cities and/or desire for unspoiled environment</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>need to transport canoe/kayak from end point to beginning</td>
<td>1</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>not enough information</td>
<td>16</td>
<td>27.6</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>3</td>
<td>5.2</td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:
- we have young kids and not alot of time, it would be great to do a family class
- I don't live close enough.
- Have gone to recreational areas that are closer to me
Question 3: What length of time would you most likely participate in an activity on Rice Creek? (select all that apply)

Table 15. Responses to question 3 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour</td>
<td>10</td>
<td>17.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 hours</td>
<td>25</td>
<td>44.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 hours</td>
<td>13</td>
<td>23.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>half day</td>
<td>15</td>
<td>26.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>full day</td>
<td>2</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment Text:
- depends on where it is at and what is there.
- Don't know anything about it.
- don't know what's available at RC
- unsure of what happens there

Question 4: What outdoor recreational activities do you enjoy outside of using Rice Creek? (select all that apply)

Table 16. Responses to question 4 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canoeing</td>
<td>20</td>
<td>35.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kayaking</td>
<td>12</td>
<td>21.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td>32</td>
<td>57.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunting</td>
<td>10</td>
<td>17.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird watching</td>
<td>12</td>
<td>21.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping</td>
<td>30</td>
<td>53.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>28</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trails (biking/walking)</td>
<td>47</td>
<td>83.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comment Text
- x country skiing, biking
- off leash areas for walking with my dog
- Gardening
Question 5: What outdoor recreational activities would you like to participate in on Rice Creek? (select all that apply)

Table 17. Responses to question 5 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canoeing</td>
<td>24</td>
<td>42.1</td>
<td>Skipped</td>
<td>1</td>
</tr>
<tr>
<td>Kayaking</td>
<td>17</td>
<td>29.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td>24</td>
<td>42.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunting</td>
<td>5</td>
<td>8.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird watching</td>
<td>11</td>
<td>19.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping</td>
<td>21</td>
<td>36.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>23</td>
<td>40.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trails (biking/walking)</td>
<td>42</td>
<td>73.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 6: What concerns do you have with the future development of Rice Creek?

Answered: 41
Skipped: 17

Comment Text:

- Water quality
- none
- As with any growing community, the biggest concern that I have is how to effectively grow the park system with the community, but not damaging the park. By grow, I am referring to upgrading amenities, access points, and trail systems.
- Traffic & Parking
- additional taxes
- I am concerned about all development of our natural resources.
- not informed enough about rice creek park to give you an answer
- Too much development around it will harm it's beauty, pollute the creek.
- None right now - I don't know enough about it.
- None! I know that U of MN students will do a wonderful job.
- That it not get "overdeveloped", i.e., turn into an amusement park.
- Eco friendliness and no damage to current environment or habitats that currently exist.
- MAYBE LOSS OF ANIMALS AND NATURE BECAUSE OF PEOPLE NOT RESPECTING SUCH THINGS
- interested in access via bike trails
- None at this point.
- none
- predators and safety
- Risk to the environment/natural habitat
- Environmentally safe?
- keep it natural, don't build
- Too many people on the creek.
- too much noise and light pollution, increased stormwater runoff degrading water quality and habitat
- Don't know
- I'm not sure what you mean by development? Much of the area already seems developed with houses, etc. Are you talking about a park?
I believe the experience should be as natural as possible. I prefer recreation where I do not have any view of development from the creek.

Pollution

Question 7: What is your preferred way to get news about Rice Creek recreational opportunities?

Answered: 41
Skipped: 17

Comment Text

- E-mail
- email and at the other facilities
- Email or postal
- email
- e-mail
- email reminders - website links
- Internet
- email
- newsletters, email
- email
- e-mail
- Car.
- web
- email and snail mail
- MAIL OR COMPUTER
- Internet
- Via E-Mail or by Newsletter
- email
- E-mail
- Anoka Co. Parks Newsletters
- Brochures at the county park offices.
- email
- email
- e-mail
- email
- email
- email
- mail
- Email or in the mail
- Online
- I would prefer a mailing that highlights all the recreations opportunities. It would be great to have a map, descriptions, prices and even some coupons if applicable. Give me a reason to come.
- email notifications
- email
- email
- email
- email
- E-mail
- from newsletters, direct mail (maybe once a year to watershed residents?), from Rice Creek Watershed District, even newspaper (PP)
- Display at annual city meeting might be nice
- Email is good.
- e-mail
- Look on web-site myself

Table 18. Responses to question 7 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Summary Results</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>email</td>
<td>29</td>
</tr>
<tr>
<td>newsletter/mailings</td>
<td>9</td>
</tr>
<tr>
<td>website</td>
<td>7</td>
</tr>
<tr>
<td>brochure</td>
<td>2</td>
</tr>
<tr>
<td>newspaper</td>
<td>1</td>
</tr>
<tr>
<td>city meetings</td>
<td>1</td>
</tr>
</tbody>
</table>
Question 8: Additional comments or concerns?

- N/A
- no
- Great park. Please keep it pet friendly. (maybe a dog park or dog pond)
- none
- I look forward to hearing more about this development.
- it is great to have spaces like this I would worry about people littering or overusing areas of the landscape causing erosion issues.
- I feelm outdoor activities are a great way for families to do things together and enjoy themselves.
- none
- none
- By the way...the correct ethnic term for white is Caucasian....not White. White is neither a race code nor color! I'm a little offended you don't know that!
- Would use the creek if I had more info, a map.

Question 9: If you would use the Rice Creek Water Trail, what type of trip(s) would you be likely to take? (select all that apply)

Table 19. Responses to question 9 in nonrecreationist survey.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Answered</th>
</tr>
</thead>
<tbody>
<tr>
<td>solo</td>
<td>16</td>
<td>27.6</td>
<td>Skipped 0</td>
</tr>
<tr>
<td>with a few friends</td>
<td>18</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>with my kids/family</td>
<td>44</td>
<td>75.9</td>
<td></td>
</tr>
<tr>
<td>with an organized group (church, outdoor club, etc)</td>
<td>4</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>5.2</td>
<td></td>
</tr>
</tbody>
</table>

Comment Text

- my dog
- don't know what's available
- with my dogs

Question 10: Please fill out the following section to help us to determine who is using the Rice Creek waterway.

Table 20. Responses to question 10 in nonrecreationist survey (age/sex).

<table>
<thead>
<tr>
<th>Age:</th>
<th>Response Count</th>
<th>%</th>
<th>Sex:</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>0</td>
<td>0</td>
<td>Male</td>
<td>23</td>
</tr>
<tr>
<td>11-20</td>
<td>0</td>
<td>0</td>
<td>Female</td>
<td>35</td>
</tr>
<tr>
<td>21-30</td>
<td>7</td>
<td>12.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>19</td>
<td>32.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41-50</td>
<td>19</td>
<td>32.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-60</td>
<td>8</td>
<td>13.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>61-70</td>
<td>5</td>
<td>8.6</td>
<td>Total Response</td>
<td>58</td>
</tr>
<tr>
<td>71 and above</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Response</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 21. Responses to question 10 in nonrecreationist survey (ethnicity/race).

<table>
<thead>
<tr>
<th>Ethnicity/Race</th>
<th>Response Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Black or African American</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>55</td>
<td>98.2</td>
</tr>
</tbody>
</table>

Total Response 56

Table 22. Responses to question 10 in nonrecreationist survey (city/town).

<table>
<thead>
<tr>
<th>City/Town:</th>
<th>Response count</th>
<th>City/Town:</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andover</td>
<td>11</td>
<td>Isanti</td>
<td>1</td>
</tr>
<tr>
<td>Anoka</td>
<td>4</td>
<td>Lino Lakes</td>
<td>3</td>
</tr>
<tr>
<td>Blaine</td>
<td>9</td>
<td>Minneapolis</td>
<td>2</td>
</tr>
<tr>
<td>Brooklyn Park</td>
<td>1</td>
<td>Mounds View</td>
<td>1</td>
</tr>
<tr>
<td>Burns Township</td>
<td>1</td>
<td>New Brighton</td>
<td>2</td>
</tr>
<tr>
<td>Cambridge</td>
<td>1</td>
<td>Oak Grove</td>
<td>1</td>
</tr>
<tr>
<td>Coon Rapids</td>
<td>11</td>
<td>Shoreview</td>
<td>1</td>
</tr>
<tr>
<td>Fridley</td>
<td>2</td>
<td>St. Francis</td>
<td>1</td>
</tr>
<tr>
<td>Ham Lake</td>
<td>2</td>
<td>Woodbury</td>
<td>1</td>
</tr>
<tr>
<td>Hugo</td>
<td>2</td>
<td>Zimmerman</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Response 58