

# LOWER HAW RIVER STATE NATURAL AREA



6/15/2018

Lower Haw Trails Plan

## Trails Plan Report and Conceptual Designs

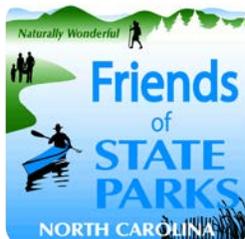
### Lower Haw Trails Plan:

This report provides a summary of the stakeholder input process conducted in cooperation with Friends of the Lower Haw River State Natural Area (SNA) and NC Division of Parks and Recreation.

### Conceptual Designs:

The proposed site plans are conceptual only. The conceptual plans are not a suitable document for determining construction or building cost estimates. The goal of the site plans are to guide development of the state natural area by visualizing enhancements along the trail corridor. Further, the plans will assist Friends of the Lower Haw River SNA in their support of State Parks by working with stakeholders and applying for grant opportunities. The conceptual plans, in concert with the trails plan document, allow parties to evaluate options and present a plan for the future.

The land managers must consult engineers, surveyors, construction professionals and, or building code experts as needed to confirm final placement of built facilities, including trails, on the project site. The suitability of programmed areas for activities in the Natural Area should also be considered as updates are made along the site. The information included in the trails plan report reflects recommendations based on site assessment data gathering, the stakeholder input process, and proposed facilities illustrated on the accompanying conceptual site plans.



Base information used to create the site plan was gathered from multiple sources including NC One Map, NC State Parks, and the Chatham County GIS Department Open Data Portal. All sources are referenced in the appendix. Parcel and boundary data document SNA boundaries and orthophotography (aerial photos) were used for placement of existing facilities. Facilities are drawn to scale with the overall design conceptual in placement of each feature. This spatial data was used in supplement to personal site visits to the corridor sites and discussion with the Friends group and knowledgeable stakeholders.

Report and Conceptual Plan Developed and Presented by Recreation Resources Service (RRS) at NC State University

RRS Project Staff: Pete Armstrong : Kyle Smith, CPRP : Charlyne Smith, GISP

Developed in partnership with **Friends of Lower Haw River State Natural Area**, a local chapter of the nonprofit Friends of State Parks, Inc.

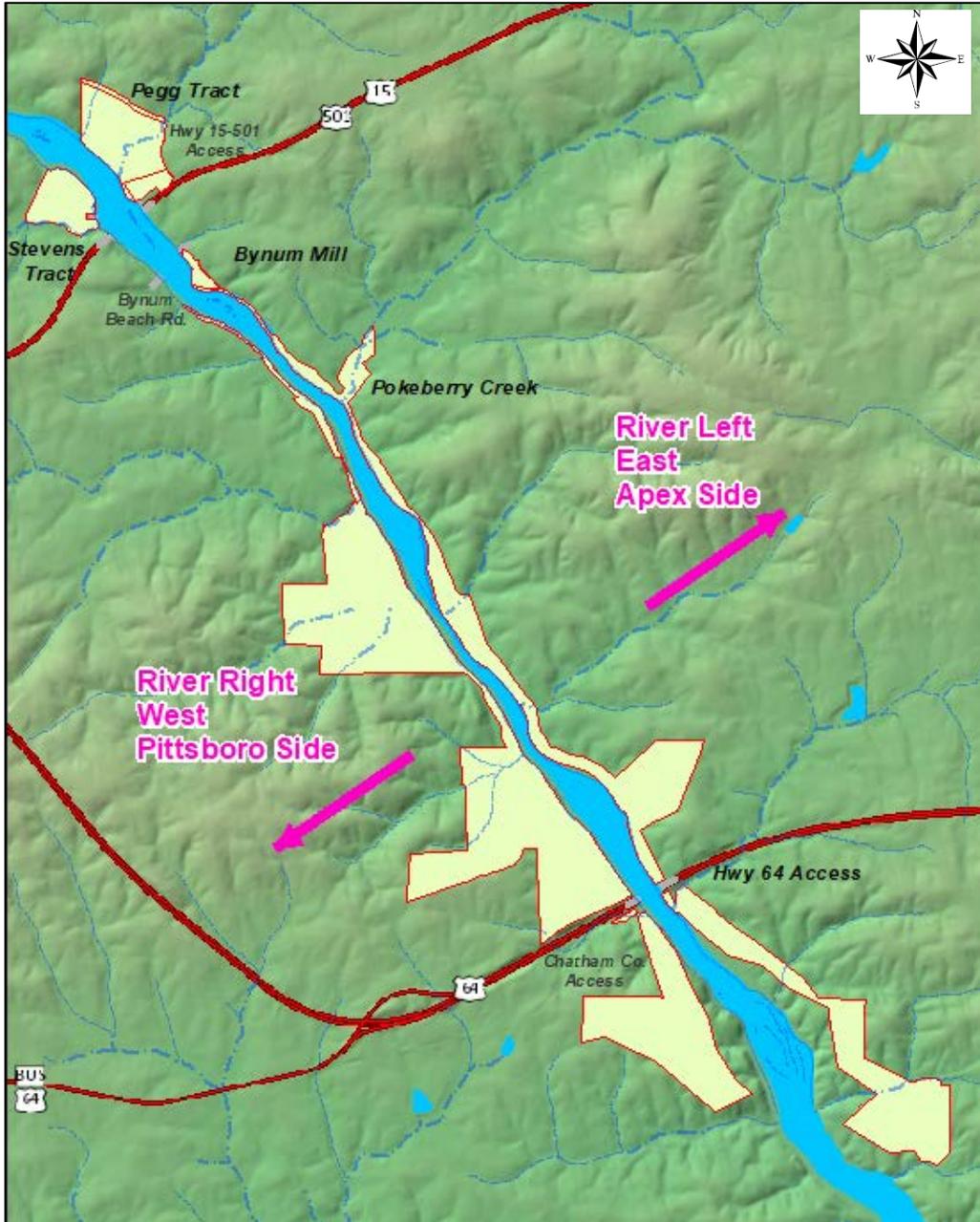
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Corridor Map of the Lower Haw River State Natural Area (LHRNSNA) Trail Corridor, locations and terminology used in this report.



# Lower Haw River State Natural Area

## LOWER HAW TRAILS PLAN

### PROJECT OVERVIEW

The Lower Haw River State Natural Area (LHRSNA) is a component of the North Carolina State Parks System. The LHRSNA serves to preserve and protect the aesthetic and ecological value of the river corridor while offering specific opportunities for outdoor recreation. The NC Division of Parks and Recreation expressed a desire for a trails plan to guide public access in this protected area. In its role of assisting State Parks, Friends of Lower Haw River State Natural Area (Friends of Lower Haw) was awarded a grant from the Triangle Community Foundation's Support for Places Awareness Program to develop this plan for the LHRSNA in Chatham County. The grant funded development of a trail corridor plan to provide a structured process for planning future sustainable development of official hiking and paddle trails and amenities. Recreation Resources Service (RRS) at NC State University was tasked to develop the plan. The RRS team represents a combined experience of over forty years as park and recreation professionals. That experience includes managing public and private recreation resources, planning park and natural resource areas, public safety and overseeing development of facilities.

The resulting plan incorporates data gathered about the site and from informed stakeholders to develop a proposal for future use and management of the natural area that both protects natural resources yet accommodates outdoor recreation opportunities. Supplementing this report are a series of conceptual plans based on site suitability for proposed hiking and paddle trails, recommendations for improved traffic flow in the village of Bynum, improved parking, and new amenities such as picnic shelters and restrooms.

### About Lower Haw River State Natural Area

In 2003, Duke University sold a corridor of land along the Haw River to the North Carolina Department of Environment and Natural Resources. Funds for the purchase came from a new state program for NC Department of Transportation (DOT) wetland and stream mitigation, the Ecosystem Enhancement Program. The Triangle Land Conservancy spent almost three years facilitating the purchase between Duke Forest and the State of NC. They deserve much thanks to all who enjoy the beauty of the Haw River and rugged white water landscape.

Since establishment, the State has acquired additional acreage for a total of 1,025 acres. These additions include two acquisitions in 2006 north of Hwy. 15-501: the 82-acre Pegg Tract on the east side of the river, and the 40-acre Stevens Tract on the west side. In 2007, the 7-acre Bynum Mill Tract was added to further expand protected areas and providing a prime public access location. The Triangle Land Conservancy and Haw River Assembly facilitated acquisition of these additional tracts. The LHRSNA encompasses approximately 5 miles along both sides of the Haw River from the Bynum area to Highway 64 where the Haw feeds into Jordan Lake. Whitewater rapids make this section of river popular for paddling.

The State does not have contiguous ownership along that corridor. Gaps in state-ownership exist between Hwy 15-501 and the Bynum vicinity, where ownership falls to both private and public entities. Management of the LHRNSA is under the supervision of Jordan Lake State Recreation Area park staff.

### **Significance of the Natural Area Habitat**

The NC Natural Heritage Program (NCNHP) designated the section of the Haw River within the LHRNSA as *exceptional* overall rating for aquatic habitat, and *very high* overall rating for habitats and riverbank lands. NCNHP identifies portions of the river as home to the Federally endangered Cape Fear shiner, classified as critically imperiled, and the State endangered yellow lampmussel, classified as vulnerable to extinction. The natural area along the river supports habitat for the wildflower *Phacelia covillei*, commonly known as the eastern buttercup phacelia, classified as significantly rare. Geologic features along the river corridor include steep slopes and rocky outcrops that support Mountain Laurel, a plant not commonly seen in the Piedmont region. Bald Eagles, Osprey, Herons as well as Otter are often seen along the river.

The significance of the SNA habitat drives priorities in development of this trails plan. Protecting the natural environment while providing opportunities for outdoor recreation to the public requires a careful balance in managing resources. Pedestrian and paddler access to the land and water-based areas of the LHRNSA are the main priority. Carefully built trails to allow hiking and water trail access at designated launches will protect the resource while providing safer experience for visitors. The LHRNSA plays a critical role in NC's Trail System. The Haw River connects the Mountains to Sea State Trail, at the town of Haw River, to Jordan Lake. The Lower Haw trail segment is part of the proposed concept for a 70-mile Haw River Trail Corridor that extends from the Upper Haw corridor. The full corridor is described in the Haw River Trail Partnership Memorandum of Understanding (see Appendix 3) signed by State Parks and local governments in 2006 and then renewed in 2011. This Lower Haw Trails Plan provides a significant contribution to the corridor planning efforts.

## **STATE NATURAL AREAS**

According to the NC Division of Parks and Recreation, the "purpose of a State Natural Area is focused on preserving and protecting areas of scientific, aesthetic, or ecological value. Facilities are limited to those needed for interpretation, protection, and minimum maintenance. Generally, recreational and public use facilities such as camping, swimming, picnicking, and the like are not provided in State Natural Areas. However, they are available for photography, nature study, and research." (NC State Parks, 2018). The State of North Carolina began establishing State Natural Areas in 1963 in response to the growing population and its impact on significant natural resources located throughout the state. A portion of the LHRNSA property is a Dedicated Nature Preserve, dedicated pursuant to the Nature Preserves Act and subject to established Articles of Dedication (see Appendix 6).

## **TRAILS PLAN PROCESS**

The trails planning process involved gathering information from a number of sources. The information collected informed the proposed plan and recommendations. Stakeholder input included comments from government agencies, businesses and special interest groups. Additional data were collected during two publicized public input meetings. A range of stakeholder groups, listed in Table 1, were invited to provide input on needs and ideas for the Lower Haw as a natural area and opportunity for outdoor recreation. Complete details of attendees and information gathered during the meetings are included as addendums to this report.

Table 1. Invited Stakeholder Groups

<p><b>Local Governments</b></p> <ul style="list-style-type: none"> <li>▪ Town of Pittsboro (Parks)</li> <li>▪ Chatham County                             <ul style="list-style-type: none"> <li>○ County Manager’s office</li> <li>○ Planning</li> <li>○ Facilities Management</li> <li>○ Parks &amp; Recreation</li> <li>○ Swift Water Rescue Team</li> <li>○ Sheriff's Office</li> <li>○ Emergency Operations</li> </ul> </li> </ul>	
<p><b>State &amp; Federal Agencies</b></p> <ul style="list-style-type: none"> <li>▪ NC Division of Parks and Recreation (State Parks)</li> <li>▪ NC Natural Heritage Program</li> <li>▪ NC Forest Service</li> <li>▪ NC Department of Transportation</li> <li>▪ NC Wildlife Resources Commission</li> <li>▪ NC Geological Survey</li> <li>▪ NC Office on Disability and Health</li> <li>▪ Triangle J Council of Governments</li> <li>▪ US Army Corps of Engineers</li> <li>▪ US Fish &amp; Wildlife</li> </ul>	
<p><b>Outdoor Interest Groups</b></p> <ul style="list-style-type: none"> <li>▪ Haw River Assembly</li> <li>▪ Triangle Land Conservancy</li> <li>▪ UNC Campus Recreation Outdoor Education Program</li> <li>▪ Haw River Trail Coordinator</li> <li>▪ Get Going NC</li> <li>▪ Outdoor Afro Triangle</li> <li>▪ Sierra Club Outdoors Group</li> <li>▪ Hispanic Liaison of Chatham County</li> <li>▪ Carolina Canoe Club</li> <li>▪ New Hope Audubon</li> <li>▪ Grand Trees of Chatham</li> <li>▪ Friends of Lower Haw River State Natural Area</li> <li>▪ Friends of Mountains to Sea Trail</li> <li>▪ Kids in Parks</li> </ul>	
<p><b>Business Community</b></p> <ul style="list-style-type: none"> <li>▪ Haw River Canoe &amp; Kayak</li> <li>▪ Great Outdoor Provision Company</li> <li>▪ Frog Hollow Outdoors</li> <li>▪ REI Co-op</li> <li>▪ Townsend &amp; Bertram</li> <li>▪ New Horizons Trading Company</li> <li>▪ Chatham County Economic Development Corporation</li> <li>▪ Chatham County Convention &amp; Visitors Bureau</li> </ul>	

Additional meetings were held with representatives for the two major adjacent land developments: Chatham Park and the Retreat on Haw River. Information was also gathered from a number of state and regional documents including: the Connect 2045 Metropolitan Transportation Plan for Durham-Chapel Hill-Carrboro Metropolitan Planning Organization, the Articles of Dedication for the Lower Haw River State Natural Area (*included as an addendum*) and the Chatham Park Small Area Plan North Village. As a means to make recommendations the RRS Trails Plan team worked to clearly define the State Natural Area opportunities and constraints, identified processes that it became part of the State system, and examined current uses. Cost estimates were researched for proposed development within activity areas based on the recommendations.

## SITE ASSESSMENT: EXISTING CONDITIONS

To fully understand the potential of this publically accessible protected area, we evaluated the current site conditions, both natural and built features within and adjacent to the SNA boundaries. The following sections describe the site within the context of the region, as a five-mile corridor, and within distinct sections along that corridor. The region surrounding the Lower Haw corridor include multiple natural resource management areas, public parks along with current and future residential areas (Figure 1).

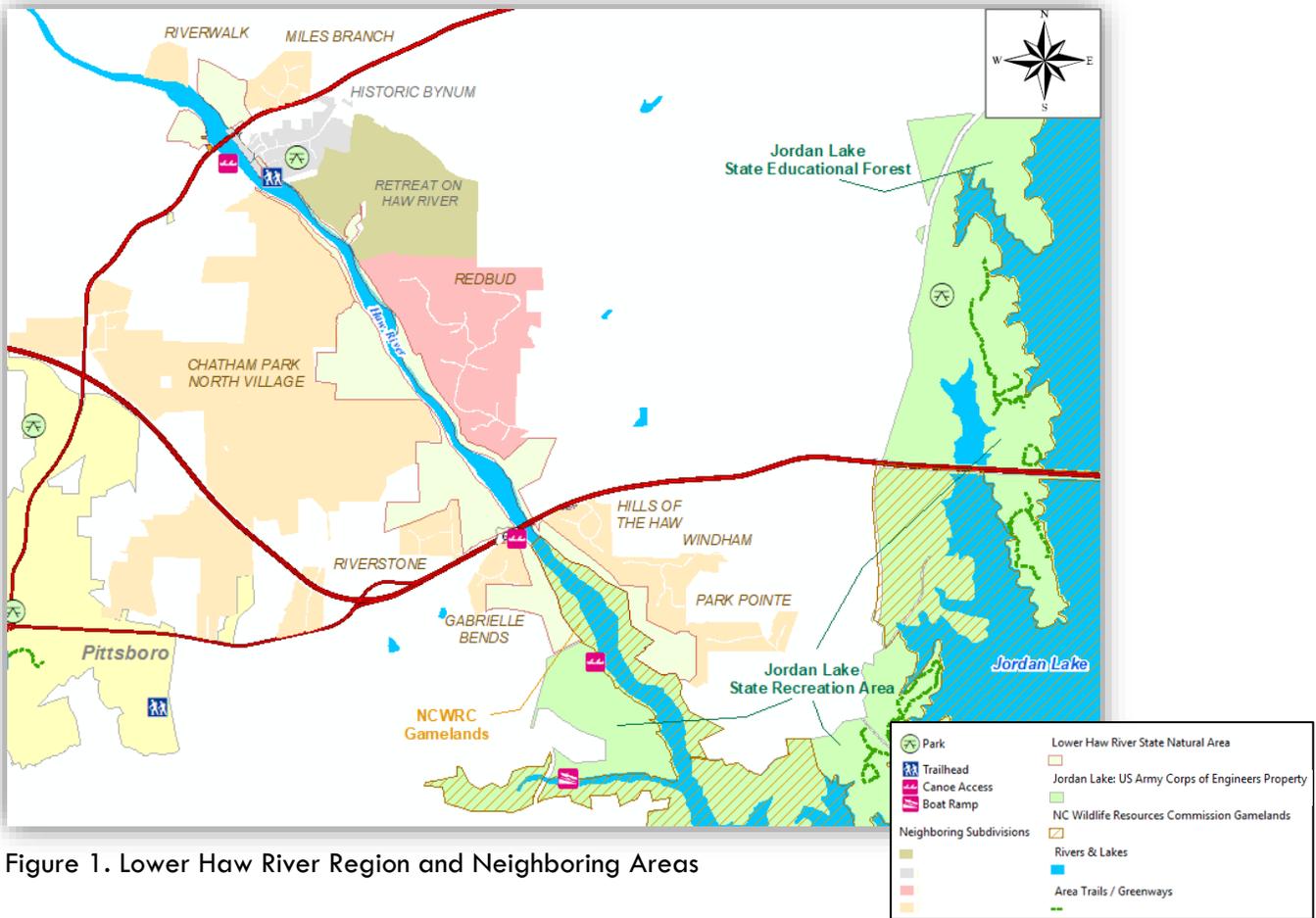


Figure 1. Lower Haw River Region and Neighboring Areas

The neighboring public lands maintain trails to expand the total amount of opportunities for visitors to participate in outdoor recreation. **Existing public trails in the region near LHRNA include:**

- Jordan Lake State Recreation Area – over 15 miles of trails
- Jordan Lake State Educational Forest – approximately 3 miles of trails
- Town of Pittsboro Parks – multiple parks offer over 3 miles of walking trails
- Chatham County Parks & Recreation – approximately 2 miles of walking trails

## Lower Haw River State Natural Area: Evaluating Opportunities

Due to the length of the Lower Haw River corridor, site maps depicting existing conditions and proposed activity are presented by area. The Plan areas (A – D) are illustrated in Figure 2. Plan Zone A is comprised of the aforementioned Pegg and Stevens Tracts of land north of Hwy 15-501 above the Bynum Dam. Portions of these two areas are identified as a Dedicated Nature Preserve. Plan Zone B-1 includes the Bynum Mill Tract and primary parking and trail head for the LHRNSRA. Plan Zone B-2 includes the trail leading from Bynum Mill to the Pokeberry Creek area. Plan Zone C is comprised of the primary trail corridor section of LHRNSNA to Hwy 64, and Plan Zone D includes the sections south of Hwy 64 where the Haw River empties into Jordan Lake.

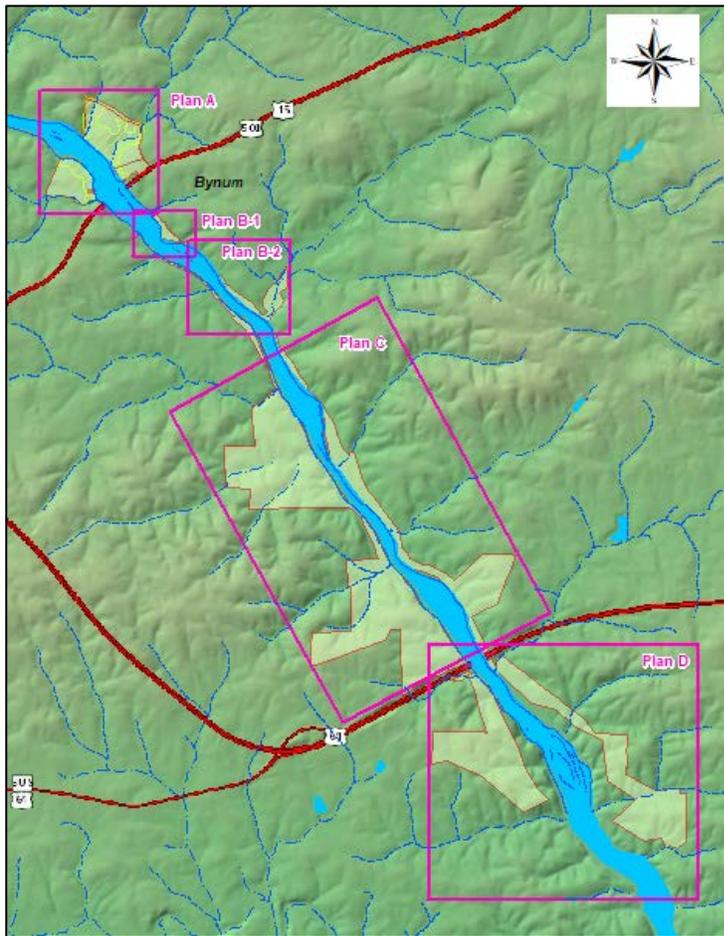
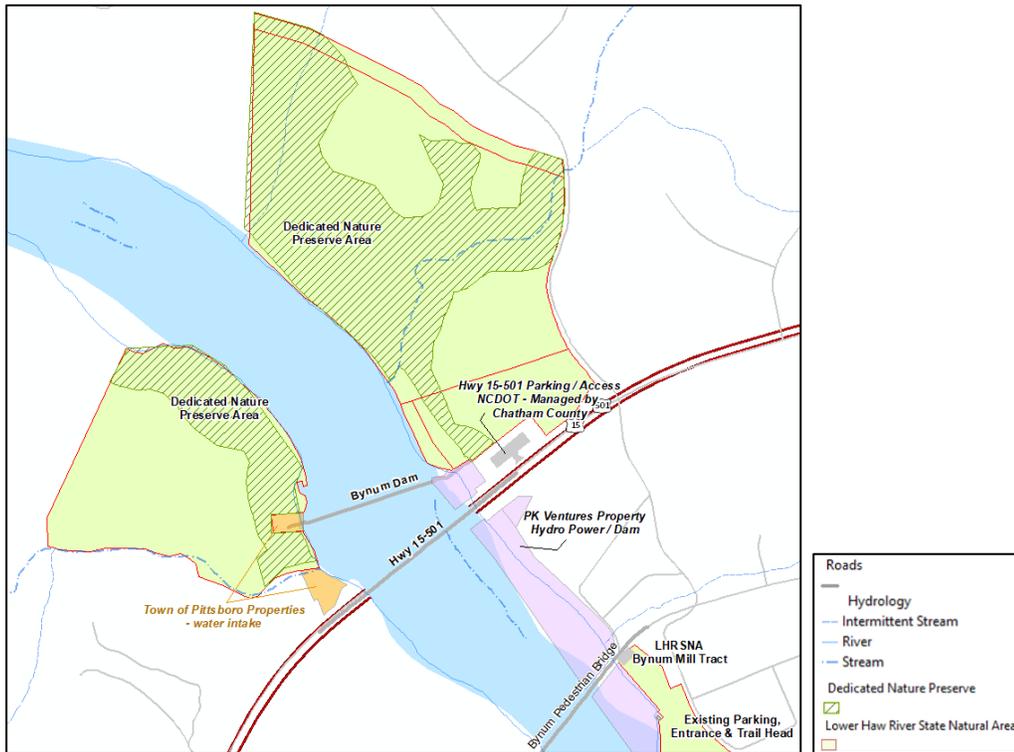


Figure 2. Trails Plan Map Zone Key

The following sections describe opportunities and constraints for each Plan Zone that was considered when evaluating site conditions. A map for each area is labeled with prominent features to reference the textual description. The recommendations section of this report includes conceptual plan maps for the Plan Zones A, B, C and D, plus an overall corridor map illustrating trail location and phases for implementation.

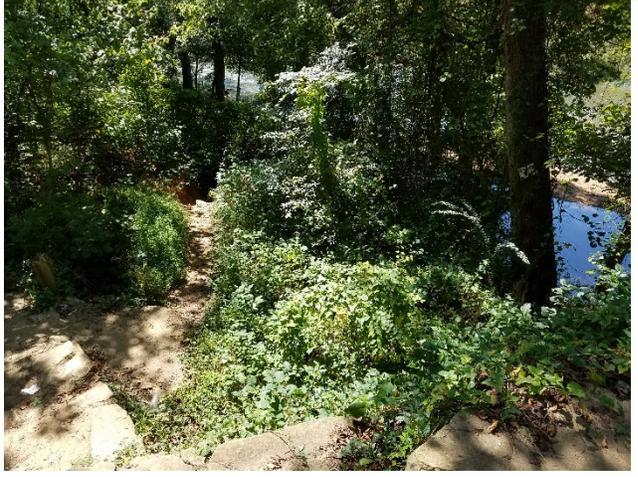
**Plan Zone A: Dedicated Nature Preserve and Hwy 15-501 Access**

The area north of Hwy 15-501 includes tracts on each side of the river. The West side property is surrounded by private property and does not have a public access point. The Town of Pittsboro's water intake location is within this parcel and includes a parcel between the LHRNSA and Hwy 15-501. This town-owned public water facility is fenced off, thus restricting public entrance into the LHRNSA tract. The property to the East side of the river is a primary location for river access that allows paddlers to travel up-stream along calmer waters. Paddlers indicate this is a good location for beginners. While the parking area, constructed by NC DOT and maintained by Chatham County Parks and Recreation, offers excellent parking off the main highway, access to the river needs much improvement. The slope of the terrain combined with informal paths that are not maintained creates challenging obstacles for paddlers and other visitors. Most users access the river via use of private property, owned by PK Ventures. The property serves as the portage around the dam, and continues south of Hwy 15-501 to the historic Bynum Bridge (see *Plan Zone A map*).

**Constraints:**

The Bynum dam is frequently the location that paddlers portage their boats. The photos of the site (*below*) show the current conditions of the area used as a portage. This is an unsafe area for visitors to traverse, negatively impacts the environment, and encourages activity on privately-owned property. The property owner, PK Ventures, is aware of public access at Bynum Dam, but no improvements for safe public access have been implemented.

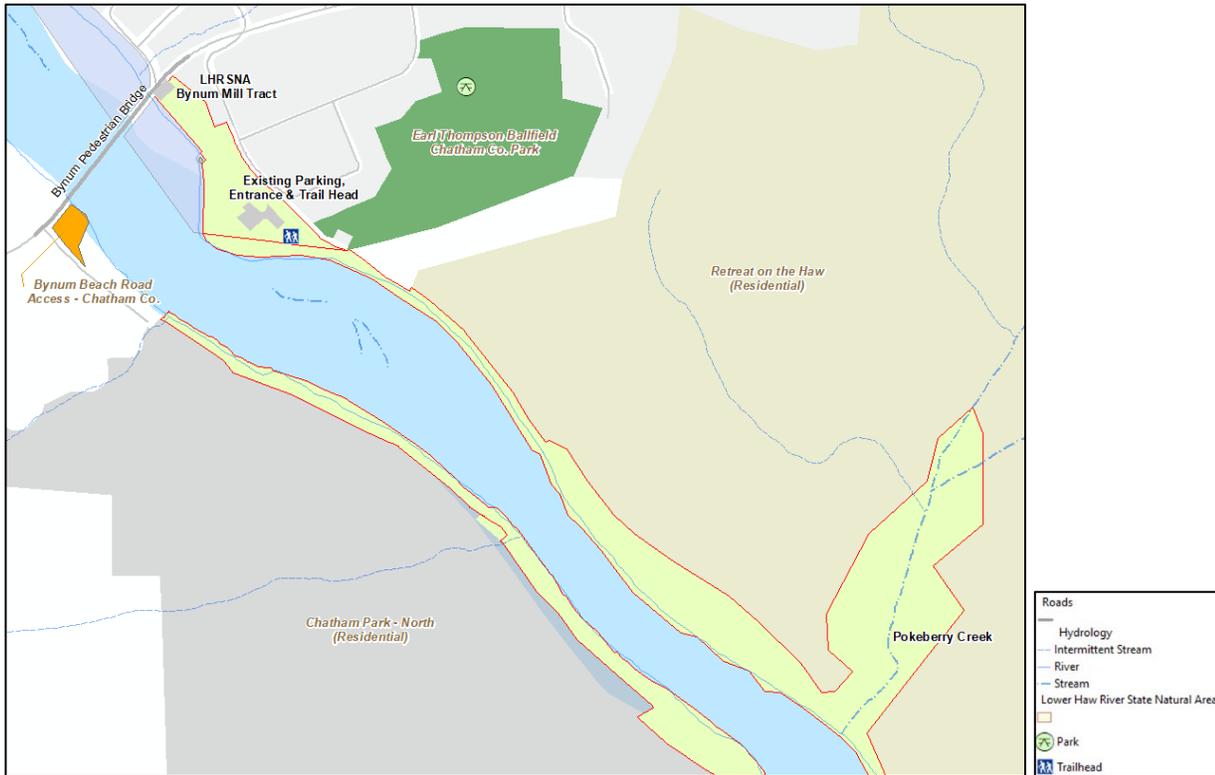
**Site Conditions: Portage at Bynum Dam**

	
<p>Paddlers exit from upstream to portage around the Bynum Dam.</p>	<p>Paddlers continue to downstream location by taking boats down a social trail (path) to the river edge.</p>

**Opportunities:**

The Federal Energy Regulatory Commission (FERC) licensing process for hydropower documents [responsibilities that a licensee has to provide recreation opportunities](#). The property owner currently works with LHRNSA volunteers to allow trash receptacles on their property. The opportunity to expand this relationship and create river access, a portage around the dam that protects both the environment and user is a high priority for the LHRNSA. A Recreational Use Study developed by McMahan Hydroelectric, LLC of Bynum, NC as part of the FERC process, proposes improvements to the portage to better accommodate paddlers, enhance signage and make connections to the existing trails in the LHRNSA down river. The full study is available in Appendix 7 and offers an additional resource documenting current site limitations and proposed improvements.

**Plan Zone B: Bynum Mill Access & Pokeberry Creek**



The Bynum Mill tract provides the primary public access for the State Natural Area. This area includes two public parking lots, one at the Bynum Pedestrian Bridge and the other off Bynum Church Road. Motor vehicle access between the two lots is not in place, but pedestrian access is possible. The parking area off Bynum Church Road includes a trail head kiosk, State Park rules signage, and serves as the access point for both foot traffic and paddlers from the East side of the river.

**Constraints:**

The area is site of a former industrial mill and remnants of the buildings remain as evidenced by concrete drives and loading dock walls. PK Ventures hydroelectric property, including the powerhouse and canal, are adjacent to the Bynum Mill tract. Fencing and signage should be added to clearly define boundaries and direct park visitors away from private property, especially if visitors park off Bynum Rd. or enter from the pedestrian bridge area. The parking lot off Bynum Church Road brings visitors through the Historic Bynum residential area. These streets do not offer the most efficient entry to the SNA. For most park entrances, the practice of directing visitor traffic away from residential streets is preferred.

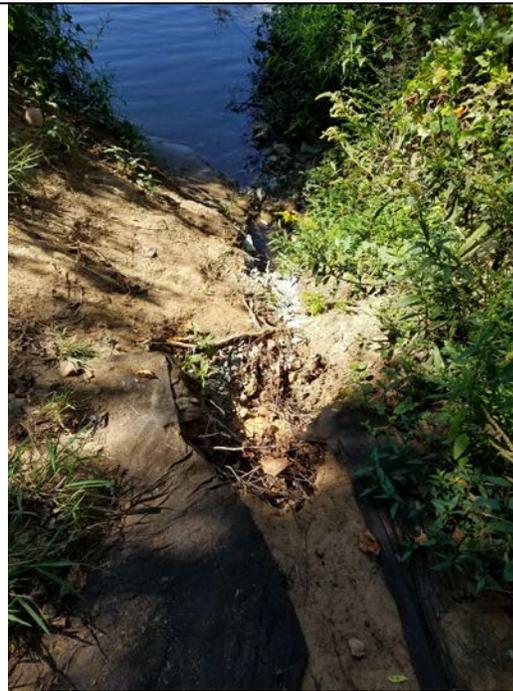
The LHR SNA trailhead is located off the lower parking lot. Hikers can head down river past the Chatham County Public Utilities and Water facility adjacent to the path. Boundaries between these two areas needs to be clearly marked to improve wayfinding for hikers.

Canoe and kayak access for paddlers is not well defined, rather paddlers have created access points and attempted to reinforce the launch area to reduce erosion. A formal launch needs to be installed to provide

safe access by boaters while protecting the integrity of the riverbank in a sustainable manner. The photos below illustrate the eroded pathway and boat launch currently serving this area.



Path from parking lot to river access point.



Boat launch conditions.

**Opportunities:**

NC State Parks has received a Connect NC Bond grant to update the Bynum Mill area with improved parking, a restroom, seating, boat access point and a picnic shelter. A conceptual layout of the proposed improvements is included in the recommendations section of this report. The development expands opportunities to enhance this area by establishing a formal entrance area away from the residential neighborhood, provide much-needed amenities and create a safe and sustainable river access location.

Additional funding through the Recreational Trails Program (RTP) has been received to build a pedestrian bridge across Pokeberry Creek and provide a one-mile natural surface trail on either side of the bridge. The RTP funds were awarded to Chatham County with the final products to be turned over to NC State Parks for maintenance and operations.

**Plan Zone C:** Lower Haw River SNA Corridor

This section describes the Lower Haw River corridor extending along both sides of the river from Bynum to US Highway 64. As indicated on the Plan Zone B maps, Chatham County owns and manages a small public access area on Bynum Beach Road on the West side of the river. The LHR SNA property begins at the end of Bynum Beach Rd., approximately 1/10<sup>th</sup> of a mile from the Chatham County access point. The main corridor is contiguous from this location to the Hwy 64 bridge. On the East side of the river, the LHR SNA property is contiguous from the Bynum Mill parking area to the Hwy 64 bridge. Much of the neighboring property on either side of the river are large residential communities that are either complete, in development or proposed (see *Plan Zone C map*).

**Constraints:**

The corridor property varies greatly in width through this section of the SNA. While some areas are conducive to constructing a trail, others appear too narrow to accommodate an appropriate trail corridor width. Some locations along the river are very steep and may limit trail path construction if the corridor width is too narrow (*See constraints map*).

Recommended *corridor width* for a pedestrian, natural surface trail is a minimum of 25 feet (IMBA), with a trail *tread width* of four feet. Site visits to measure and assess the slope along the proposed trail bed and identify the riverbank edge location is necessary to determine corridor needs and related construction costs. **The constraints identified on the map are areas that appear narrow and/or very steep at the riverbank based on contour elevation maps and using parcel data for the LHR SNA property line.**

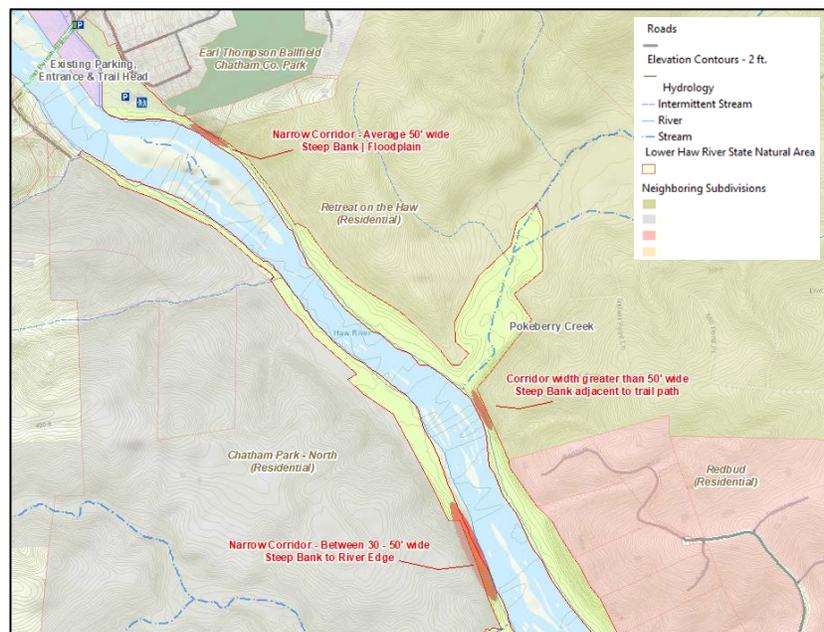
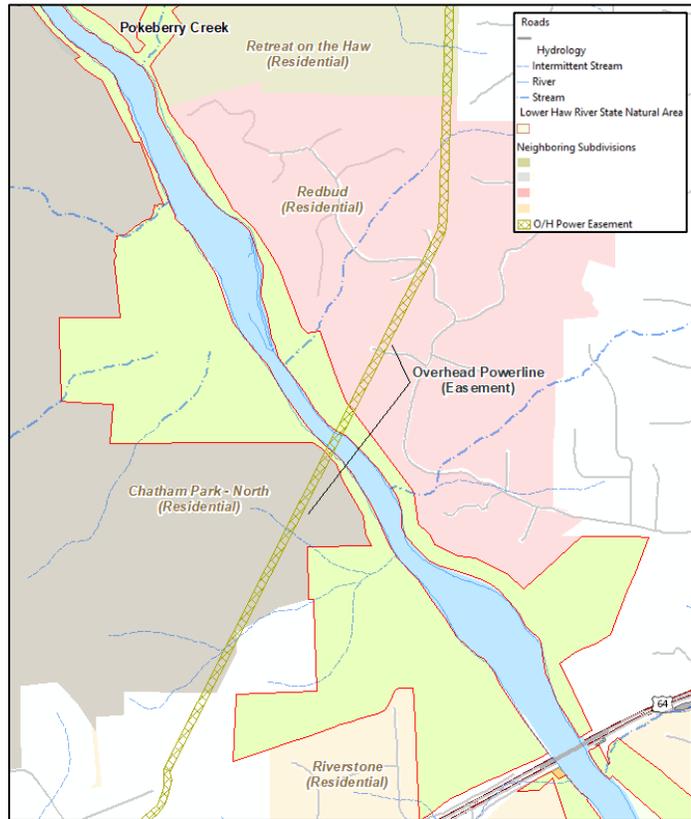
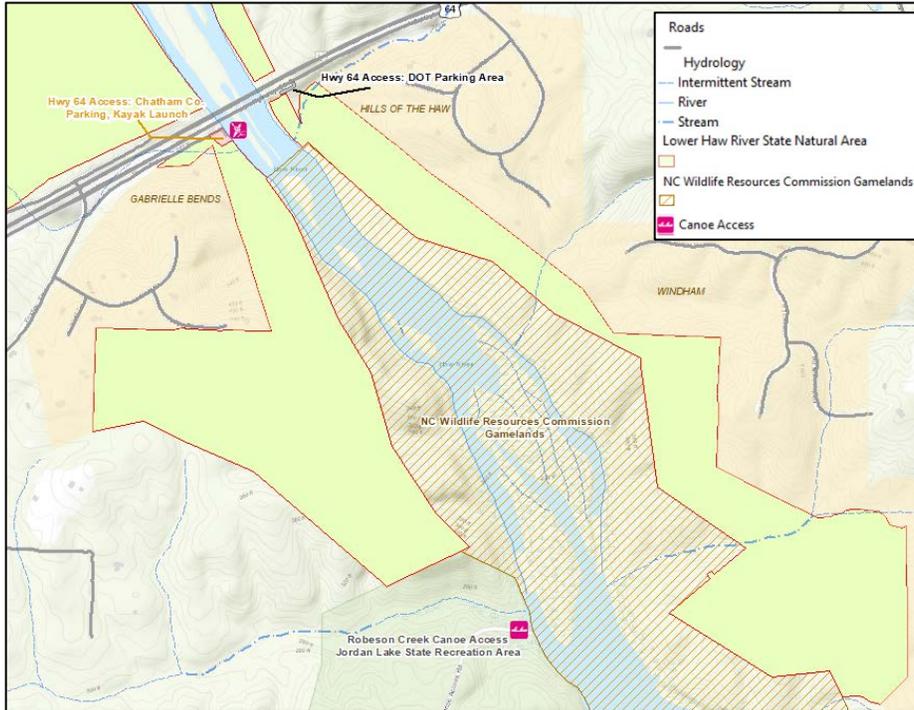


Figure 3. Constraints Map

**Opportunities:** The locations described above offer an excellent opportunity to partner with neighboring landowners for trail path development using an easement. The two major developments, Chatham Park North and Retreat on the Haw, introduce opportunities to collaboratively integrate trails from the neighborhoods to the LHRNSNA in a coordinated manner. This can provide controlled access to the SNA and use adjacent property in locations where the LHRNSNA boundaries are not sufficient to host a sustainable trail path.

**Plan Zone D: US Highway 64 Access**



The LHRNSNA continues on both sides of the river under US Highway 64 to Jordan Lake. Visitor access for the SNA is available on both sides of the river. The West side parking lot and canoe access is owned and managed by Chatham County.

**Constraints:**

On the Chatham County property, the boat access is not formally developed, leading visitors to slide boats down the bank across tree roots. A more sustainable solution is needed to protect the natural resources and provide safe access by users. Chatham County Swift Water Rescue uses this area as their launch site.

**Chatham County Access Photos**

		
<p>Gravel parking area.</p>	<p>Paths leading to riverbank.</p>	<p>Access location used to launch boats across tree roots.</p>

The other access location is on the East side of the river with parking directly off Highway 64 at the end of the bridge. This area was developed by NC DOT and is constructed on the NC DOT right-of-way. The parking area is small and the vehicle entrance and exit is steep leading to the road. Vehicles exiting the parking area introduce safety concerns when entering the highway, as many vehicles are traveling the highway at a high rate of speed as they come down the incline of Hwy 64.

The pedestrian path down to the river has been reinforced with some gravel, but is very steep terrain to the flat area next to the river. Conditions are illustrated in the photos below.

	
<p>Path from parking area to the river.</p>	<p>NC DOT Parking lot entrance / exit on Hwy 64 at the Haw River bridge.</p>

Visitors have been seen walking across the Hwy 64 bridge to get from one side of the river to the other. No safe pedestrian walkway exists on the bridge.



Open canopy area next to river.



Signage and trash receptacle in place for visitors.

The flat area next to the river showed signs of visitors using the site for campfires. Some user paths are evident, and the overall ground condition is sandy from river flooding incidents.

As noted on the Plan Zone D map, the area where the Haw River empties into Jordan Lake is not part of the LHRNSNA. The section in between the two sides of the river are designated Gamelands by the NC Wildlife Resources Commission. Many recreation areas that are a part of US Army Corps of Engineers property, such as Jordan Lake, or US Forest Service lands, include hunting as a recreational use. The type of hunting and time period for hunting should be considered before developing official trails in this area of the SNA.

**Opportunities:** The Chatham County access and parking area needs improvements, but offers safer vehicle access off the heavily traveled Hwy 64. Pedestrian access under the bridge to continue up stream along the west bank is feasible. The NC DOT parking area is more challenging to improve due to the steep terrain and limited property to expand current parking. Opportunities for easements or purchase of adjacent property may permit expansion. NC DOT owns a parcel approximately 1/4 mile east, that may provide improved parking but will require a pedestrian path along the highway edge to reach the path to the river. Site assessment is necessary to evaluate suitability of this parcel for any development. Access under the Hwy 64 bridge on the east side of the river is also available to connect to the trail corridor. A pedestrian walkway on the Hwy 64 bridge, or preferably a pedestrian bridge adjacent to the vehicle structure should be investigated to provide a safe pathway for users to cross the river and hike both sides along the Lower Haw corridor.

The potential to extend the trail system from the LHRNSNA to connect with trails at Jordan Lake SRA are possible through the areas adjacent to gamelands. State Parks and NCWRC should examine the designated areas to determine if the sections along river and SNA boundaries may be removed from the gamelands to better meet needs for hiker access and trail corridor connections.

## STAKEHOLDER AND PUBLIC INPUT PROCESS AND RESULTS

### Summary of the stakeholder input process

In addition to specific stakeholder groups outlined in the trails plan process section, the general public forum provided a wide range of citizens reporting how they currently use the Haw River and surrounding natural area, as well as identify needs to accommodate outdoor recreation activities. The process introduced the need for a Lower Haw Trails Plan, outlined potential changes to the area in the future, and took comments, concerns, and questions regarding the focus area of the Lower Haw River SNA. Participants were asked to “prioritize” the activities they enjoy on the Lower Haw River on a flipchart, ranking each of their prioritized activities 1-4. This same engagement process was used to gather input during the Friends of the Lower Haw meeting. The results of both meetings are combined and presented in Table 2. Individual meeting results are shared in the Appendix 2.

Table 2. Prioritization of Activities along the Lower Haw River SNA Based on User Input

Uses	Rank #1 Number of Dots	Rank #2 Number of Dots	Rank #3 Number of Dots	Rank #4 Number of Dots	Total Dots
Fishing	1	2	1	0	4
Hiking	12	6	1	0	19
Tubing	2	1	1	0	4
Birding	4	3	1	3	11
Kayak	4	4	3	2	13
Camping	0	0	0	0	0
Swimming	2	1	4	1	8
Science & Education	2	2	1	3	8
Picnicking	1	0	0	0	1
Plant/Tree Id	3	3	1	0	7
Dog walking	1	0	2	3	6
Wildlife observation	5	2	3	5	15
Biking	1	0	0	0	1
Paddleboarding	1	0	0	0	1
<b>Total Dots</b>	<b>39</b>	<b>24</b>	<b>18</b>	<b>17</b>	<b>98</b>

The following are the four most prioritized activities along the Lower Haw River SNA, as indicated by participants from both input forums:

Table 3. Highest Ranking Activities

Activity	Percent of Total Responses
Hiking	19%
Wildlife Observation	15%
Kayak / Canoe / Boating	13%
Birding	11%

Access to water-based recreation activities was expected to receive a high response. Based on interviews of key personnel prior to the public input meetings, we established that paddling, fishing and swimming were frequent activities along the LHR SNA corridor. Hiking and wildlife observation, including birding, were also high use activities for the area. The input meeting results listed in Table 2 show that those uses ranked high. After the top four activities, Swimming followed in popularity and was tied with Science and Education activities at 8% of ranked responses. Fishing received 4% of ranked responses in the exercise.

The second activity to identify use preferences along the corridor was designed for participants to add dots directly onto a map of the Lower Haw River State Natural Area (Figure 4). Participants were also asked to highlight areas along the river where they engage in specific activities: Fishing, Paddling, Hiking, and Swimming. Participants used color dots to represent the activity, and ranked each dot 1-3 to rank their use. The results of mapping input is shown in Figure 5 to illustrate activity and rank. While fishing received only 4% of ranked responses in the first exercise, the spatial representation of where that activity occurs along the corridor provides additional insight into patterns of use. Presenting the results by activity illustrates patterns of use throughout the corridor (Figure 6). Paddling and swimming take place near existing parking and canoe access locations. Hiking occurs throughout the LHR SNA corridor, but more concentrated at public parking areas. Fishing spots are identified along areas that appear more isolated from the primary public access locations.

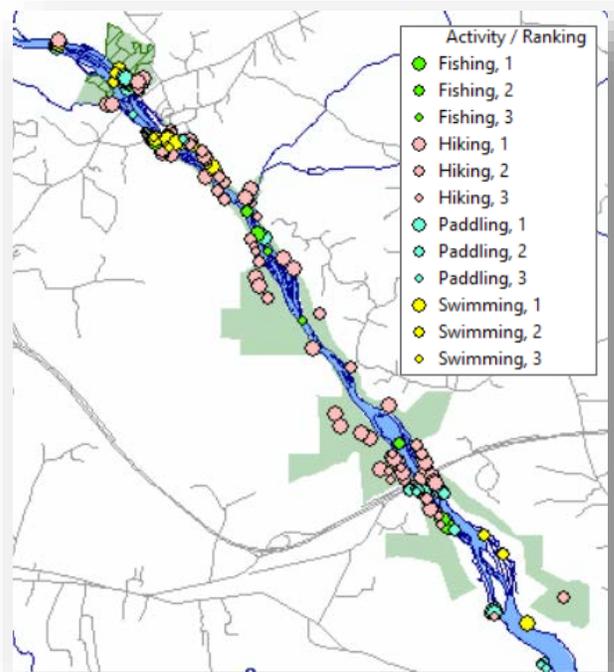


Figure 5. Spatial Representation of Activity by Rank

Figure 4. Public Input Meetings

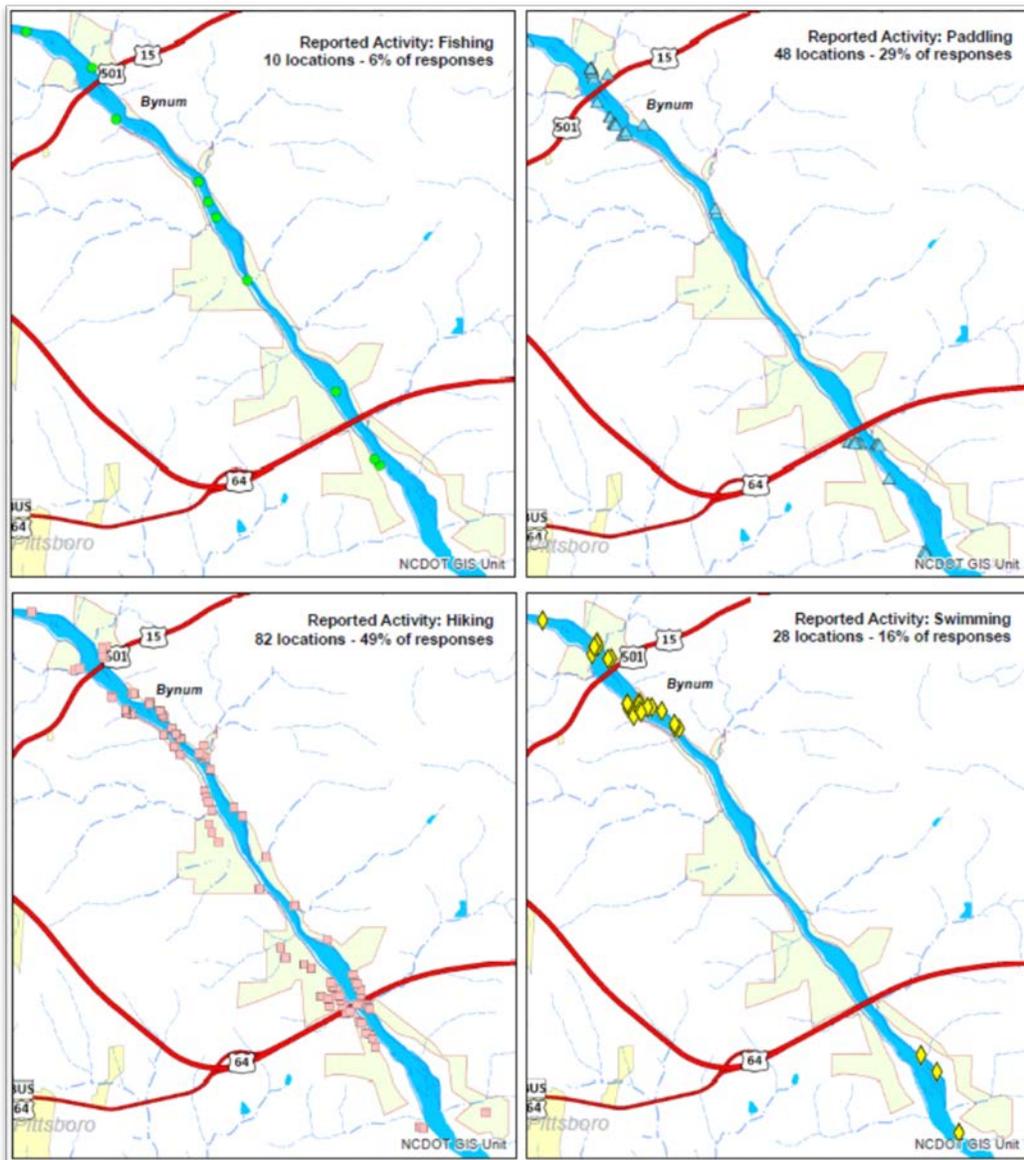


Figure 6. User Input Results: Activity & Use of Site

## RECOMMENDATIONS AND IMPLEMENTATION PHASES

The data gathered for this report include physical site assessment, review of reports and documentation of site conditions, ecological assessment and guidelines for development in state natural areas. This data combined with stakeholder and public engagement meeting results informed the following recommendations. A conceptual plan for each Plan Zone is provided with a brief textual description, and then followed with a summary of recommendations and an action plan for implementation.

**Plan Zone A:** Due to limited access points, we propose that the West side tract remain without development of public trails. This provides for protection of the ecologically sensitive areas and protects water quality. Should additional property or easements be acquired in the future, the State may evaluate access opportunities.

**Land-Based Access:** Property on the East side of the river should be improved to accommodate the current type and level of use. The presence of social trails within the Dedicated Nature Preserve areas of the tract present the need to develop official trail routes that direct users in locations to protect the ecologically sensitive areas. The trails on the associated site plan (Plan Zone A) follow the contours of the land and are conceptual only. State Parks staff should work with the NC Natural Heritage Program to ensure trail layout is consistent with protecting the natural resource and takes advantage of current social trail locations to minimize impact.

**Water-Based Access:** Safe access routes to the river and portage around the dam are high priority needs. The portage and river access below the Bynum Dam are on private property. The LHRNA team should work with land-owners to collaborate on provision of a safe, and environmentally sensitive portage corresponding with recommendation in the Bynum Hydroelectric Recreation Plan report.

**General Access:** The LHRNA should continue to collaborate with NC DOT and Chatham County Parks and Recreation to manage the parking area. The potential of adding a restroom facility should be evaluated. Public water and sewer lines are not extended to the north side of Hwy 15-501. A proposed location is shown on the site plan, but the location will be dependent on placement of new utility lines, a septic and well system, or consider a pit vault toilet structure.

**Plan Zone B:** This area serves as the primary Lower Haw River State Natural Area entrance. We propose that the Bynum Road entrance be designated as the main entrance with vehicular access connecting the Bynum Road lot to the lower parking lot. This will reduce current traffic patterns through the residential area along Bynum Church Rd. The Bynum Church Road entrance should be gated and used only as a service entrance. This secondary location may also be opened for special events.

**Connect NC Bond Grant:** The proposed development for the Bynum Mill tract is based on the Connect NC Bond grant awarded to the state for improvements. The conceptual plan shows the vehicle access between the two current parking areas, restrooms, a seating area and picnic shelter that can also serve as an outdoor classroom. The proposal shows a designated canoe / kayak launch area that is ADA accessible, providing for safe river access that protects the environmental integrity of the riverbank. The trailhead is separate from the canoe access to reduce congestion between boaters and hikers arriving at the site.

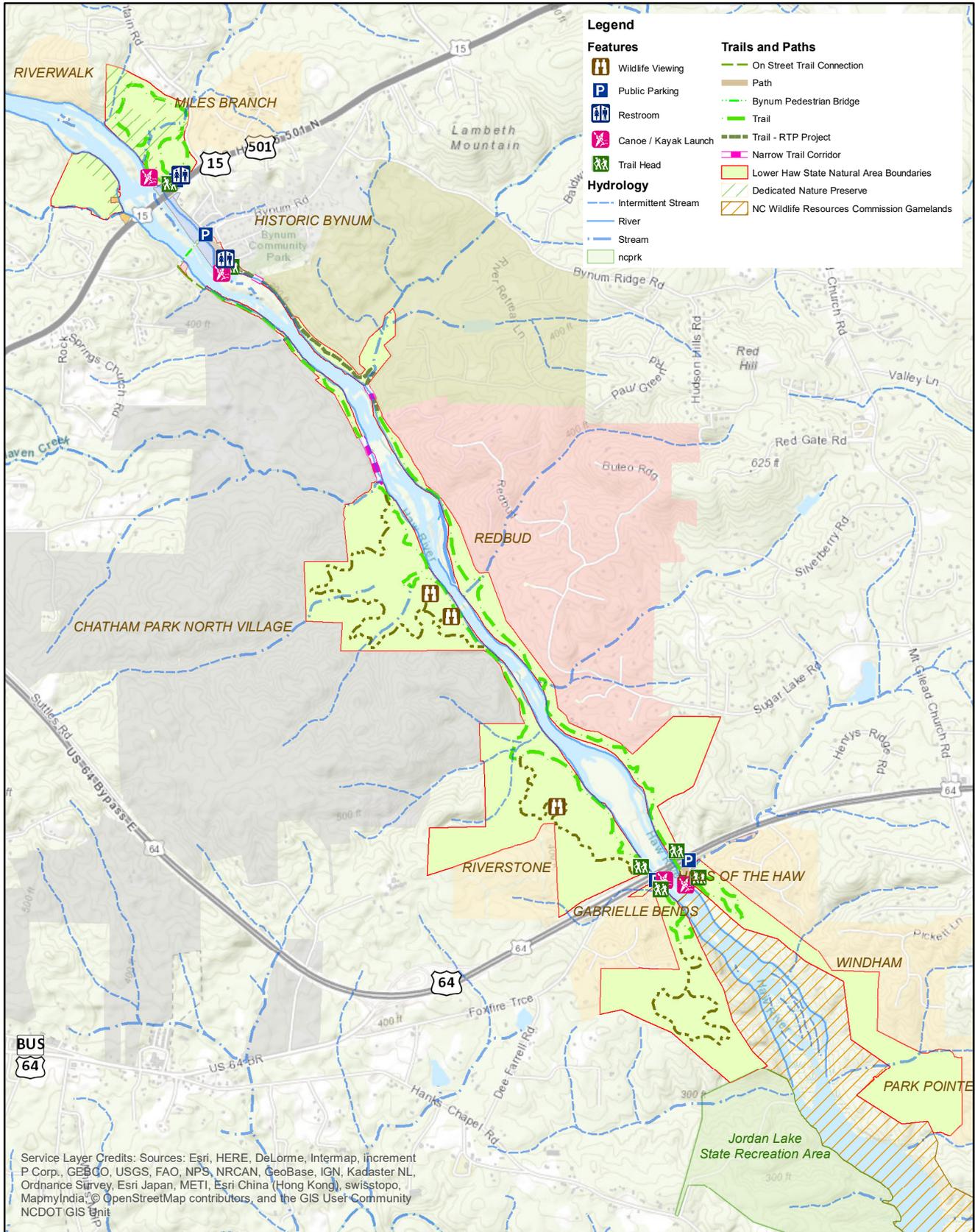
**Recreational Trails Program (RTP) Grant:** This awarded project focuses on one mile of trail from the Bynum Mill parking area past Pokeberry Creek. The project includes construction of a pedestrian bridge crossing

Pokeberry Creek at the midway point of the project. The trail is designated on the map as the RTP phase of development.

**Plan Zone C:** This area focuses on the trail corridor along both sides of the Haw River, connecting the Bynum area to the Hwy 64 access locations. The RTP funded project will establish a pedestrian trail along the East bank just past Pokeberry Creek. Future development should extend the trail under the Hwy 64 bridge to connect trail users to the Hwy 64 access location. Pedestrian trail development along river right from the Bynum Beach Road (Chatham County) access to the Hwy 64 bridge should extend under Hwy 64 and connect to the Chatham County parking area and LHRNSA trails. The site plan for these areas indicate Phase 1 trails along the riverbank, and Phase 2 development extending into the property where appropriate. The areas of the LHRNSA adjacent to residential developments are prime locations to coordinate trail development for designated pedestrian access points. The Plan Zone C conceptual map illustrates several narrow corridor areas along both river banks. These areas were highlighted as constraints due to the limited potential to construct a sustainable trail. The Chatham Park North residential development adjacent to the narrow corridor offers an opportunity to coordinate trail development through partnership.

**Plan Zone D:** This area offers access points from US Hwy 64 on both sides of the river. Suggestions for parking improvements on the East side of the river are shown on the map. Formal trails are included for each side of the river; however, since this area borders gamelands we recommend limiting the location of public trails within LHRNSA property south of Hwy 64. Educational signage about proximity to hunting areas to inform visitors and reinforce safety practices should be installed at the trailhead. Improved canoe launches should be provided at each of the Hwy 64 access points to provide safe and ADA accessible boater entry and exit, and protect the environmental integrity of the riverbank.

# Lower Haw River State Natural Area Trail Corridor Plan



## Lower Haw River SNA Corridor

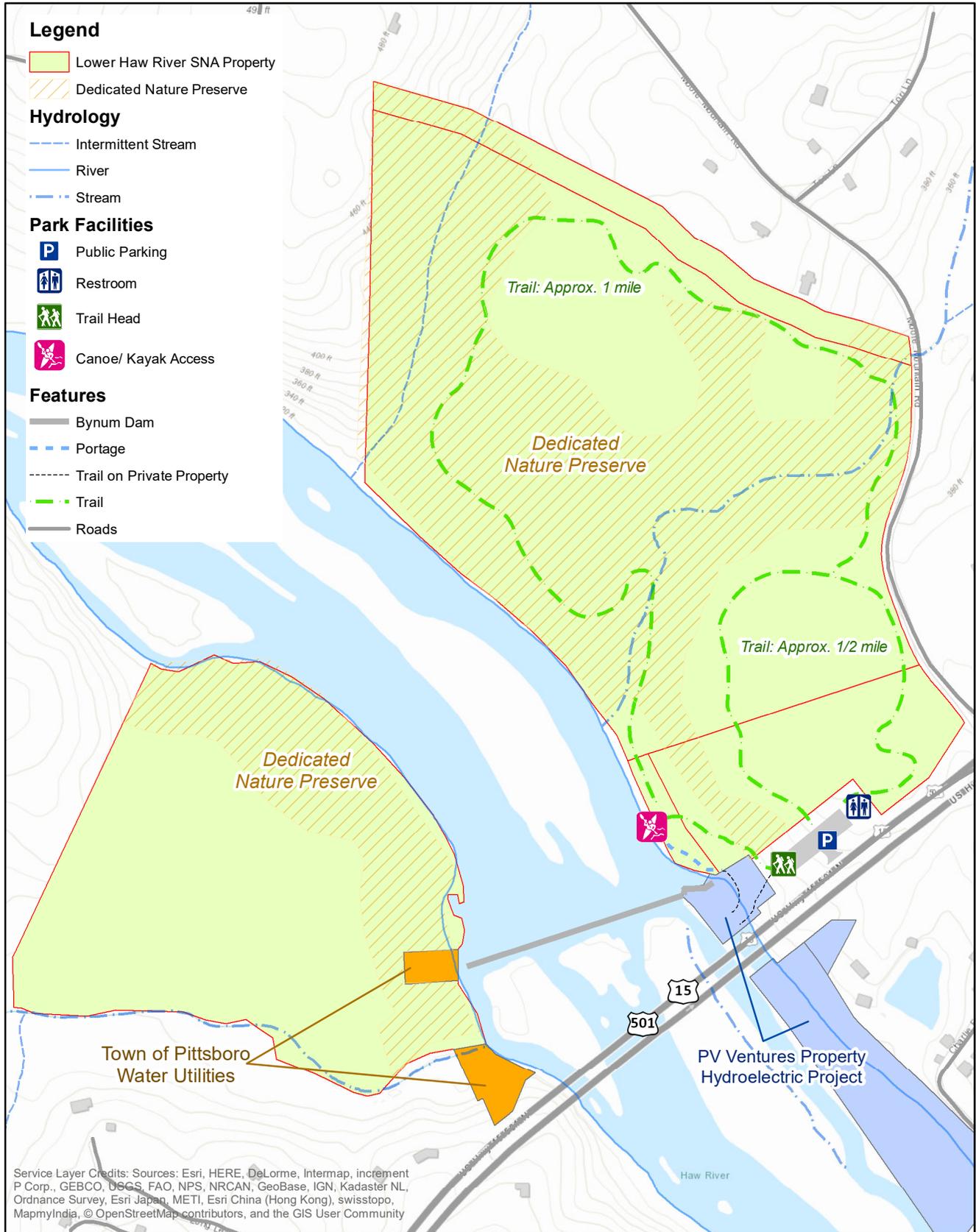
Prepared by: C. Smith

Recreation Resources Service

Updated: June 11, 2018

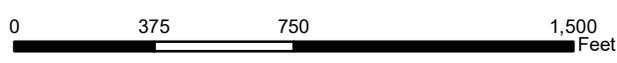


# Lower Haw River State Natural Area Trail Corridor Plan

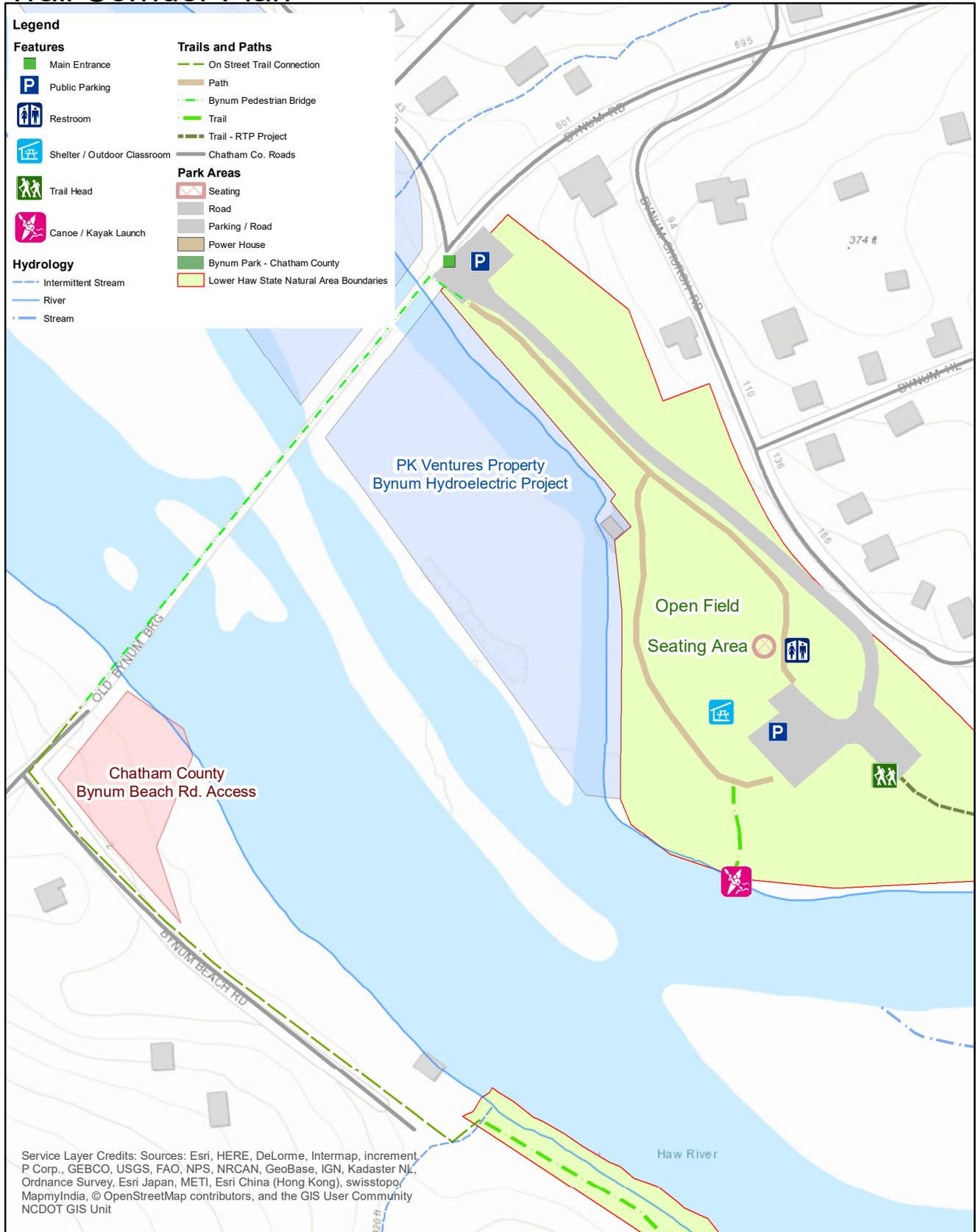


## Plan Zone A

Prepared by: C. Smith  
 Recreation Resources Service  
 Updated: June 11, 2018



# Lower Haw River State Natural Area Trail Corridor Plan

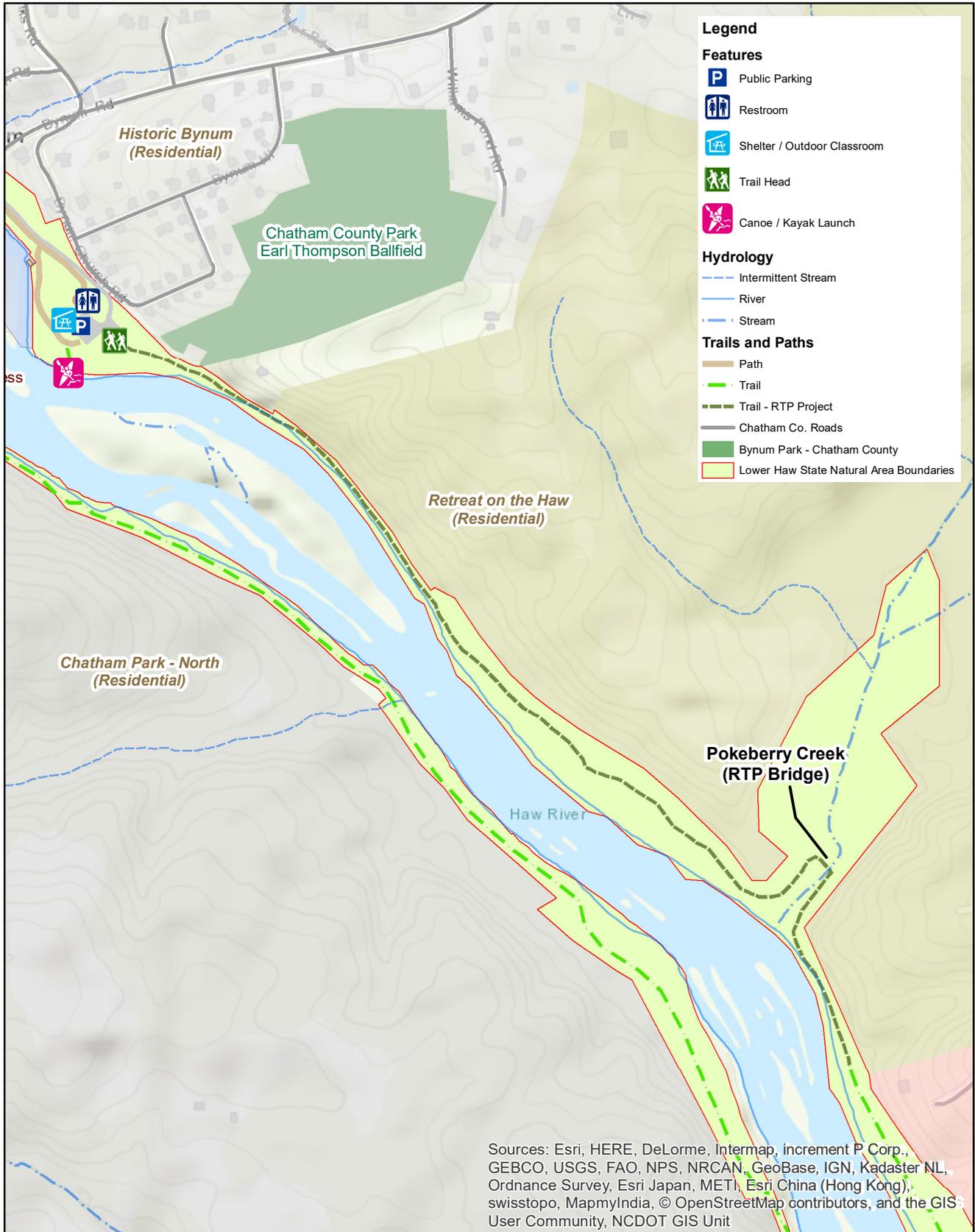


## Plan Zone B-1

Prepared by: C. Smith  
 Recreation Resources Service  
 Updated: June 11, 2018

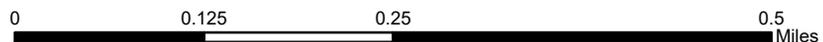


# Lower Haw River State Natural Area Trail Corridor Plan

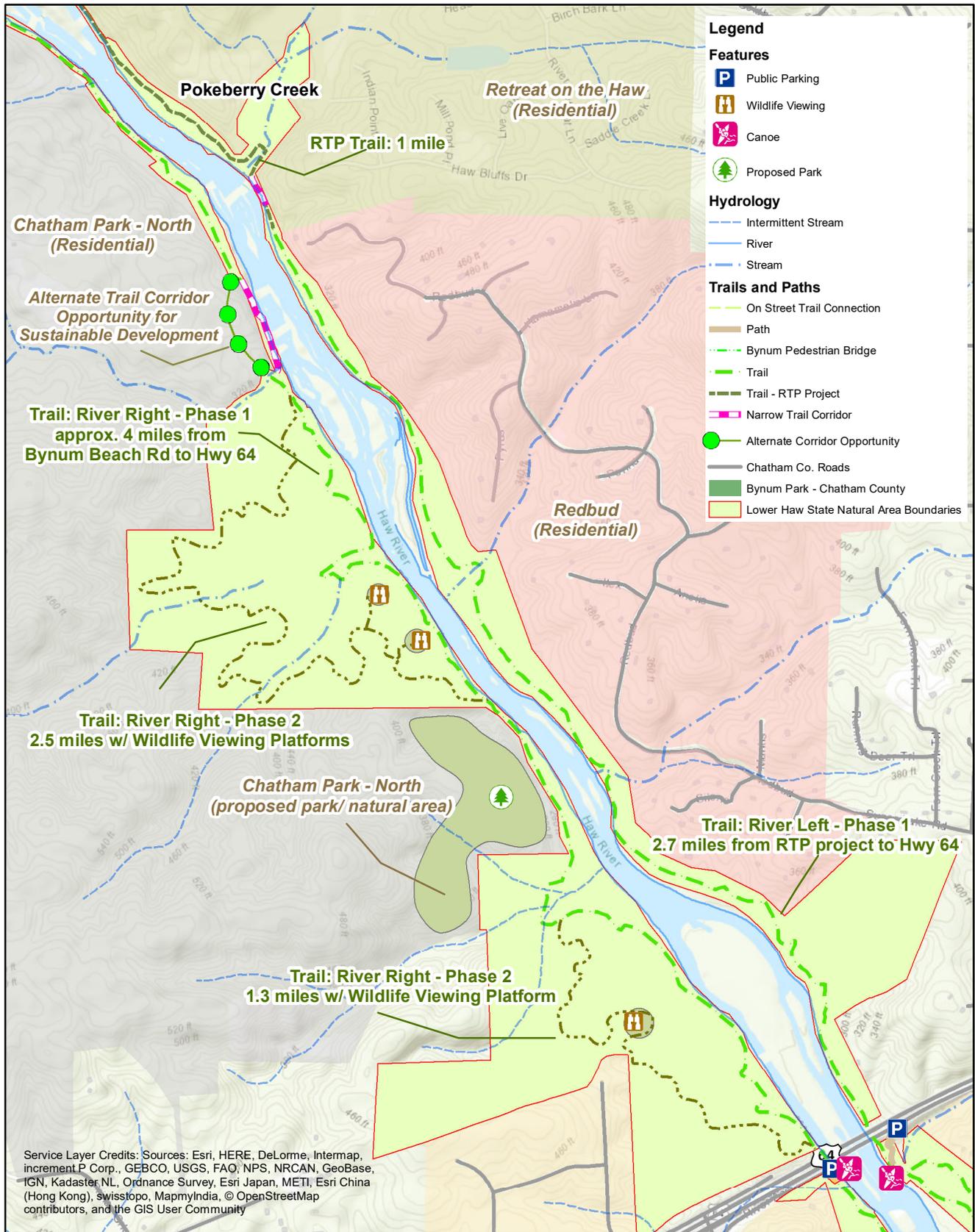


## Plan Zone B-2

Prepared by: C. Smith  
 Recreation Resources Service  
 Updated: June 11, 2018



# Lower Haw River State Natural Area Trail Corridor Plan

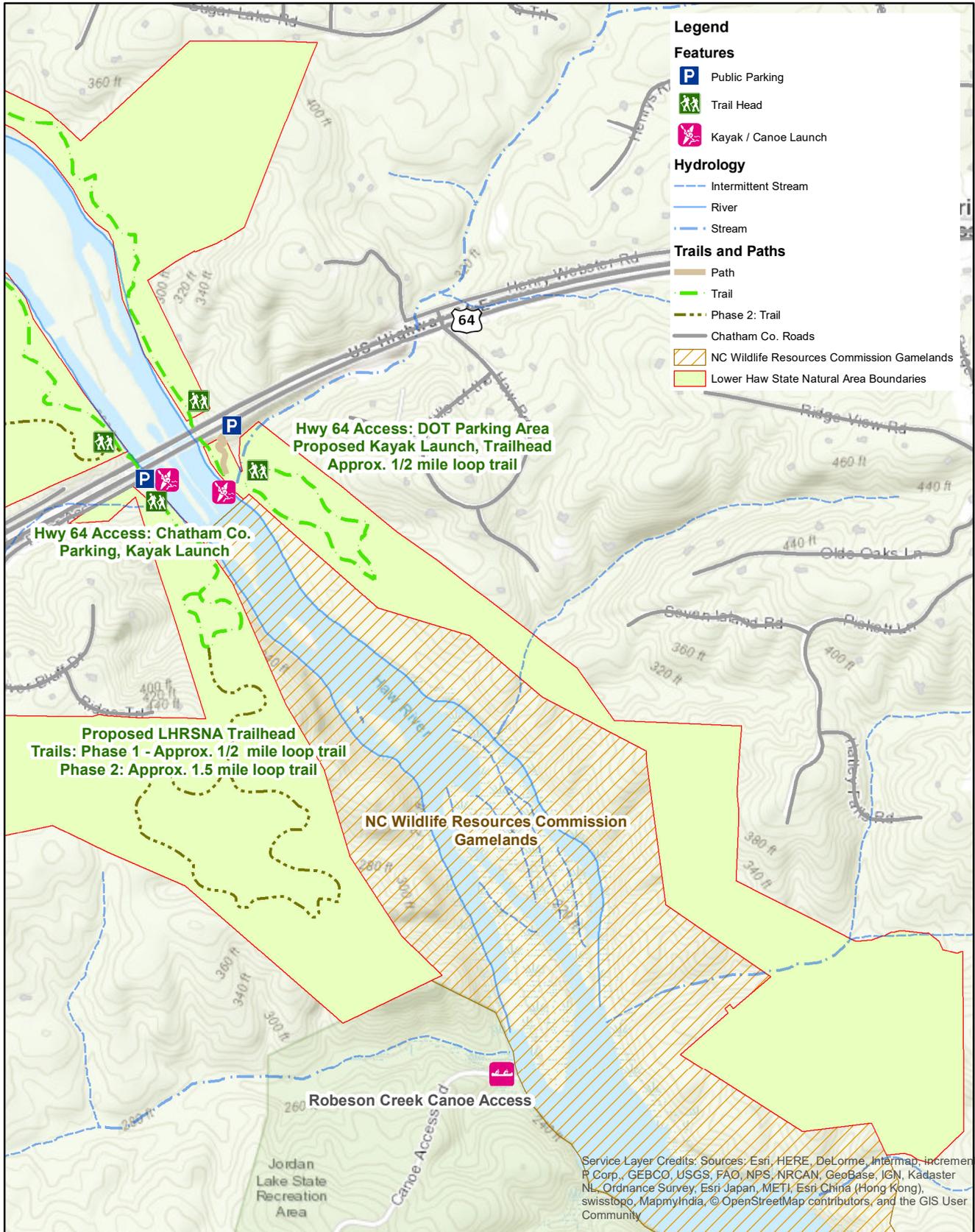


## Plan Zone C

Prepared by: C. Smith  
Recreation Resources Service  
Updated: June 11, 2018



# Lower Haw River State Natural Area Trail Corridor Plan



## Plan Zone D

Prepared by: C. Smith  
Recreation Resources Service  
Updated: June 11, 2018

0 0.25 0.5



## Summary of Recommendations

Formation of the Lower Haw River SNA was intended to provide critical buffers along the Haw River for protection of water quality, aquatic and terrestrial habitats, scenic and geological features while also allowing limited types of recreational use by the public. The following recommendations are made to provide a balance of conservation and low-impact recreational use such as hiking, paddling, fishing, and environmental education. Due to the environmentally sensitive nature of this area, variations in buffer width, and the close proximity to residential communities, recreational activities should adhere to only those permitted by SNA regulations. Common outdoor recreation activities **not** permitted for this state natural area include mountain biking, horseback riding, off-road motorized vehicle riding, camping or campfires. Due to the size and elongated shape of the Lower Haw River SNA with its multiple access points, it may be more feasible and manageable for development to occur in phases.

Based on the public input process presented in this plan, in addition to previous user surveys and general observations, users of the LHR SNA enjoy the natural experience the SNA has to offer. Area residents also enjoy river, wildlife, forest, plants and boulders experienced in the natural setting as it can provide an escape from the stresses of daily life in this busy and growing region. Low-impact, outdoor recreation such as hiking, dog walking, paddling, tubing, swimming, fishing and nature photography are popular activities by site visitors. Feedback shared during this planning process included the addition of scientific and educational programs that are family friendly. Concerns presented at both the public and stakeholder meetings echoed that of land and resource managers to limit activities not typically permitted in state natural areas. The region is projected to grow exponentially with new residential developments adjacent to the river corridor. Careful planning to manage access to the area in a manner to protect environmental integrity of the river is an expectation of all contributing input to this trails plan. The LHR SNA is valued for its natural setting, habitats, and recreational opportunities for visitors of all ages.

### Recommendations:

#### General Access & Safety

1. Main access to State Natural Area should be off Bynum Road along the old mill property instead of Bynum Church Rd. A concern expressed by many Bynum residents was the issue of traffic coming through the residential area. Therefore, we recommend a new roadway connecting the Bynum Road parking lot to the primary trailhead and parking area for Lower Haw River SNA. The proposed location is illustrated on the Bynum Mill conceptual plan. In addition to serving as the main entrance and trailhead access, the Bynum Mill parking area provides visitor access to the old Bynum Bridge. The pedestrian bridge provides connection to the West bank of the river and the Chatham County river access on Bynum Beach Rd. The area may experience increased traffic once the improvements at Bynum Mill are completed and further monitoring of traffic patterns may be necessary to continue evaluation of transportation needs.
2. There is a need for signage at public access areas. It is a balancing act in terms of too many signs and not enough information. State Parks does a good job of signage and is familiar with facilitating that balance. State Parks will provide the language to be used on all SNA signage. In addition,

bilingual signage should be incorporated due to the large Hispanic population in the area. The following signage should be considered:

- Signs delineating state property and private property.
  - Water level signs and impact on safety should be posted at public access areas.
  - Signs designating environmentally sensitive areas should clearly mark those areas.
  - Educational signage regarding the flora and fauna located in the environmentally sensitive areas as well as other historical aspects of the site.
  - State Park rules, hours of operation, and maps of hiking and paddle trails should be posted at all public access areas.
  - Fishing advisory signs identifying which fish are safe to eat included at all public access areas where fishing occurs. (Note: *NC State University Department of Applied Ecology has designed bilingual fishing advisory signs that are available to agencies*).
  - Hiking trail markers and paddle trail markers visible from the river to assist recreational users in identifying their location to Emergency Management personnel.
3. Concerns were noted by stakeholders and the public about prohibited activities occurring within the SNA, including drug and alcohol use, campfires and ATV use. State Parks staffing is not adequate to routinely address enforcement on the Lower Haw River SNA property. Recommendations to investigate as a means to address these challenges may include:
- Gates at access points on automatic preset timers to open from dawn to dusk.
  - Improved fencing (i.e. cable in posts) at the Bynum Mill parking lot to prevent ATV access.
  - Security cameras in parking lots known to be problematic.
  - Increased park ranger presence / patrols.
  - Signage denoting permitted and prohibited uses is in place at all entrances.
  - Interagency arrangement with Chatham County Sheriff's Office to regularly patrol State Parks parking lots, respond to calls related to illegal activity or unauthorized uses on state natural area property.
  - Lighting in the parking areas to discourage activity and provide visibility for law enforcement officials on patrol. The lighting should be designed in a manner to preserve the "night sky" from light pollution. Resources for dark sky initiatives are further described in Appendix 1.
4. Proximity to gamelands in the areas at the Hwy 64 Access were shared as a concern for hikers. As noted on the concept maps, the gamelands are between two narrow corridors of the SNA boundaries. This property is leased by the U.S. Army Corps of Engineers to the NC Wildlife Resources Commission to be managed as gamelands. Due to the gameland designation and limited SNA use currently in that area (*based on public input meeting use exercise results*), limited trail development is proposed in the areas immediately adjacent to the gamelands. In the short-term we recommend providing visitors with information on the gamelands and safety measures during hunting seasons. Long-term recommendations include addressing the status of this section of the Jordan Lake SRA as a designated gameland. Connecting the Lower Haw River SNA trail system to Jordan Lake SRA trails will be best served by extending hiking trails through this area, but must be planned in coordination with the WRC to ensure habitat protection and visitor safety.
5. ADA Accessibility concerns were expressed throughout the public discussions. It is not feasible to make the entire trail accessible but a portion around the Bynum Mill entrance should be accessible and

clearly marked as such. The possibility of creating an accessible trail loop in that area should also be considered. This would allow individuals with mobility challenges to experience the area without having to travel down and back along the riverside trail. Features along the accessible trail may include wildlife-viewing platform, fishing pier and benches that meet ADA guidelines (see *resources listed in the appendix*).

6. Constraints noted for the Plan C area along the LHRNSA corridor indicate a need to extend the width of the corridor to accommodate trail construction and protect the riverbank and environmentally sensitive areas. State Parks should continue to explore opportunities to acquire land (e.g. easements, fee simple) to address inadequate buffers and further conserve and protect the river corridor's water quality, plant and wildlife habitats.

### **Land-Based Use & Access**

7. Trail development is a high priority based on input and current use of the SNA. Initial development should extend from the Bynum Mill entrance and Pokeberry Creek funded projects to develop trails along river-left (East side) to provide public access along the extent of the state parks owned property. Since the area surrounding the Lower Haw River Natural Area is in flux, it is important to focus on the left bank because its future is much more predictable. On the river-right bank, property owners include the Town of Pittsboro, Chatham County, and Chatham Park Development. Concept plans are in place for the Chatham Park development, but no definitive answers are available. All parties should continue to discuss their future intentions and to keep the environmentally sensitive area along the riverbank at the forethought of their discussion. In terms of the State Natural Area, the goal would be a public trail along the riverbank.
8. Provide fencing (i.e. split rail) along public access areas to channel use through maintained corridors, specifically at the following locations:
  - Above the Bynum Dam
  - Bynum Mill Site (Connect NC Bond Project Area)
  - NCDOT Parking area at the Hwy 64 Bridge
9. It was noted in site visits that people accessed the river from many different locations. This practice contributes to erosion and damage of the riverbank and displaces plants and ground cover. Efforts should be made to channel people into specific areas along the bank and provide amenities that would encourage them to use those areas. Amenities should include general signage to educate visitors about "protecting the riverbank" and emphasize Leave No Trace principles for protected areas (see *resource links in Appendix 1 for Leave No Trace resources*).
10. Construct natural surface, environmentally-friendly, trail along both sides of the river. Priority is the river left bank of the river since plans are already in place to build a bridge over Pokeberry Creek. There appears to be sections along the river left route that do not provide sufficient land space to build such a trail. As part of the Trails Plan process we met with adjacent land owners who indicated that easements may be provided to allow for the construction of the trail. An effort should be made to acquire these easements for trail development. The location, construction methods and surface type for the trail is extremely important to ensure riverbank preservation. Current trail users tend to make their own paths as they traverse the area. An identifiable trail would lessen the impact on other areas of the riverbank. Locations for benches, wildlife viewing platforms and fishing piers should be

identified along the trail corridor to guide use and protect natural resources. Potential locations are presented in the site plan recommendations based on the “use mapping” exercise results from public meetings.

11. Explore the feasibility of expanding the parking at the small NCDOT easement on the southeast side of Hwy 64 for access to east side of river, and building a safer pedestrian corridor parallel to Hwy 64 to permit safer crossing over the river from the larger Chatham County parking lot on the southwest side of Hwy 64. This will permit hikers safer travel along both sides of the river between Hwy 15-501 and Hwy 64.

### Water-Based Use & Access

12. ADA Accessible Kayak/Canoe launches should be provided to permit safe entry and exit from the river while protecting the riverbank resources. We recommend three locations for launches in the initial development phase in this plan. State Natural Area property locations for launches include the Hwy 15-501 entrance above the dam, the primary parking area at Bynum Mill and at the Hwy 64 access on the Lower Haw River SNA property on the river left side of the river. As previously mentioned, people are accessing the river from many locations. Launches should be in close proximity to parking areas and include designated pathways to allow boaters clear and easy routes to carry boats to the water's edge. Providing launches will encourage people to use areas properly designed to access the river in a manner that protects the boater and the resources. (*Note that Chatham County has two river access locations near the SNA frequently used: Bynum Beach Rd., Hwy 64 parking area*). Partnerships to facilitate formal canoe kayak launches, preferably ADA accessible design, installation at the Chatham County locations may offer additional boater access, provide alternative locations to enter the river based on user preference, and improve riverbank protection. The Hwy 64 access is used by emergency management officials and includes a public parking area. The **Swift Water Rescue** Team also indicated the need for trails, bridges and launches be constructed to accommodate emergency rescue equipment. Launch construction should be appropriate for the site conditions, particularly if located in a flood prone areas along the river. Selection of sustainable solutions for boat access construction should be a priority to protect the environment and require minimal maintenance.
13. Swimming is not a designated use at the SNA. In addition, the Haw River has fluctuating water levels contributing to dangerous conditions. Swimming is also dangerous in close proximity to the dam. However, visitors engage in this popular recreation activity when public river access is available. The areas most frequently noted for swimming, based on the public meeting “use exercise,” were above the Bynum Dam, near access points in the Bynum community (*Chatham County's Bynum Beach access and Bynum Mill access*), islands in the river near Bynum, and at Hwy 64 access points. Signage indicating that swimming is at your own risk from the LHR SNA should be included with other use regulations.

## Action Plan for Implementation

The Lower Haw River State Natural Area exists to preserve and protect the aesthetic and ecological value of the river corridor while offering specific outdoor recreation opportunities for the public. This trails plan document serves to guide land managers in meeting that strategic objective. The recommendations listed above are based on objective review of the site, input from the public and stakeholder groups, and rules governing State Natural Areas and similar protected resources. Priorities to take action implementing the plan are listed below as short-term and long-term initiatives. Providing improved access (e.g. parking, trails, boat launch) is necessary to meet the demand of LHRNSA visitors will increase use. However, implementation should not happen before staffing to manage increased use is in place to appropriately manage the resources. Similarly, trail development should not take place until suitable land is acquired in those areas needing expansion to ensure a trail corridor that can accommodate development of a sustainable trail.

### Short Term Priorities

- Enhance the Visitor Experience
  - Focus on funded project areas to provide public access and protect resources.
    - Lower Haw River SNA Main Entrance & Trail Head at Bynum Mill – Connect Bond Funding to include restrooms, shelter, parking updates, and river access using universal design principles.
    - Trail Development from Bynum Mill to Pokeberry Creek – Recreational Trails Program (RTP) funding to include natural surface trail from trailhead at Bynum Mill crossing Pokeberry Creek along the east riverbank.
  - Install signage at public access points: informational, directional, educational. Signage and wording will be provided by NC State Parks.
- Ensure Visitor & Resource Protection
  - As part of the Connect Bond project at Bynum Mill, improve security at the parking area through access control and monitoring for reduction in after hours and/or illegal activity.
  - Explore opportunities to improve river access at the Bynum Dam area. Current conditions to portage around the dam are not safe for users nor sustainable for the environment.
    - Develop formal & sustainable trail system from the Hwy 15-501 parking area to the river.
  - Coordinate trail layout for the dedicated nature preserve area (*by 15-501 parking lot*) with the NC Natural Heritage Program to identify location for formal trail system that directs visitors and protects environmentally sensitive resources.
- Build on Partnerships
  - Current partnerships with Chatham County Parks and Recreation extends public access to the Haw River beyond the LHRNSA boundaries. Explore new partnerships and/or interagency agreements to strengthen management of the LHRNSA. This may include facility maintenance and operations, law enforcement, or trail development agreements.
  - Explore opportunities for trail access along the riverbank under NCDOT bridges at Hwy 64 and Hwy 15-501. Include opportunities for pedestrians to cross the river at Hwy 64.

- Identify Funding Opportunities
  - Continue to identify funding opportunities to assist with facility development, resource protection and public program offerings.

### **Long Term Priorities**

- Ensure Resource Protection
  - Explore opportunities to collaborate with adjacent landowners in those areas identified as needing additional land to accommodate trail construction or to enhance resource protection through buffers.
  
- Enhance Visitor Experiences through Public Access
  - Extend trail development of Phase 1 trails along the west side of the riverbank.
  - Develop Phase 2 trails and wildlife-viewing platforms.
  - Provide river access at designated locations on the concept plans.
  - Explore opportunities to connect Lower Haw River SNA trails to Jordan Lake State Recreation Area, adjacent neighborhoods and other area trails systems.

## APPENDIX 1: REFERENCES AND RELATED RESOURCES

### Sources Used in Plan and Report Preparation:

Parcel Data, topography, streets and orthoimagery

- North Carolina Division of Parks and Recreation (NC State Parks)
- Chatham County GIS Open Data Portal
- NC OneMap
- NC Department of Transportation
- NC Wildlife Resources Commission
- North Carolina Natural Heritage Program

### Resources for Design and Construction

Americans with Disabilities Act Accessibility Guidelines (ADAAG) - US Access Board

- Guidelines for Outdoor Developed Areas

<https://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas/text-of-the-guidelines>

Principles for Universal Design

- NCSU College of Design - [https://projects.ncsu.edu/design/cud/pubs\\_p/docs/poster.pdf](https://projects.ncsu.edu/design/cud/pubs_p/docs/poster.pdf)
- <http://universaldesign.ie/What-is-Universal-Design/The-7-Principles/>

Protected Area Management

- Leave No Trace - <https://lnt.org>

Dark Sky Association: Guidelines to minimize light pollution and preserve a dark night sky within the SNA

<http://darksky.org/>

Trail, Blueway & Water Resources

- American Trails Resources and Library - <http://www.americantrails.org/resources/index.html>
- IMBA Trail Solutions for sustainable trail design - <https://www.imba.com/explore-imba/trail-creation-and-enhancement/trail-solutions>
- National Park Service – National Water Trails Toolbox: <https://www.nps.gov/WaterTrails/Toolbox>
  - *includes best management practices & accessible / universal design for kayak launch*
- Logistical Lasting Launches - [http://www.nps.gov/nrcr/programs/rtca/helpfultools/ht\\_launch\\_guide.html](http://www.nps.gov/nrcr/programs/rtca/helpfultools/ht_launch_guide.html)
- National Parks Service Rivers, Trail and Conservation Assistance Program - <http://www.nps.gov/nrcr/programs/rtca/>
- USGS North Carolina Water Science Center - <http://nc.water.usgs.gov/>

## APPENDIX 2: GENERAL COST ESTIMATES

General cost facility estimates are listed in the following table. These values represent a range of sources from recent park development projects in North Carolina, and from product research while preparing this report. Cost provided do not include design or permitting costs that may be incurred before and during construction.

These values only serve as a general resource. Thorough research should be conducted and current values used when preparing grant applications or creating funding documents. We suggest that vendors, the NC Division of State Parks or area park and recreation agencies be consulted for current estimates since they routinely plan and construct similar facilities.

Facility	Cost Range
<p><b>Trails</b>  <i>depending on trail width</i></p> <ul style="list-style-type: none"> <li>▪ Natural Surface</li> <li>▪ Boardwalk</li> <li>▪ Paved / ADA Accessible</li> </ul> <p><i>Trail cost examples ranged from \$9,500 per mile for a nature trail to up to \$1 million a mile for the Neuse River Greenway.</i></p>	<p>\$5.00 - \$10.00 / lf                      \$225 - \$350 / sq. ft.                      \$41 - \$125 / lf</p>
<p><b>Pedestrian Bridge</b>  <i>Range in costs depending on width, span, type of structure and permitting requirements.</i></p>	<p>\$100 / sq. ft.                      \$1,800 - \$2,800 / lf</p>
<p><b>Information Kiosk / Trailhead</b>  <i>Depending on size and materials used.</i></p>	<p>\$900 - \$2,000</p>
<p><b>Picnic Shelter</b>  <i>Shelters vary depending on size. Consider the group size to be served (people or number of tables), and if use will include classroom instruction.</i></p>	<p>\$32,000 - \$150,000</p>
<p><b>Restrooms</b></p> <ul style="list-style-type: none"> <li>▪ Restroom building</li> <li>▪ Compost or Flush Vault Systems</li> <li>▪ Pit Vault toilets</li> </ul> <p><i>Access to water and sewer or the need for a well or septic system will influence the appropriate option to select for a site.</i></p>	<p>\$175,000                      \$65,000 - \$95,000                      \$15,000 - \$20,000</p>
<p><b>Boat Launch</b></p> <ul style="list-style-type: none"> <li>▪ ADA Accessible Launch</li> <li>▪ Floating Dock</li> <li>▪ Metal Stairs w/ boat slide</li> </ul>	<p>\$25,000                      \$300 / sq. ft.                      \$700 / ft.</p>
<p><b>Parking Area</b>  <i>Depending on the surface material used. Gravel and pavement cost range.</i></p>	<p>\$16 - \$25 / sq. yd.</p>
<p><b>Automatic Gate Systems</b>  <i>similar to those in use at Durant Nature Park in Raleigh, NC</i></p>	<p>\$4,000 per gate</p>

## APPENDIX 3: FUNDING RESOURCES

### State & Federal Resources for Parks & Park Facilities

NC State Parks – <https://www.ncparks.gov> & Recreation Resources Service - <https://rrs.cnr.ncsu.edu>

- North Carolina Parks and Recreation Trust Fund (PARTF) <https://www.ncparks.gov/more-about-us/parks-recreation-trust-fund/parks-and-recreation-trust-fund>
- Land and Water Conservation Fund (LWCF) <https://www.ncparks.gov/more-about-us/grants/lwcf-grants>
- Recreational Trails Program <https://www.ncparks.gov/more-about-us/grants/trail-grants/recreational-trails-program>
- Safety & Education Grant Program <https://www.ncparks.gov/more-about-us/grants/trail-grants/recreational-trails-program>
- Rivers Trails and Conservation Assistance Program (RTCA) [www.nps.gov/nrcr/programs/rtca/](http://www.nps.gov/nrcr/programs/rtca/)

### Trails and Transportation

- Transportation Enhancement Projects, EU, NCDOT [www.ncdot.org/financial/fiscal/Enhancement/](http://www.ncdot.org/financial/fiscal/Enhancement/)
- Bicycle and Pedestrian Planning Grant Initiative, managed by NCDOT, DBPT <https://connect.ncdot.gov/municipalities/PlanningGrants/Pages/Planning-Grant-Initiative.aspx>
- Bicycle and Pedestrian Independent Projects Funded Through the Transportation Improvement Program (TIP)
- [http://www.ncdot.org/transit/bicycle/funding/funding\\_TIP.html](http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html)
- Public Lands Highways Discretionary Fund <http://www.fhwa.dot.gov/discretionary/>
- National Trails Fund <https://americanhiking.org/national-trails-fund/>
- US Department of Transportation BUILD Program Grants <https://www.transportation.gov/BUILDgrants>

### Rivers & Water Quality

- Clean Water Management Trust Fund [www.cwmtf.net/](http://www.cwmtf.net/)
- American Rivers <http://www.americanrivers.org/>
- Water Resources Development Grant Program <https://deq.nc.gov/about/divisions/water-resources/water-resources-grants/financial-assistance>
- Wetlands Reserve Program <http://www.nrcs.usda.gov/PROGRAMS/wrp/>
- Partners for Fish and Wildlife NC [www.fws.gov/raleigh/pfw.html](http://www.fws.gov/raleigh/pfw.html)
- Division of Water Quality 319 Grant Program <https://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/319-grant-program>

### Land & Forests

- Conservation Trust for North Carolina (Land Trusts) [www.ctnc.org](http://www.ctnc.org)
- The Conservation Fund <https://www.conservationfund.org/our-work/conservation-finance/conservation-grants>
- Land for Tomorrow Campaign <http://www.land4tomorrow.org/>
- The Trust for Public Land <http://www.tpl.org/>

- North Carolina Division of Forest Resources <http://ncforestry.info/ncdfr/>
- Urban and Community Forestry Assistance Program  
[http://www.ncforestservice.gov/Urban/urban\\_grant\\_overview.htm](http://www.ncforestservice.gov/Urban/urban_grant_overview.htm)
- Community Forest Program [www.fs.fed.us/spf/coop/programs/loa/cfp.shtml](http://www.fs.fed.us/spf/coop/programs/loa/cfp.shtml)

### Health & Wellness

- North Carolina Health and Wellness Trust Fund <http://www.hwtfc.org/>
- Blue Cross Blue Shield Foundation [www.bcbsncfoundation.org/](http://www.bcbsncfoundation.org/)

### Other Opportunities

- Triangle Community Foundation <http://trianglecf.org/>
- USDA Rural Business Enterprise Grants <https://www.rd.usda.gov/recovery/rural.html>
- Z. Smith Reynolds Foundation [www.zsr.org](http://www.zsr.org)
- North Carolina Community Foundation <http://nccommunityfoundation.org/>
- Community Facilities Grants <https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program/nc>
- Creating New Economies Fund <https://www.conservationfund.org/our-work/resourceful-communities/tools-and-forms>
- Kate B. Reynolds Foundation <http://www.kbr.org/>

## APPENDIX 4: SUMMARY OF STAKEHOLDER AND PUBLIC MEETING INPUT

Community input for the Lower Haw Trails Plan encompassed both meetings with stakeholders, the general public, and federal/local/state government representatives. While communication with federal, state, and local representatives was ongoing, stakeholder and public input meetings occurred over two days in October, 2017. The following encompasses the community input meetings facilitated by RRS for the Lower Haw River Trails Plan:

- Six (6) planned stakeholder meetings
- One (1) meeting with the town government
- One (1) meeting with the county government
- One (1) stakeholder forum
- One (1) public forum

### **Public and Stakeholder Meetings**

#### **Format: Two Days of Meetings**

#### **Day 1: Tuesday, October 17**

##### **1. Chatham County – 10:30 am**

- a. Chatham Economic Development Corporation
- b. Chatham County (Pittsboro/Siler City) Convention and Visitors Bureau

##### **2. Emergency Services-1:30 pm**

- a. Chatham County Sheriff's Office
- b. North Chatham Volunteer Fire Department's Swift Water Team
- c. Chatham County Emergency Services

##### **3. State/Federal Agencies-3:00 pm**

- a. NC State Parks
- b. NC Natural Heritage Program
- c. NC Wildlife Resources Commission
- d. Triangle J Council of Governments
- e. NC Geological Survey

*Invited –not in attendance*

US Army Corps of Engineers, US Fish & Wildlife Services, NC Forest Service

##### **4. Friends of Lower Haw River State Natural Area Public Forum -6:30pm**

**Day 2: Thursday, October 19**

**5. Chatham Park-10:30am**

**6. Outdoor Interest Groups 1:30pm**

**7. Business/Outdoor Retail Communities-3:00pm**

**8. General Public Forum-6:30 pm**

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The following encompasses local government meetings facilitated by RRS for the Lower Haw Trails Plan.

**Meeting with Local Governments:**

1. Town of Pittsboro: Thursday, October 4, 2017
    - a. Town Parks and Recreation Director
  2. Chatham County: Thursday, October 5, 2017
    - a. Chatham County Representatives including County Manager, Planning Director, County Parks & Recreation Director, and Facilities Management Director
- 

The following encompasses stakeholder meetings facilitated by RRS or the Friends of Lower Haw River State Natural Area for the Lower Haw Trails Plan:

**Miscellaneous Meeting with Stakeholders**

1. Woods Charter School: October 25, 2017
2. Retreat on Haw River and Chatham Park: November 9, 2017

**The following section of this plan will summarize the comments and concerns raised at each of the aforementioned meetings.**

**Public and Stakeholder Meetings:**

**Chatham County Stakeholders**

**October 17, 2017 from 10:30 to 11:30pm**

**Attendees:** Stakeholders canceled meeting

*Chatham Economic Development Corporation*

Chatham Economic Development Corporation (EDC) is the lead economic development agency for Chatham County. The EDC is a 501(c)3 economic development non-profit that provides support to businesses throughout the county and markets Chatham County as the preferred location for emerging growth companies.

- CEDC has a 2020 Strategic Action Agenda as well as a 2008 Economic Development Strategic Plan

*Chatham County Convention and Visitors Bureau*

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The Pittsboro-Siler City Convention & Visitors Bureau (CVB) is Chatham County's official destination marketing organization, responsible for travel and tourism promotion as mandated by the occupancy tax and its legal uses. As the liaison between the local travel industry and potential visitors, news media and film scouts, the CVB is the catalyst for visitor-related economic development.

The Convention and Visitors Bureau understand that some of the largest touristic appeal to the area is the Lower Haw River and surrounding natural resources. The Bureau will work to promote tourism efforts along the Lower Haw River as facilities and amenities are enhanced.

### **Chatham County Emergency Services**

**October 17, 2017 from 1:30 to 2:30 pm**

#### **Attendees:**

Pete Armstrong, Recreation Resources Service  
Kyle Smith, Recreation Resources Service  
Gretchen Smith, Friends of Lower Haw River State Natural Area  
Ryan Cadwalader, Friends of Lower Haw River State Natural Area  
Capt Chris Cooper, Chatham County Sheriff's Office  
Lt Phillip Richard, Chatham County Sheriff's Office  
Lt Edward Freeman, North Chatham VFD Swift Water Rescue  
Lt Eric Solomon, North Chatham VFD Swift Water Rescue  
Denise Suits, Chatham County Emergency Management  
Lesia Chavis, Chatham County Emergency Management

#### *Comments from Swift Water Rescue:*

- Swift Water rescues predominately occur downstream from Hwy 15-501
- Swift Water Rescue has arrangements with private property owners for access points upstream of Hwy 15-501, as well as with Redbud neighborhood property owners
- Swift Water Rescue uses Bynum Mill for boat launch; width of access is an issue
  - Wider river access
  - Use 14 ft motor boat and military zodiac boats
- Recommend against installing floating paddle launches due to variability of river flow

#### *Comments from Sheriff's Office:*

- State Parks is primary responder for state natural area property
  - Most calls to Sheriff's Office relate to trespassing on private property
  - Sheriff's Office patrols Bynum Beach Road, Hwy 15-501 parking lot, and county owned Hwy 64 parking lot
- Recommendations include:
  - Safe water level standards
  - Trails wide enough for emergency services
  - County provide better marking of property lines
  - Handicap accessibility to natural resource

#### *Comments from County Emergency Management:*

- Need for unique river location identifiers/markings that can be communicated to emergency responders

### **State and Federal Agencies**

**October 17, 2017 from 3:00 to 4:00 pm**

**Attendees:**

Pete Armstrong, Kyle Smith, Recreation Resources Service  
Gretchen Smith, Ryan Cadwalader, Friends of Lower Haw River State Natural Area  
Brooke Massa, NC Wildlife Resources Commission  
Scott Crocker, Matthew Lawson, Smith Raynor, NC State Parks  
Phil Bradley, Brandon Peach, NC Geological Survey  
Matt Day, Triangle J Council of Government  
Judith Ratcliffe, NC Natural Heritage Program

*Comments from NC Geological Survey:*

- Geologically rich area with numerous points of interest
- Published Lower Haw River State Natural Area Trail Guide with coinciding maps

*Comments from NC Natural Heritage Program:*

- NC Natural Heritage Program holds dedication on state natural area above Bynum dam
  - For trails to be constructed in this dedicated area, a trail approval process would be needed through the Natural Heritage Program
- There is a rare plant (buttercup phacelia) in Pokeberry Creek area so needs to be taken into consideration
- Look at existing infrastructure that allows access and how it can be improved

*Comments from NC Wildlife Resources Commission:*

- Important to understand the width of the buffer between Chatham Park development and the Lower Haw River bank

*Comments from NC State Parks:*

- Building a sustainable trail in the floodplain of the river will most likely require acquisition of some adjacent land where corridor width is minimal
  - An alternative to land acquisition could be a boardwalk
  - Priority should be placed on creating a sustainable trail with the impending increase in users with Chatham Park
- Put-ins and take-outs for paddlers are located far from each other
  - Paddle access on both sides of river may be needed due to the way the river runs its channels
    - Channels for paddling favor Bynum Beach side of river for boating put-in

*Comments from Triangle J COG:*

- Transportation plan highlights trails on both sides of the river as most preferable
- Bicycle/pedestrian options for traversing the Lower Haw River are limited
  - The Hwy 64 bridge poses safety concerns with a limited road shoulder
  - Chatham County Comprehensive Transportation Plan proposes bicycle/pedestrian corridor running parallel to the Hwy 64 bridge over the Haw River

*Comments from U.S. Army Corps of Engineers (absent from meeting; acquired by phone from Jon Bannerman at Jordan Lake)*

- U.S. Army Corps of Engineers lease land adjacent to the state natural area to NC Wildlife Resources Commission
  - Opportunity to coordinate trail connections with Jordan Lake

- U.S. Army Corps is aware hiking and hunting may happen simultaneously during hunting season
  - They make blaze vests available for public to borrow while hiking
  - Signage throughout U.S. Army Corps of Engineers land designates hunting areas

**Friends of the Lower Haw Public Forum**

**October 17, 2017 from 6:30pm-8:00pm**

**Attendees:**

Pete Armstrong, Recreation Resources Service

Kyle Smith, Recreation Resources Service

Gretchen Smith, Friends of Lower Haw River State Natural Area

Ryan Cadwalader, Friends of Lower Haw River State Natural Area

Britt Davis, NCSU student

Ken Tunnell, Friends of Lower Haw River State Natural Area, Bynum

Debbie Tunnell, Friends of Lower Haw River State Natural Area, Bynum

Anne Geer, Friends of Lower Haw River State Natural Area, Bynum

CC King, NC Wildlife Resources Commission and Bynum property owner

Jeannie Ambrose

Wallace Ambrose, Friends of Lower Haw River State Natural Area

Thomas Toms, Friends of Lower Haw River State Natural Area

Paul Konove, Friends of Lower Haw River State Natural Area, Redbud Subdivision

Robin Lyons, Friends of Lower Haw River State Natural Area, Redbud Subdivision

Nancy Strong, Friends of Lower Haw River State Natural Area

Matt Spangler, Friends of Lower Haw River State Natural Area

David Everage, Friends of Lower Haw River State Natural Area

Tracy Burnette, Chatham County Parks & Recreation

Patrick Mueller, Friends of Lower Haw River State Natural Area

Sarah Bacon, Friends of Lower Haw River State Natural Area, Bynum

The Friends of Lower Haw River State Natural Area Public Forum introduced the need for a Lower Haw Trails Plan, outlined potential changes to the area in the future, and took comments, concerns, and questions regarding the focus area of the Lower Haw River SNA. Attendees were asked to prioritize the activities they enjoy on the Lower Haw River SNA on a flipchart, ranking each of their prioritized activities 1-4. Attendees were also asked to highlight what areas along the river they utilize for particular recreation and leisure activities by putting those activities on a large map of the area.

**Reoccurring Themes on “Concerns” Flipchart Sheet:**

- The effect of increased usage in the natural area on sensitive species of plants, animals
- Americans with Disabilities Act (ADA) accessibility
- Handling of litter, trash, and waste services
- Recreational use on private property
- The need to utilize both sides of the river for public recreation use
- Lack of enforcement not being able to deter non-authorized recreation and leisure activities such as mountain biking, ATVs, walking dogs off leash, and after-hours noise disturbances
- Increased usage leading to erosion of embankments.
- SNA visitor use of Bynum Church Road

- Conservation including wildlife corridors

**Prioritization of Activities along the Lower Haw River SNA**

	<b>Rank #1 Number of Dots</b>	<b>Rank #2 Number of Dots</b>	<b>Rank #3 Number of Dots</b>	<b>Rank #4 Number of Dots</b>	<b>Total Dots</b>
Fishing	0	2	0	0	2
Hiking	4	2	0	0	6
Tubing	0	0	0	0	0
Birding	2	2	1	0	5
Kayak	0	2	1	0	3
Camping	0	0	0	0	0
Swimming	0	0	0	0	0
Science & Education	1	0	0	0	1
Picnicking	0	0	0	0	0
Plant/Tree Id	1	0	0	0	1
Dog walking	0	0	1	0	1
Wildlife observation	1	0	0	2	3
Biking	0	0	0	0	0
<b>Total Dots</b>	<b>9</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>22</b>

**Chatham Park**

**October 19, 2017 from 10:30 to 11:30 am**

**Attendees:**

Pete Armstrong, Kyle Smith, Recreation Resources Service  
 Gretchen Smith, Friends of Lower Haw River State Natural Area  
 Ryan Cadwalader, Friends of Lower Haw River State Natural Area  
 George Pauly, Friends of Lower Haw River State Natural Area  
 Smith Raynor, State Parks Trails Planner  
 Chuck Smith, Chatham Park

*Comments from Chatham Park:*

- Chatham Park wants to see trails along the river

- Prioritizes controlled access
- Chatham Park Small Area Plan includes a 110-acre park next to state park land that would connect to natural area via a natural surface trail.
  - Hired Chuck Flink to do greenway plan for Chatham Park
- Chatham Park claimed to own one acre next to Bynum Beach, and is in talks with the county about combining properties for a private facility
  - Will not provide a public kayak launch
  - Will have to connect their road to Bynum Beach Road
- A regional trail is desired
  - East Coast Greenway corridor parallel to Hwy 64 for greenway crossing the Haw River
  - Connect to Mountains-to-Sea Trail

*Comments from State Parks:*

- Parks will work with neighborhoods to guide neighborhood access to state park
  - Similar to Eno River State Park

**Outdoor Interest Group**

**October 19, 2017 from 1:30 to 2:30 pm**

**Attendees:**

Pete Armstrong, Recreation Resources Service

Kyle Smith, Recreation Resources Service

Gretchen Smith, Friends of Lower Haw River State Natural Area

Ryan Cadwalader, Friends of Lower Haw River State Natural Area

Matt Lawson, State Parks Trails Program

David Rogers, UNC Campus Recreation Outdoor Education Program

Russell Hobart, UNC Campus Recreation Outdoor Education Program

Guil Johnson, Haw River Trail Coordinator with Alamance County Parks & Recreation

Laura Stroud, Triangle Land Conservancy

Andy McMahan, McMahan Hydroelectric

Elaine Chiosso, Haw River Assembly and Haw Riverkeeper

Joe Jacob, Haw River Canoe & Kayak

*Comments from McMahan Hydroelectric:*

- FERC license for hydroelectric at Bynum Dam has obligation to provide public access

*Comments from Haw River Assembly:*

- Haw River Assembly and Triangle Land Conservancy were involved in acquiring the Lower Haw River State Natural Area for State Parks
- Concerns include:
  - Trespassing on private property
  - Protecting the sensitive species and geological integrity of the Lower Haw
  - Bynum Church Road traffic
  - Light pollution
- Recommendations include:
  - Repurposing mill site, inclusion of picnic shelter and restroom facilities
  - Additional easements for legal access

- Bilingual signage for fishing, and signage for hikers, paddlers
- Gates and opening/closing procedures for proposed facilities

*Comments from Haw River Canoe & Kayak:*

- State Natural Area is too narrow, limiting new facilities, trails, and recreation opportunities
- Chatham Park proposed Kayak launch is potentially a dangerous location
- River run between Hwy 15-501 and Hwy 64 is a great teaching stretch for paddlers
- Bynum Mill provides convenient paddling put-in, as parking is available
- Bynum Beach provides a favorable paddling put-in, however, has no parking

*Comments from State Parks:*

- Dedicated nature preserve above Hwy 15-501 based on Natural Heritage Program inventory

*Comments from Triangle Land Conservancy:*

- Concerns:
  - Width of buffer between Chatham Park development and the Lower Haw River state natural area
    - Undesired social trails likely
- Recommendation:
  - Potential opportunity for home owner associations to create formal trail connections from neighborhood to state natural area.
- Historic trading path exists upstream of Hwy 15-501

*Comments from UNC Outdoor Programs:*

- UNC Outdoor Programs does expeditions on the Lower Haw near Jordan Lake
- Painted water levels on bridges recommended for paddlers

*Comments from Alamance County Parks & Recreation:*

- Recommendations:
  - Closure of gates to paddle access points if water level is at a dangerous level
    - Opening and closing of gates require staff unless the gate system is fully automated
  - Addition of informational kiosks to aid in communication/education
  - Implementation of traffic/trail counters to collect visitor statistics
  - Pick a priority side of the river first to develop responsibly/sustainably
  - Landowner outreach is critical for future easements/acquisitions

**Business Community**

**October 19, 2017 from 3:00pm – 4:00 pm**

**Attendees:**

Pete Armstrong, Recreation Resources Service

Kyle Smith, Recreation Resources Service

Gretchen Smith, Friends of Lower Haw River State Natural Area

Ryan Cadwalader, Friends of Lower Haw River State Natural Area

Matt Lawson, State Parks Trails Program

Joe Jacob, Haw River Canoe & Kayak Company

Bittu Ali, Great Outdoor Provision Company

Neha Shah, Chatham County Convention & Visitor Bureau

*Comments from Great Outdoor Provision Company:*

- Great Outdoor Provision has supported the Triangle Land Conservancy and upper sections of the Haw
- This lower stretch of the river is the best whitewater the Triangle has to offer
- Access promotes advocacy
- Recommendations:
  - Easily accessible natural areas are most desirable for customers.
  - Enhanced signage, maps, and blazes within the state natural area
  - Hiking and paddling trails that run parallel to each other
  - Need for bathrooms
- Great Outdoor Provision partners with Get Hiking's Joe Miller

*Comments from Haw River Canoe & Kayak Company:*

- Haw River Canoe and Kayak has a Bynum outpost for self-guided tours
  - Agreement with Chatham County to run outpost at Hwy 15-501 as recreational amenity
- Haw River Canoe and Kayak Company teaches paddling between Hwy 15-501 and Hwy 64
  - Current put-in is at Bynum Beach
- Concerns:
  - Safer access points for paddlers
    - Hwy 15-501 access has numerous safety issues
    - 95% of all paddling injuries are ankle injuries from getting in/out
- Lack of boundary markers to prevent trespassing
- Recommendations:
  - Bathrooms at Bynum Mill Parking

*Comments from Convention and Visitors Bureau:*

- Recommendations:
  - Creation of spectator opportunities/viewing platforms along the river
    - Picnicking, birding, wildlife observation
  - Kids in Parks TRACK Trail collaboration opportunities
  - Need for Informational Kiosks

**General Public Forum:**

**October 19, 2017 from 6:30pm-8:00pm**

The general public forum introduced the need for a Lower Haw Trails Plan, outlined potential changes to the area in the future, and took comments, concerns, and questions regarding the focus area of the Lower Haw River SNA. Attendees were asked to “prioritize” the activities they enjoy on the Lower Haw River SNA on a flipchart, ranking each of their prioritized activities 1-4. Attendees were also asked to highlight what areas along the river they utilize for particular recreation and leisure activities by putting those activities on a large map of the area.

**Prioritization of Activities along the Lower Haw River**

Uses	Rank #1 Number of Dots	Rank #2 Number of Dots	Rank #3 Number of Dots	Rank #4 Number of Dots	Total Dots
Fishing	1	0	1	0	2
Hiking	8	4	1	0	13
Tubing	2	1	1	0	4
Birding	2	1	0	3	6
Kayak	4	2	2	2	10
Camping	0	0	0	0	0
Swimming	2	1	4	1	8
Science & Education	1	2	1	3	7
Picnicking	1	0	0	0	1
Plant/Tree Id	2	3	1	0	6
Dog walking	1	0	1	3	5
Wildlife observation	4	2	3	3	12
Biking	1	0	0	0	1
Paddleboarding	1	0	0	0	1
<b>Total Dots</b>	<b>30</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>76</b>

*Summary of Activities along the Lower Haw River State Natural Area*

The following are the five most prioritized activities along the Lower Haw River State Natural Area, as indicated by participants in the General Public Forum:

1. Hiking
2. Wildlife Observation
3. Kayak/Canoe/Boating
4. Swimming
5. Science and Education

During the General Public Forum, attendees were invited to list their concerns or recommendations relating to the Lower Haw River State Natural Area on a flip chart. The following are reoccurring concerns and recommendations that were expressed:

*General Public Concerns along the Lower Haw River State Natural Area*

- State Natural Area corridor and corresponding buffers are too narrow
- Destruction or displacement of sensitive species and effects on wildlife corridors
- Non-permitted recreational activities like mountain biking or ATVs
- Litter, trash control, and general waste management
- The spread of invasive plant species and methods used for treatment
- Light and noise pollution
- Safety
- Trespassing
- Chatham Park's plans for public access and trail network

*General Public Recommendations along the Lower Haw River State Natural Area*

- The need for additional land acquisitions/easements to expand natural area
- Accessible and safe paddling put-ins and take-outs
- Americans with Disabilities Act (ADA) compliant trail options
- Installation of benches and viewing platforms
- Citizen Science opportunities
- Need for bilingual educational and informational signage
- Facilities such as restrooms or vault toilets, and picnic shelter
- Gates to restrict access during designated closure times or high river levels
- Connecting parking lots and close Bynum Church Rd entrance
- Clearly mark borders between public and private property, visible from either direction

Attendees also had an opportunity to outline recommendations or concerns through mailed in comment forms. The following are reoccurring themes in the mailed-in comments:

*Mailed Comments*

- The need for a network of unpaved hiking trails within the state natural area
- The importance of not disturbing plants, wildlife and natural habitats
- Overcrowding the state natural area as well as the surrounding neighborhoods
- Increased traffic and need to plan for it
- Prohibited or inappropriate activity, especially at night, and the lack of staff resources for enforcement
- Concern about amount of poison ivy at the access points
- Erosion and safety issues at Hwy 15-501 path to river put-in/take-out
- Safety signage about high water warnings and hunting on adjacent gamelands
- The need for benches and shade structures
- Boardwalks for muddy or low-lying areas
- Dock for paddle launch at Hwy 15-501
- ADA accessibility to the river
- Close Bynum Church Rd entrance and make traffic enter at Bynum Rd
- Concerns about hunting on game lands so close to state natural area

- Better signage to mark state and private boundaries
- Concerns about dogs off leash
- Concerns about trash

### **Meeting with Local Governments:**

The following includes meetings conducted with county and town representatives.

#### **Town of Pittsboro**

**October 4, 2017 from 11:00 am – 12:00 pm**

**Attendees:** Paul Horne, Gretchen Smith, Pete Armstrong, Kyle Smith

A concept map created by Chatham Park in 2015 was used for visual understanding of the Lower Haw River State Natural Area and surrounding Chatham Park planned development.

Town of Pittsboro highlighted the following items as important:

- Ensuring access for hiking and paddling
- Land acquisition where the state park boundary parcels are thin is needed.
  - Allows for sustainable trail development
- As part of the Town of Pittsboro's newest Parks and Recreation Master Plan, a survey was conducted which included a needs assessment
  - Respondents indicate the following as priorities in Pittsboro
    - Walking trails
    - Pool
    - Conservation of the natural resources and support for enhancements to the state natural area
- Management of area needs to be an ongoing partnership with the county, town, and state
  - Mutual understanding between all three parties that resources/capacity are limited
  - There is an opportunity to garner public support/agency with active volunteers to help fill this capacity gap
  - Priorities are land acquisition, paddle access, hiking access, and sustainability

#### **Chatham County Government**

**October 5, 2017 from 1:30-3:00pm**

**Attendees:** Jenn Beedle, Tracy Burnett, Cara Coppola, Renee Paschal, Gretchen Smith, Kyle Smith, Brian Stevens, Jason Sullivan

Scope of the trails plan was introduced to county staff, which is limited to existing state park boundaries. County staff were encouraged to share any information, suggestions, or concerns related to the the Lower Haw River State Natural Area and the Recreation Trails Program (RTP) grant project between Bynum Mill and Pokeberry Creek.

- Bynum residents have raised concern about traffic on Bynum Church Road.
  - The county had previously met with State Parks about Connect NC Bond plans for Bynum Mill Access, and had suggested connecting upper and lower parking lots to direct traffic away from Bynum Church Road entrance

- Redbud subdivision regularly uses their adjacent area of the Lower Haw River for recreation and leisure activities
  - Concern raised over non-permitted recreation activities such as camping, ATV use, and mountain bike use
  - Concern raised over lack of enforcement of area if participation in recreation and leisure activity increases
  - Signage is a concern
- The county, Pittsboro, and State Parks have been meeting with Chuck Flink of Chatham Park to discuss trails and greenways within the proposed development and potential trail connections to the state natural area.
- County Parks and Recreation Master Plan has been developed (2009) and Town of Pittsboro Parks and Recreation Master Plan is underway
  - Landowner outreach was part of the County-wide Master Plan, inquiring about potential land acquisition or easements
  - Surveys for these master plans identified trails as citizen's top priority in this area.
- Chatham Park's Small Area Plan for the North Village has been created
- When asked about including county owned or leased property as part of this trails plan, county was agreeable to including the Hwy 15-501 leased property and the Hwy 64 property owned on the west side, but not the Bynum Beach property
- County staff were asked about the perceived opportunities along this area of the Lower Haw. The following were highlighted
  - Canoe/kayak put-ins/take-outs, trailheads, enhanced water quality
  - Conservation of natural resources; balance between recreation opportunities and conservation of the natural resource.
  - Desired trail connection from Bynum County Park to State Natural Area.
  - Connections to the Mountains to Sea Trail
  - Haw River Trail Partnership connects Haw River State Park to Jordan Lake
- County staff were asked about general concerns for development of this natural area
  - Trails and natural resources being compromised as a result of over-usage
  - Parking and traffic
  - Trespassing
  - Signage

**Meetings with Alternative Stakeholders:**

**Woods Charter High School**

**October 25, 2017 from 12:20 to 1:12 pm**

**Attendees:**

Gretchen Smith, Friends of Lower Haw River State Natural Area  
Students in Young Naturalists Club

Students from Woods Charter School were prompted to express the kinds of things they like to do in the outdoors, reasons why teens don't spend more time outside in nature, what motivates teens to spend more time outdoors, what they like about trails where they walk, what they think we should be doing to help preserve and protect natural areas for now and the future, and what they would be willing to do.

Students indicated they enjoyed hiking, nature/wildlife viewing, paddling, swimming, and dog walking. The students stated that reasons why teens do not spend more time outside may pertain to school

priorities/obligations, time commitment with extracurricular after school activities, inability to drive, and relationships with technology and social media. Students indicated that they would be more motivated to participate in outdoor activities if they had peers to go outside with, or if there were outdoor activities that looked favorable on college applications.

*What they like about trails where they walk:*

- Trail markers
- Like trails that follow the landscape, not just flat
- Native and natural vegetation

*What we should be doing to help preserve and protect natural areas for now and the future:*

- Do little things like keeping the Haw River clean
- Show more care, like planting trees or cleaning up
- Preservation of certain animals
- Education, reach lots of people
- Had no idea trails in Lower Haw River State Natural Area were not official

*What they would be willing to do:*

- Clean Jordan Lake's Adopt a Shoreline on Robeson Creek
- Litter clean-up, planting trees, encourage charitable giving to natural resource and outdoor recreation organizations
- UNC Follow That Drop program
- Eco/outdoor based summer camps

### **Retreat on Haw River and Chatham Park**

**November 9, 2017 from 2:00 to 3:00 pm**

#### **Attendees:**

Pete Armstrong, Recreation Resources Service

Gretchen Smith, Friends of Lower Haw River State Natural Area

Smith Raynor, State Parks Trails Planner

Matt Lawson, State Parks Trails Specialist

Jonathan Short, State Parks Biologist

*Comments from Tim Smith:*

- Met with State Parks four years ago about plans for Chatham Park side of river
  - Hired consultant Chuck Flink for greenways plan
    - Chuck Flink created trail plan for west side of river
  - Interested in river as amenity, benefit the public and homeowners
    - Wants trails, canoe/kayak launches, picnic shelters
    - Low impact passive recreation
    - Trails on both sides of river, with access points on both sides as well
- Stressed the need to plan for 250,000 people in 50 years
  - Plan amenities for lots of people
- Willing to give easements, right of way for roads, help build parking lots

- Houses in Chatham Park North Village will be visible from the river

*Comments from State Parks:*

- There is not enough width in a section between Bynum Mill and Pokeberry Creek for State Parks to build a sustainable trail
  - Alternative is a natural surface trail in a 30-foot buffer
- This state natural area will not become a state park, as priority function remains a preservation buffer
- Permitted activities will be limited to those compatible with state natural areas

## APPENDIX 5: HAW RIVER TRAIL PARTNERSHIP MEMORANDUM OF UNDERSTANDING

08/11/11

**MEMORANDUM OF UNDERSTANDING  
BETWEEN ALAMANCE COUNTY, GUILFORD COUNTY, CHATHAM  
COUNTY, ORANGE COUNTY, ROCKINGHAM COUNTY, THE CITY OF  
BURLINGTON, THE CITY OF GRAHAM, THE CITY OF GREENSBORO, THE  
TOWN OF HAW RIVER, THE TOWN OF PITTSBORO,  
THE TOWN OF SWEPSONVILLE, AND THE STATE OF NORTH CAROLINA,  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES  
CONCERNING  
THE HAW RIVER TRAIL CORRIDOR**

**October 1, 2011 – December 31, 2021**

WHEREAS, the State of North Carolina (hereinafter referred to as “the State”), has proposed multi-use trail development and natural resource preservation efforts within a defined area along the Haw River (hereinafter referred to as “the Trail Corridor”); and

WHEREAS, the State has proposed a paddle, hiking and/or multi-use trail connecting the Haw River State Park to Jordan Lake State Recreation Area, (hereinafter referred to as “the Trail”), as a component of the State Trails System, to make efficient use of public dollars and provide the greatest benefit by linking key resources; and

WHEREAS, the Trail Corridor contains a wide range of outstanding and unique natural, cultural and historic resources; and

WHEREAS, the preservation of resources within the Trail Corridor provides a wide range of outstanding existing and potential recreational and economic development opportunities; and

WHEREAS, the preservation of lands within the Trail Corridor would support the multiple goals of the Partners; therefore the width of the Trail Corridor for planning purposes should be at a minimum of 500 feet from the top of bank (1000’ corridor) where possible. The proposed use of the Trail Corridor should be a balance of natural resource protection, recreation, water quality, historical and cultural preservation, view shed protection, and economic development. As much as possible, undisturbed natural vegetation within the Trail Corridor is preferred to meet the maximum number of these goals; and

WHEREAS, the Haw River and its tributaries flow through multiple municipalities, counties and four multi-county planning regions; and

WHEREAS certain portions of the Trail Corridor will traverse public lands owned by municipalities, counties, the State of North Carolina, and may also cross privately held land managed by private non-profit agencies or land under conservation easements, held by either the State, municipal, county or private non-profit agencies; and

08/11/11

WHEREAS, The State has partnered with Alamance County, Guilford County, Chatham County, Orange County, Rockingham County, the City of Burlington, the City of Graham, the City of Greensboro, the Town of Haw River, the Town of Pittsboro, the Town of Swepsonville, the Piedmont Triad Council of Governments and non-profit organizations to develop a conceptual plan for the trail; and

WHEREAS, the listed governmental agencies desire to represent a unified vision for the Trail Corridor when sharing information both internally within their respective agencies and externally on matters relating to the planning, development, signage, public information, maintenance and management of the Trail Corridor;

NOW, THEREFORE, the listed parties hereto mutually agree:

1. To title this coalition of partners the "Haw River Trail Governmental Agency Partnership," to speak with one unified voice for all agencies involved in the planning, design, construction, maintenance, management and promotion of the Trail.
2. To seek and consider thoughts and ideas from non-profit organizations, private property owners and citizens regarding the planning, development and management of the Trail.
3. To establish a name for this trail and to develop an identifiable trail marker that can be used to uniformly sign segments of the Trail.
4. To jointly develop and endorse trail development standards for the paddle and land-based trail.

The paddle trail standards will include the maximum length between access areas, the basic design of the overall access areas including off-road access, parking, access to the water and other desired or needed facilities.

The land-based trail standards will include, at a minimum, trail width and surfacing options, parking and desired or needed facilities.

Both the paddle trail and land-based trails will have uniform trail markers (to be agreed upon) containing minimum basic information (to be agreed upon).

5. The State will coordinate activities between the land managing agencies. Implementation will be carried out by the agency administering the lands through which the Trail passes, with assistance by the State if required.
6. To consider every opportunity to acquire land or the interest in land that will provide public access to or land for the Trail, its buffer, or other needed open space within their jurisdiction.

08/11/11

7. The selection and approval of the Trail route on-the-ground is the primary responsibility of the land managing agency/entity. The State will assist the land managing agencies/entities and holders of conservation easements with Trail layout activities.
8. To maintain, within budget constraints, the segments of the Trail which pass through lands under their jurisdiction.
9. There will be no exchange of funds for work performed on the trail project without further written agreement. Funds for trail planning, construction, maintenance and management activities are the responsibility of the appropriate land managing agency; however, the State may assist the agencies if agreement is reached as to the extent of such assistance between the parties.
10. The appropriate land managing agency shall erect the uniform trail markers established by the Haw River Trail Public Partnership for the Trail. The erection and maintenance of these trail markers shall be in accordance with the land managing agencies' standards referenced in Paragraph 4 above.
11. To meet as needed to discuss matters of mutual concern affecting the planning, construction, maintenance and management of the Trail.

No member of, or delegate to Congress, the North Carolina General Assembly or local elected official shall be admitted to any share or part of this agreement, or to any benefit that may arise there from; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

Nothing in this agreement shall affect or interfere with fulfillment of the obligations and rights of the parties hereto to manage the lands and programs administered by them in accordance with their other basic land management responsibilities.

This agreement may be revised as necessary by mutual consent of all parties by the issuance of a written amendment, signed and dated by all parties.

Any party may terminate this Memorandum of Understanding by providing 60 days written notice. Unless terminated by written notice, this Memorandum of Understanding will remain in force for a period of ten (10) years ending on December 31, 2021. At the end of that time, the parties will assess the benefits accrued and determine if the agreement should be reaffirmed.

08/11/11

ALAMANCE COUNTY

(Date)

Linda Massey - Chair - Alamance  
NAME POSITION County Commissioner

**GUILFORD COUNTY**

(Date)

 9/20/11  
\_\_\_\_\_  
NAME County Manager

**ATTEST:**

\_\_\_\_\_  
Clerk to Board

**APPROVED AS TO CONTENT:**

\_\_\_\_\_  
Property Management Department Representative

ORANGE COUNTY

Date \_\_\_\_\_

Frank Clifton, Jr.

*Frank Clifton, Jr.*

9-9-11

County Manager

08/11/11

CITY OF BURLINGTON

(Date) 9/6/2011

  
NAME POSITION, Mayor

08/11/11

CITY OF GRAHAM

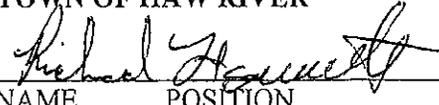
(Date)

*James R. [Signature]* 9/6/11  
NAME / POSITION

08/11/11

TOWN OF HAW RIVER

(Date)

  
\_\_\_\_\_  
NAME            POSITION  
Richard Honeycutt  
mayor Pro Tern

08/11/11

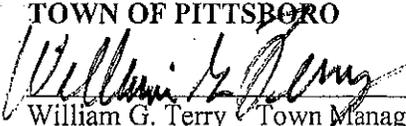
IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding as of the last date written below.

**STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT  
AND NATURAL RESOURCES**

(Date)

\_\_\_\_\_  
Dee A. Freeman Secretary

11/7/2011  
(Date)

**TOWN OF PITTSBORO**  
  
\_\_\_\_\_  
William G. Terry Town Manager

08/11/11

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Understanding as of the last date written below.

STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENT  
AND NATURAL RESOURCES

(Date)

*Sep. 16, 2011*

  
Dee A. Freeman

Secretary

08/11/11

CHATHAM COUNTY

(Date)

*Charles Hogue* *County Manager*  
NAME POSITION

## APPENDIX 6: LOWER HAW RIVER STATE NATURAL AREA ARTICLES OF DEDICATION



## North Carolina Department of Administration

Pat McCrory, Governor

Bill Daughtride, Jr., Secretary

February 10, 2014

Secretary John Skvarla  
Department of Environment and Natural Resources  
1615 Mail Service Center  
Raleigh, North Carolina 27699-1615

Re: Dedication of Areas within the State Park System

Dear Secretary Skvarla:

Pursuant to Article 9A, Chapter 113A of the North Carolina General Statutes, this letter of allocation is executed for the purpose of dedicating the State-owned lands hereinafter described as a North Carolina Nature Preserve.

Those real properties are allocated to the Department of Environment and Natural Resources and currently managed by the Division of Parks and Recreation, briefly described below and more specifically described in Exhibit A:

<u>Site Name</u>	<u>Approximate Total Acreage</u>
Lower Haw River State Natural Area	63 acres, including the current 13-acre addition

Dedication of the qualified portions of the tracts fulfill the terms of any prior grant agreements, including those of the Clean Water Management Trust Fund.

The Governor and Council of State have approved the dedication of the State-owned lands described by this document at a meeting in the City of Raleigh, North Carolina, on the 15<sup>th</sup> of November, 2013.

Sincerely,

  
Bill Daughtride, Jr.

BD

CONSENTED AND AGREED TO:

  
Secretary John Skvarla  
Department of Environment and Natural Resources

*Mailing Address:*  
1301 Mail Service Center  
Raleigh, N.C. 27699-1301

*Telephone (919) 807-2425*  
*Fax (919) 733-9571*  
*State Courier #51-01-00*  
*e-mail: moses.carey@doa.nc.gov*

*Location:*  
116 West Jones Street  
Raleigh, North Carolina

*An Equal Opportunity/Affirmative Action Employer*

## EXHIBIT A

### LOWER HAW RIVER STATE NATURAL AREA DEDICATED NATURE PRESERVE

COUNTY: Chatham

PHYSIOGRAPHIC PROVINCE: Piedmont - Northern  
Slate Belt and Basins

TOPOGRAPHIC QUAD: Bynum

SIZE OF AREA: ca. 63 acres total (all primary)

OWNER/ADMINISTRATOR: State of NC, Division of Parks and Recreation

LOCATION: The Lower Haw River State Natural Area is located in multiple tracts on the northeastern and southwestern sides of the Haw River, upstream and downstream from Bynum. The Dedicated Nature Preserve protects parts of two tracts located on both sides of the Haw River, just upstream from the dam at US 15-501. It provides buffer to the Haw River Aquatic Habitat, which is of national significance.

DESCRIPTION: The Dedicated Nature Preserve owned by DPR along the Haw River lies adjacent to the Nationally Significant Haw River Aquatic Habitat. One of the few populations of the Cape Fear shiner (*Notropis mekistocholas*), a Federally Endangered fish endemic to North Carolina, is located in this area. A population of Septima's clubtail (*Gomphus septima*), a dragonfly considered Significantly Rare and Federal Species of Concern, also occurs here. The rich floodplain supports part of a state significant population of buttercup phacelia (*Phacelia covillei*), a plant species considered Significantly Rare and Federal Species of Concern.

The preserve supports high quality mature forests, with the lower portions near the river occupied by buttercup phacelia, a rare riparian plant species. All riparian areas are dedicated, as they protect water quality for the aquatic species in the Haw River.

The rich floodplain of the river is densely vegetated and includes some extensive Piedmont Bottomland Forest, Piedmont Levee Forest, and Floodplain Pools. These communities share many species, but occupy different positions within the floodplain, depending on topographic position, proximity to the river, and frequency of flooding. The canopy is dominated by river birch (*Betula nigra*), sugarberry (*Celtis laevigata*), and sycamore (*Platanus occidentalis*). The understory includes southern sugar maple (*Acer floridanum*), pawpaw (*Asimina triloba*), American hornbeam (*Carpinus caroliniana*), and hop-hornbeam (*Ostrya virginiana*). The shrub layer includes box-elder (*Acer negundo*), spicebush (*Lindera benzoin*), elderberry (*Sambucus canadensis*), and bladdernut (*Staphylea trifolia*). The dominant vine is poison ivy (*Toxicodendron radicans*). The herb layer includes slender toothwort (*Cardamine angustata*), wood-nettle (*Laportea canadensis*), baby blue-eyes (*Nemophila aphylla*), arrow arum (*Peltandra virginica*), clearweed (*Pilea pumila*), lizard's-tail (*Saururus cernuus*), and giant chickweed (*Stellaria pubera*). Although the floodplain is in good condition overall, some areas contain invasive exotic plant species including Japanese honeysuckle (*Lonicera japonica*), henbit (*Lamium purpureum*), and Nepalese browntop (*Microstegium vimineum*). Part of a state-significant population of buttercup phacelia (*Phacelia covillei*), a Significantly Rare and Federal Species of Concern plant, is present within this forest type. This plant population extends in several patches along the Haw River downstream from the Dedicated Nature Preserve.

The tract southwest of the river contains rich northeast-facing slopes, mainly Mesic Mixed Hardwood Forest grading to Basic Mesic Forest. Painted buckeye (*Aesculus sylvatica*) is common, along with pawpaw, in the understory and shrub layers. The rich herb layer in the floodplain manages to "creep"

onto the slopes, such that in places the baby blue-eyes, buttercup phacelia, and yellow fumewort (*Corydalis flavula*) are quite common. Typical herbs on the slopes include giant chickweed, mayapple (*Podophyllum peltatum*), Solomon's-seal (*Polygonatum biflorum*), Solomon's-plume (*Maianthemum racemosum*), and Christmas fern (*Polystichum acrostichoides*). Herbs that are found primarily in basic soils include smooth sweet-Cicely (*Osmorhiza longistylis*) and spreading chervil (*Chaerophyllum procumbens*).

In the northeastern tract, the high quality uplands support a Dry-Mesic Oak-Hickory Forest, which grades into Basic Oak-Hickory Forest in some areas. Dominant species in the canopy include mockernut hickory (*Carya alba*), shagbark hickory (*C. ovata*), shortleaf pine (*Pinus echinata*), white oak (*Quercus alba*), and northern red oak (*Q. rubra*). The understory includes flowering dogwood (*Cornus florida*), eastern red cedar (*Juniperus virginiana*), and sourwood (*Oxydendrum arboreum*). The shrub layer has been invaded by the invasive exotic autumn olive (*Elaeagnus umbellata*), which should be controlled as soon as possible to prevent further degradation of this community type. Additional species in the shrub layer include American holly (*Ilex opaca*), pinxter-flower (*Rhododendron periclymenoides*), coralberry (*Symphoricarpos orbiculatus*), and arrowwoods (*Viburnum acerifolium*, *V. prunifolium*, and *V. rafinesquianum*). Herbs include bluestem (*Andropogon* sp.), coral honeysuckle (*Lonicera sempervirens*), and Indian grass (*Sorghastrum nutans*). This community type grades into Basic Mesic Forest on the lower slopes near the river.

**BOUNDARY JUSTIFICATION:** The primary dedicated areas are drawn based on the extent of the high quality natural communities. Additionally, areas of lower quality are included within the primary area if they lie within 300 feet of the Nationally significant Haw River Significant Aquatic Habitat or within 200 feet of its tributaries. This standard is applied for aquatic habitats supporting federally listed species.

**MANAGEMENT AND USE:** The Dedicated Nature Preserve is a portion of the Lower Haw River State Natural Area owned by the State and used for public recreation and conservation. The most important management needs will be to allow the forests to continue to mature and to manage invasive exotic species. Any proposed activities adjacent to the river should be planned with care to minimize impacts to the endangered aquatic species and significantly rare plant and dragonfly species. Regulatory agencies (NC Wildlife Resources Commission and US Fish and Wildlife Service) and the NC Natural Heritage Program should be consulted when planning and installing any features adjacent to the river.

**THIS ALLOCATION IS MADE SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:**

1. **Definitions:** As used in this allocation, the terms "natural area," and "nature preserve" have the same meaning as contained in North Carolina General Statutes 113A-164.3.
2. **Dedication:** The Preserves, as described in this Allocation, are hereby dedicated as **nature preserves** for the purposes provided in the Nature Preserves Act.
3. **Primary Custodian:** The primary Custodian of the Preserves will be the Department of Environment and Natural Resources, Division of Parks and Recreation.
4. **Primary Classification:** The primary classification and purpose of the Preserves will be conservation, scientific research, passive recreation, and nature education.
5. **Rules for Management:**

- A. **Character of Visitor Activity:** The principal activities in the Preserves shall be non-consumptive outdoor recreation and education in designated areas. These activities may be regulated by the Custodian to protect and conserve the natural values of the preserve.

Activities and uses unrelated to those listed above are prohibited except as provided in this Dedication or unless necessary to carry out the purposes of the Preserves. Prohibited activities include, but are not limited to, commercial development, commercial silviculture, agriculture and grazing, gathering of plants or plant products for purposes other than approved research, the removal, disturbance, molestation, or defacement of minerals, archaeological and natural resources, and those activities specifically restricted in this Dedication.

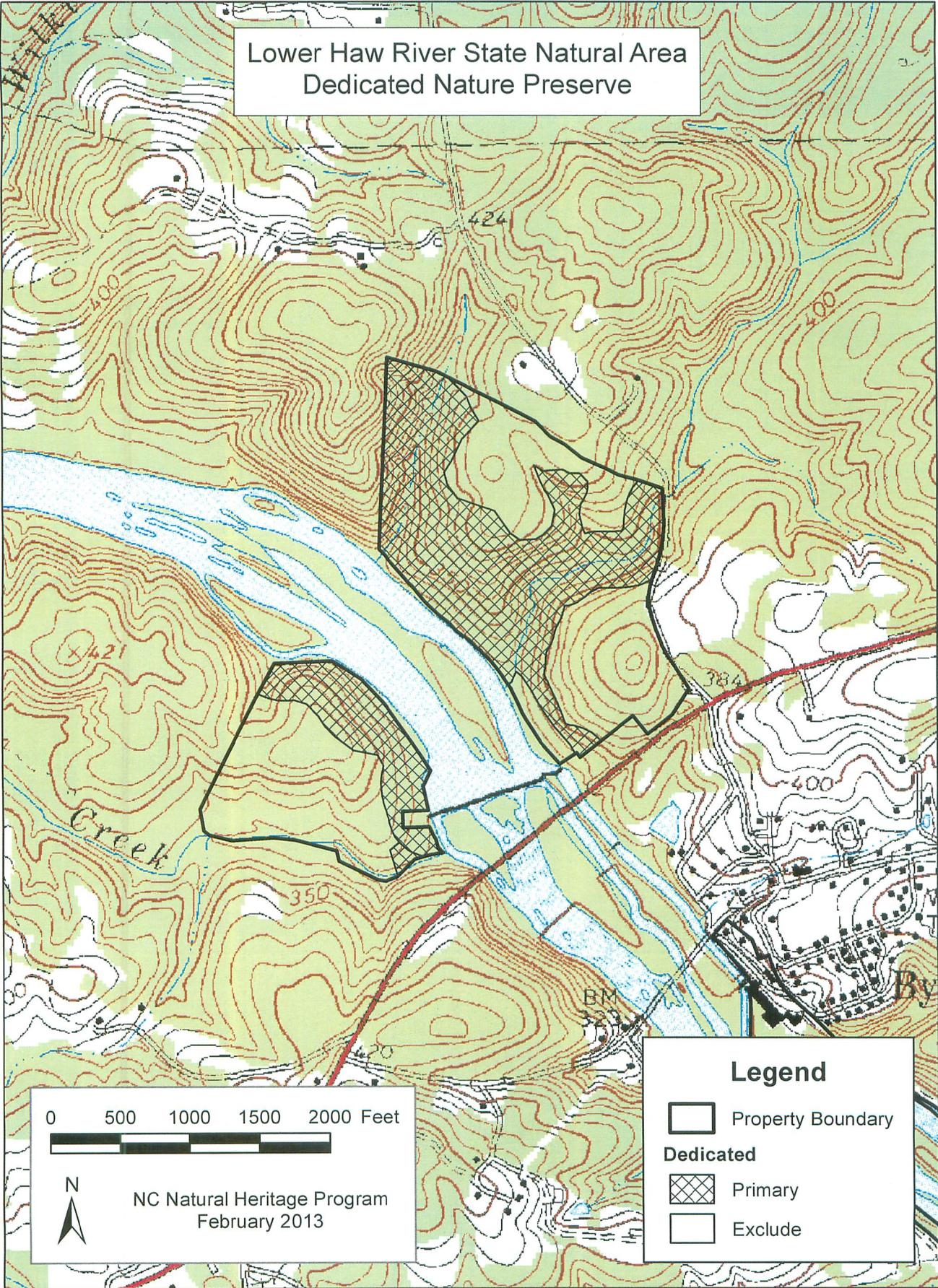
- B. **Visitors and Visitor Facilities:** The Custodian reserves the right to orient and guide visitors for educational programs, scientific research, and Preserve management. Exhibits, programs and printed materials may be provided by the Custodian. The Custodian may create and maintain nature trails, overlooks, boardwalks, and primitive campsites adequate to promote the permitted use of the Preserves. Guardrails, fences, steps, bridges, and boardwalks may be provided when appropriate. The Custodian reserves the right to erect structures necessary to protect the Preserves from unwanted or excessive visitor traffic and structures to restrict visitor access to sensitive environmental resources.

The Custodian may construct and maintain service roads for patrol, fire control, right-of-way maintenance, and other management activities. The Custodian may maintain roads presently existing within the Preserves. Otherwise, the construction of roads will be prohibited.

- C. **Other Structures and Improvements:** Buildings or facilities other than those defined above shall not be erected by the Custodian within the Preserves.
- D. **Research and Collecting Permits:** Any person wishing to engage in scientific research or collecting shall first secure written permission from the Custodian.
- E. **Vehicles:** There will be no horseback riding or bicycling except on trails designated for these purposes and no use of any motorized vehicles except boats. The Custodian may use vehicles as necessary for the management of the Preserves.

- F. Excavation: There will be no mining, drilling, removal of topsoil, sand, gravel, rock, minerals, or other material, nor any change in topography or surface hydrology of the Preserves.
  - G. Water Level Control: The purpose of water level control shall be to maintain the Preserves' natural water regimes. Water levels that have been altered by human activities may be changed, if necessary, to restore the Preserve to its natural condition. In a Preserve with a long history of managed hydrology, water levels may be managed to perpetuate the ecosystems that have evolved around the hydrology. Millponds are an example of situations in which water levels have been historically managed.
  - H. Bringing in Flora and Fauna: No exotic flora and no animals except leashed dogs and cats, horses on trails designated for horseback riding, or animals being reintroduced shall be brought into the Preserves. Any reintroduction will be of species native to the natural community and shall be done according to an approved resource management plan.
  - I. Fire: Use of prescribed burning is permitted as necessary for the biological management of the Preserves. Any prescribed burning must be done according to an approved fire management plan for the park unit in question. Fires are also permitted in conjunction with supervised activities of the Custodian, or in designated areas within primitive campsites.
  - J. Disturbance of Natural Features: The disturbance of other natural features is prohibited except for control of disease that would damage or reduce the significance of the Preserves, reduction of fire fuel load after severe storm damage, or for purposes of ecological management as stipulated in the Park unit's approved management plan and that which is consistent with the purposes of this Dedication.
  - K. Control of Populations (natural and exotic): Any control of animal or plant populations, other than fishing, shall be only to correct situations where populations have been significantly altered from natural conditions. The Custodian may, in accordance with an approved resource management plan, apply biological controls, herbicides and pesticides, and other means deemed necessary or appropriate to control or eradicate exotic or native species of plant or animal that are degrading the natural character of the Preserves.
  - L. Control of Natural Processes: Natural processes will be managed according to the policy of the North Carolina State Parks Natural Resource Management Policy. Generally, natural resources will be managed by allowing natural environments to evolve through natural processes with minimal influence from human activities. Exceptions are enumerated in the Policy Statement.
  - M. Management Plan: These rules for management constitute a management plan within the meaning of NCAC T15A:12H.0401 until detailed plans for each park are prepared. The dedicated nature preserves will continue to be subject to other applicable regulations within NCAC Title T15A, chapter 12. Where contradictions may arise between this instrument of dedication and other management regulations, the terms of this Dedication shall take precedence.
6. Amendment, Modification, and Termination: Any changes to this Dedication must be made in accordance with the provisions of North Carolina General Statutes 113A-164.8, which require the approval of the Governor and the Council of State.

Lower Haw River State Natural Area  
Dedicated Nature Preserve



0 500 1000 1500 2000 Feet



NC Natural Heritage Program  
February 2013

**Legend**

 Property Boundary

**Dedicated**

 Primary

 Exclude

APPENDIX 7: BYNUM HYDROELECTRIC PROJECT RECREATIONAL USE  
ASSESSMENT STUDY REPORT

**BYNUM HYDROELECTRIC PROJECT**  
**FERC PROJECT NO. 4093**

**RECREATIONAL USE ASSESSMENT STUDY**  
**PLAN & DATA REPORT**

MCMAHAN HYDROELECTRIC, LLC  
Bynum, North Carolina

**RECREATIONAL USE ASSESSMENT STUDY PLAN  
BYNUM HYDRO PROJECT  
FERC PROJECT NUMBER 4093  
MCMAHAN HYDROELECTRIC LLC**

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## **1.0 GOALS AND OBJECTIVES OF STUDY**

Results of the study will meet the study purpose by addressing the following specific goals and objectives:

**Goal 1:** Inventory the available recreation amenities at the Project.

**Goal 2:** Characterize recreational use of and needs for boating, angling, and other recreational purposes. This will be accomplished by meeting the following objectives:

- Calculate recreation days by month and day type (weekend, weekday, and holiday) for the Project recreation site via spot vehicle counts and people per vehicle observations.
- Identification of primary recreation activities undertaken by recreationists at the Project recreation site through on-site observations, and a Commercial Outfitter interview.

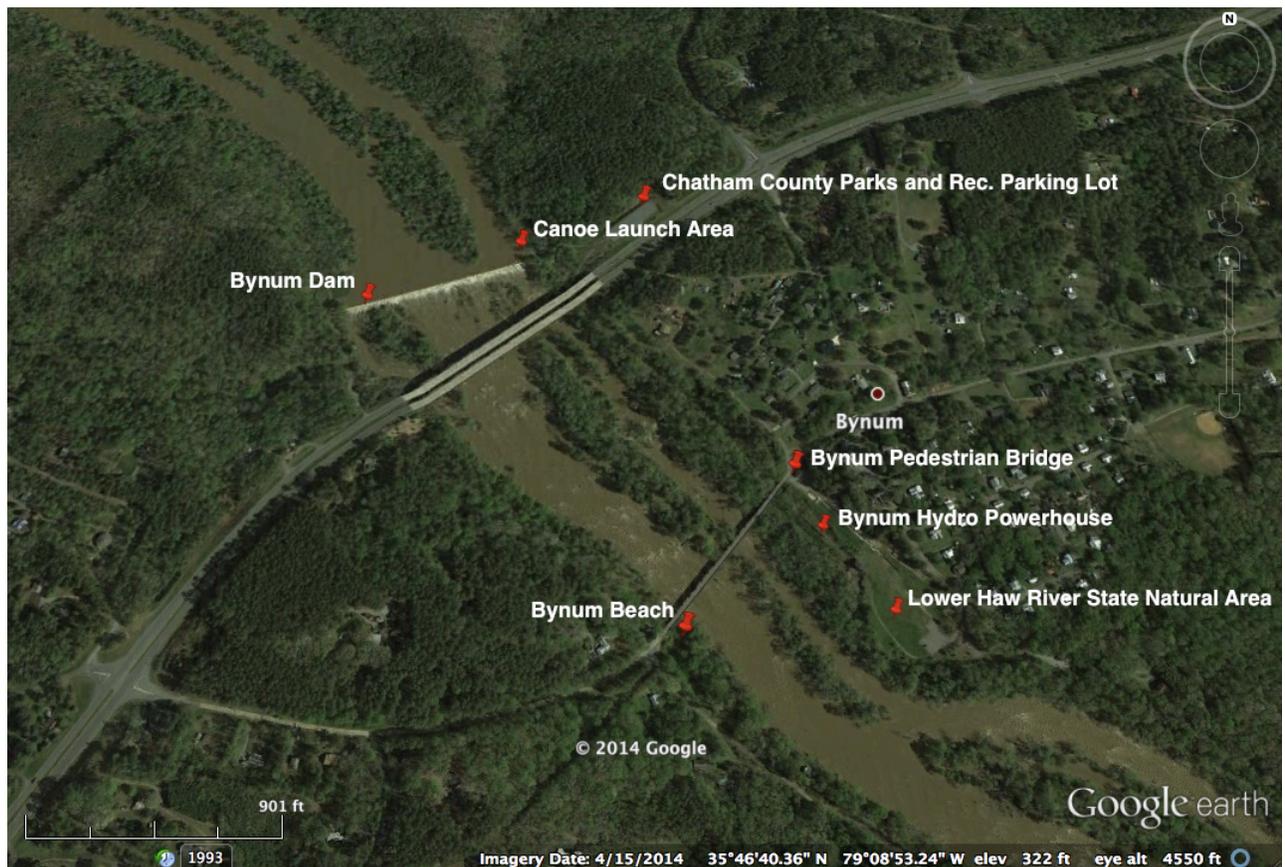
**Goal 3:** Estimate potential future use of the Project recreation sites. This will be accomplished by meeting the following objectives:

- Collect population and recreation participation trend data for the region.
- Calculate future recreation use estimates based on existing use and population projections.

## 2.0 BACKGROUND AND EXISTING INFORMATION

The Haw River, including the reach within the Project area, is commonly used for kayaking, canoeing, swimming, hiking, and fishing. Within or adjacent to the Project boundary there are multiple points of access for recreation, however the main location for vehicle parking is the Chatham County Parks & Recreation Department managed parking area located at the intersection of the eastern bank of the Haw River and US15-501 South. The project area is bordered by the Lower Haw River State Natural Area; an area managed as a satellite area of the Jordan Lake State Recreation Area. The recreational amenities within the Project area include canoe & kayak access, walking trails, and a pedestrian bridge across the Haw River. (Figure 1)

Figure 1 - Map of Project Area with Recreational Sites



### EXISTING RECREATION AMENITIES

There are currently no recreation amenities operated and maintained by the project licensee other than access onto the dam, some signage and portage around the dam. However, within the reach of the Project there are a variety of other entities that maintain recreational access points.

## EXISTING NON-PROJECT RECREATION SITES

There are a number of recreational amenities currently being operated and maintained by state and local agencies within the Project Area.

The primary point of access for recreation within the Project boundary is the parking lot operated and maintained by Chatham County Parks and Recreation Department (Figures 2 & 3). The gravel lot, which accommodates approximately 50 vehicles, is located just upstream of the Bynum Dam and provides access to a canoe/kayak launch area. A short gravel trail (approx. 100 yards) leads users onto project owned lands for access to recreational activities (Figure 4). The lot is also used by hikers for access to the state maintained Haw River trail; a 70-mile long multi-use trail following the path of the Haw River from Haw River State Park to Jordan Lake State Recreation Area. The reservoir created by the Bynum dam also creates areas in the river used for swimming and fishing and launching canoes and kayaks (Figures 5-8).

**Figure 2 - Chatham County Parks & Rec Maintained Parking Lot**



Figure 3 - Informational Sign Located at Parking Lot



Figure 4 - Trail Leading From Parking Lot to Dam Area



**Figure 5 - Canoe and Kayak Area on the Eastern Bank Upstream of Dam**



**Figure 6 - Portage Access to Downstream of Bynum Dam**



Figure 7 - Area at Toe of Dam Used for Swimming and as a Canoe & Kayak Launch Site



Figure 8 - State Maintained Trails Extend Upstream and Downstream of Project Area



## Bynum Beach

Bynum Beach Access Point is a County Maintained Canoe and Kayak launch site located downstream of the Bynum dam, on the western bank of the project bypass reach. The site is used for providing access to boaters wanting to boat downstream the canoe and kayak access point at US-64. The site is also used for swimming and fishing. No parking lot or any other amenities are provided at this site (Figures 9 & 10).

Figure 9 - Signage for Access to Bynum Beach Area



Figure 10 - View of Bynum Beach Access Area



Bynum Pedestrian Bridge

In the early 2000's the bridge that connected Bynum Road across the Haw River was closed to vehicle traffic. Since that time the Department of Transportation (DOT) has maintained the bridge as a pedestrian bridge for recreational use (Figure 11). The bridge is primarily used for casual sightseeing, bird watching and fishing. While the DOT does not maintain a dedicated parking lot for the Bynum Bridge, a parking lot originally used for the Bynum mill serves as an area for people to park their vehicles with close access to the bridge (Figure 12). The Bynum Pedestrian Bridge provides extensive views of the Bynum Project area including the hydroelectric canal and bypass reach.

**Figure 11 - Western Side of Bynum Pedestrian Bridge**



**Figure 12 - Parking Lot Used for Access to Bynum Pedestrian Bridge**



**3.0 EXISTING PROJECT RECREATION USE**

The current Licensee has not filed Form 80 Reports with the FERC for this project so current historic use levels have not been established for over ten years. McMahan Hydroelectric contacted the Chatham Parks and Recreation Department for data regarding recreational usage of the project area, however they had no data for this site.

**4.0 STUDY AREA AND STUDY SITES**

The Study will be conducted at the Chatham County operated and managed parking area; located on the eastern bank of the Haw River at the intersection with US 15-501. While possible to access the project area from other sites within the Project reach, the vast majority of recreators visiting the Bynum Dam area use the gravel lot located off of 15-501S.

**5.0 PROPOSED STUDY METHODOLOGY**

**Data Collection**

A combination of data collection efforts will be used to obtain the information necessary to address the study objectives. Primary data will include vehicle and recreator counts; and photo-documentation of project sites.

**On-Site Data Collection**

Recreation User Surveys will be performed on a stratified random sample of 18 days during the 2014 recreation season (May 1 – September 30), using a method whereby a survey clerk will be on-site for a period of four hours per sample day to conduct user interviews and conduct spot car counts.

Sample periods of four hours will be split evenly between “Morning” (8:00am to 12:00pm) “MidDay” (12:00pm to 4:00 pm) and “Evening” (4:00 pm to 8:00 pm) times throughout the recreational season (Table 1).

Assuming that most recreation activity occurs on weekend days and holidays, the weekends and holidays are over-sampled in order to focus data collection efforts on time periods when people are most likely to be at the Project. Seven sample periods will be conducted on weekdays; eight periods will be conducted on weekend days. All three national holidays falling within the 2014 recreational season will be surveyed for an 8-hour period from 9:30am to 5:30pm (Memorial Day, Independence Day and Labor Day)(Table 2).

**TABLE 1 – SAMPLE FRAME BY TYPE FOR RECREATOR SURVEYS**

<b>Survey Day Types</b>	<b>Days of Sample Type</b>	<b>Duration of Each Sample Day</b>	<b>Total Hours by Sample Type</b>
Weekday	7 days	4 hours	28 hours
Weekend Days	8 days	4 hours	32 hours
Holidays	3 days	8 hours	24 hours
<b>Total Sample Days</b>	<b>18 days</b>	<b>Total Survey Hours</b>	<b>84 hours</b>

**TABLE 2 – SAMPLE FRAME BY MONTH FOR RECREATOR SURVEYS**

Month	Survey Type (Day of Week / Time of Day)	Holiday Sample Day	Total Monthly Sample Days
May	Weekend / Morning Weekend / Midday Weekday / Evening	Memorial Day	4
June	Weekend / Morning Weekend / Evening Weekday / Evening		3
July	Weekday / Midday Weekend / Evening Weekend / Midday	Independence Day	4
August	Weekday / Morning Weekday / Midday Weekend / Evening		3
September	Weekday / Morning Weekend / Morning Weekend / Midday	Labor Day	4

**Spot Car Count Data Collection**

Spot car counts of the Chatham County Parking Lot at the intersection of the Haw River and US15-501 will be performed periodically throughout the season at various times during the day, and will include weekdays, weekends, and holidays counts. At least fifty spot car counts will be taken during the recreation season. Data collected will be summarized in a report to document the activity level and purpose, as well as to complete FERC form 80.

**Commercial Outfitter Interview**

A phone interview will be conducted with Haw River Canoe and Kayak Company, a commercial outfitter offering river trips within the Project area, to ascertain the number of commercial visitors to the Project on a monthly basis and general commercial visitor demographics.

**Data Analysis**

Spot count and survey data will be used to calculate the weekday, weekend, and holiday recreation days for the May 1, 2014 to October 31, 2014 recreation season. The average of the vehicle counts conducted for each sample shift at the recreation site will be estimated by month and day type. The average vehicle count per sample shift will then be converted to a recreation day estimate by month and day type using average group size and extrapolating recreator hours to the sample shift and summing.

**6.0 PRODUCTS**

A progress report containing preliminary data and analyses from the study will be included in the Initial Study Report filed with the agencies in October 2014. Recommendations for recreational improvements will also be delivered from this study.

## **7.0 SCHEDULE**

Due to the accelerated licensing timeline for this project, data collection began in May 2014. The Study Plan will be submitted and reviewed by NCWRC. Fieldwork and data collection will begin on or around May 1, 2014. A report containing preliminary data will be presented and/or distributed to the consulting parties in or before the end of October 2014.

## **8.0 PROPOSED PROJECT IMPROVEMENTS**

A number of improvements to the Project's recreational use were proposed during Stage 1 comments. Prior to commercial operation of the site, the licensee plans to make the following improvements.

Improve portage around the dam by removing the nonessential equipment that inhibits crossing the dam above the intake gates, and by installing steps that lead from atop the dam to below the dam.

A hiking trail from the dam to the powerhouse will be established to link the state maintained trails that currently exist upstream and downstream of the project lands.

Signage will be installed to communicate details of the hydroelectric project in accordance with FERC Part 8 guidelines, as well as signage informing the public of recreational amenities and potential dangers within the project area.

### **Portage**

The pedestrian crossing over the headrace needs improvement so that a full-size canoe can be carried across without lifting it overhead. Equipment that was once used to control the intake gates for the hydro canal remains in place and creates difficulty for boaters attempting to use the dam portage passage (Figure 13). Equipment not essential to the current operation of the hydro project will be removed to improve portage. Railings will be installed above the intake gates to ensure safe passage.

The stone steps that lead from atop the dam to below the dam are also difficult for many to navigate. Currently the steps have non-uniform heights, some with a rise of more than 1 foot (Figure 14). The current license applicant plans to improve the portage steps by creating a stair system that allows for more ease of access for users.

**Figure 13 - Unused Intake Gate Control Devices Along Portage Create Narrow Passage**



**Figure 14 - Steps Providing Portage Around Bynum Dam**



## **Project Signage**

Proper signage for the project has not been maintained. The few signs that still remain on site are in poor condition and need replacement (Figure 15). McMahan will install and maintain signage marking details of the hydroelectric project in accordance with FERC guidelines, canoe/kayak launch areas, portage passage, plus a sign upstream of the dam warning paddlers of the approaching dam. McMahan will consult with resource agencies regarding project signage. All such signage will all be created, approved, and installed prior to the operation of the project.

**Figure 15 - Only Two Signs Maintained by the Current Licensee Remain on Site**



A Project Signage Plan can be found in Attachment 4 at the end of this document.

### **Trail On Project Lands**

The State of North Carolina operates and maintains a trail system that runs along the Haw River for 70 miles from the Town of Haw River to the Jordan Lake Recreational Area. This trail system passes through the project area, however lack of trail maintenance along the project canal has made passage nearly impossible. The current state of the trails located on project land (Figure 17) prevents passage from upstream to downstream of the project in a safe and efficient manner.

McMahan Hydro plans to reestablish and maintain a trail along the east side of the river between the dam and powerhouse to link the state maintained trails upstream and downstream of the project for walkers and hikers (Figure 16).

Figure 16 - Map Displaying Hiking Trails within Project Area

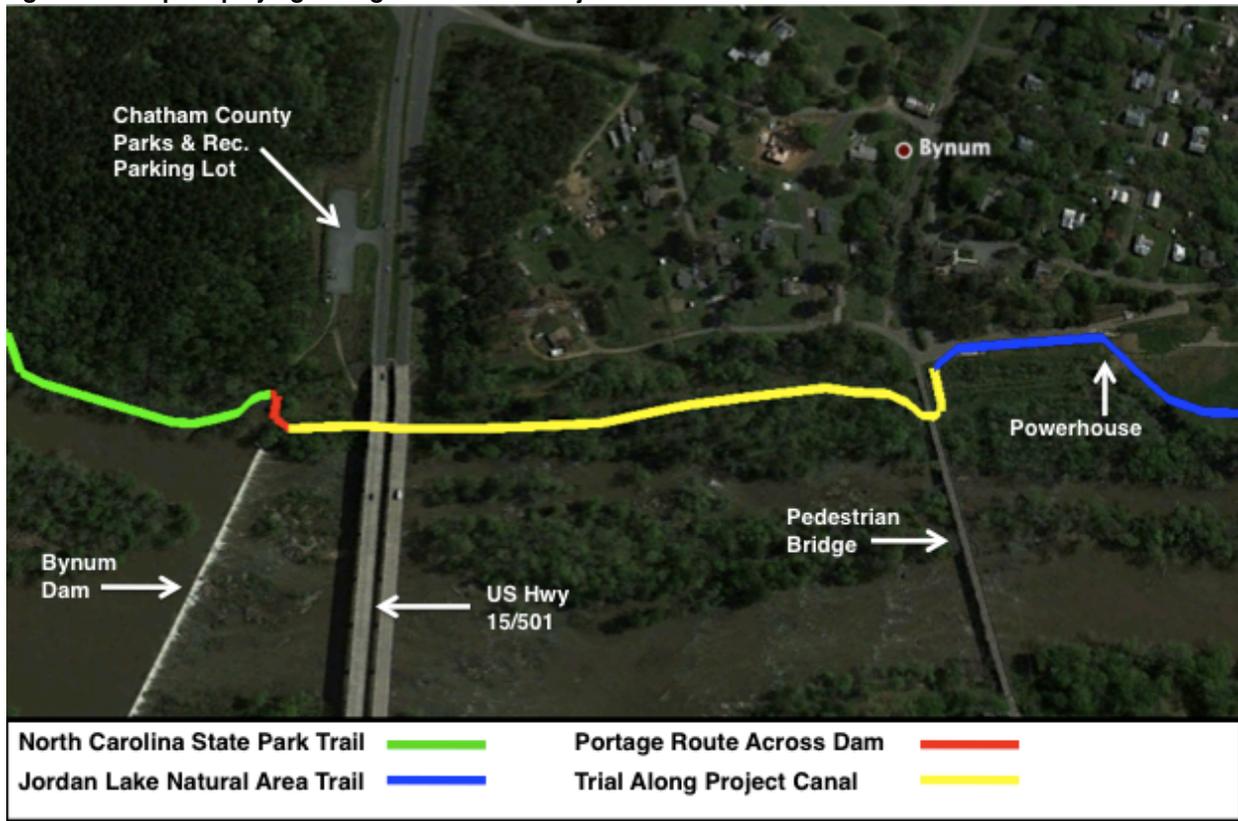


Figure 17 - Visitor Information Sign at Lower Haw River State Natural Area



## 9.0 REFERENCES

Haw River Trail description - [http://thehaw.org/Land\\_trail/Land\\_trail.html](http://thehaw.org/Land_trail/Land_trail.html)

Chatham County Parks and Recreation - <http://www.chathamnc.org/index.aspx?page=150>

## 10.0 APPENDICES

Attachment 1 – Recreational Use Summary Report

Attachment 2 – Recreation User Survey Data Collection Sheet

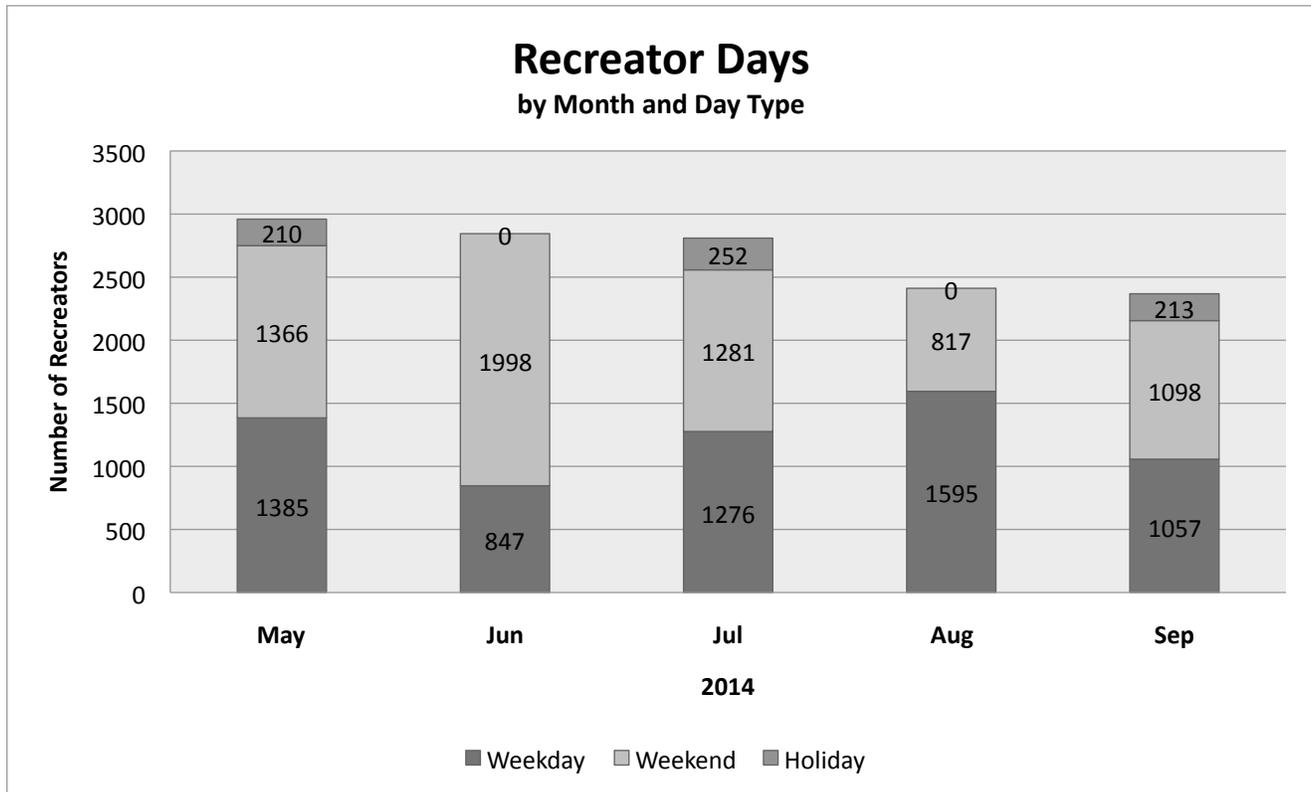
Attachment 3 - Spot Car Count Data Sheet

Attachment 4 – Project Signage Improvement Plan

Attachment 1 – Recreational Use Summary Report

# Recreational Use Summary Report

Data for this report was gathered during the 2014 recreation season as detailed in the Recreational Use Assessment Study Plan. Spot car counts were used to assess activity level and in conjunction with data gathered through onsite surveys, an estimate of total recreation days was generated. Recreational use type was observed through onsite surveys.



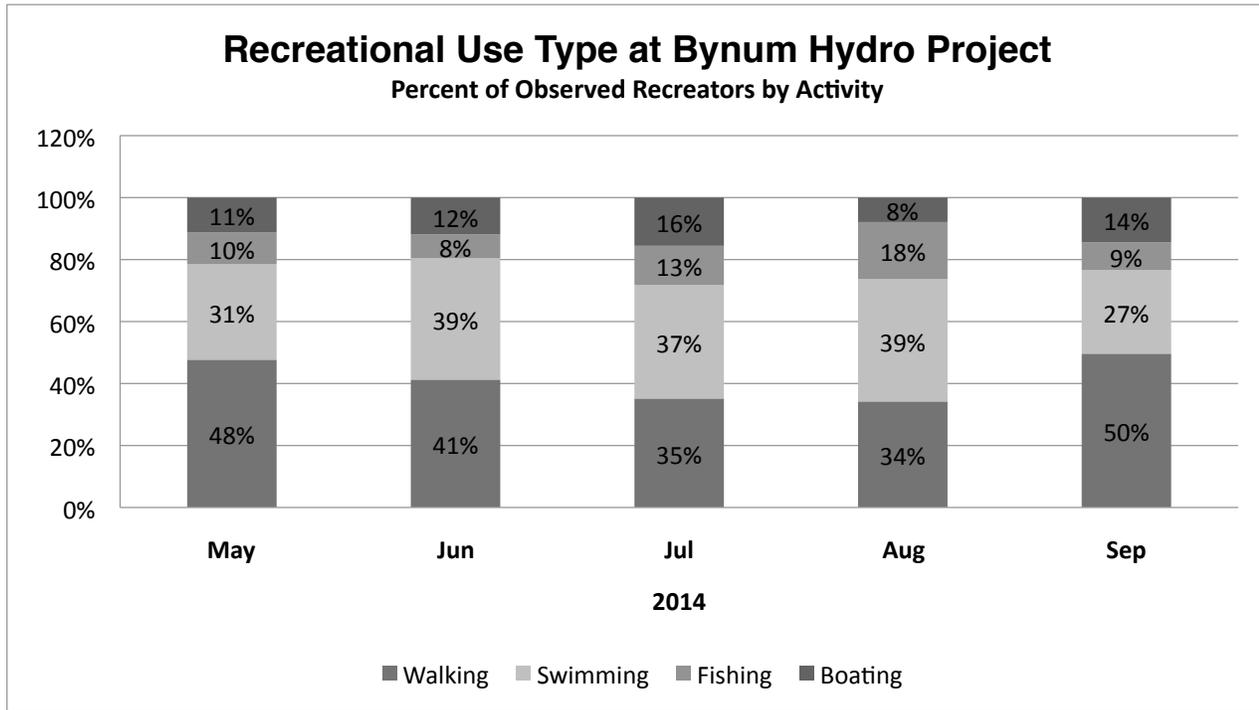
## Recreator Days by Month and Day Type

	May	Jun	Jul	Aug	Sep	Total
<b>Weekday</b>	1385	847	1276	1595	1057	6160
<b>Weekend</b>	1366	1998	1281	817	1098	6560
<b>Holiday</b>	210	0	252	0	213	675
<b>Total</b>	<b>2960</b>	<b>2845</b>	<b>2810</b>	<b>2412</b>	<b>2368</b>	<b>13395</b>

Visits were fairly consistent month-to-month, **averaging 87.5 visitors per day** during the recreation season. About half the visits were on weekends, and half on weekdays.

## Types of Recreation at Bynum Hydro Project Area

Walking and swimming account for over three quarters of all visits, with the remaining visits split fairly evenly between fishing and boating.



## Recreational Use by Activity

	May	Jun	Jul	Aug	Sep
<b>Walking</b>	48%	41%	35%	34%	50%
<b>Swimming</b>	31%	39%	37%	39%	27%
<b>Fishing</b>	10%	8%	13%	18%	9%
<b>Boating</b>	11%	12%	16%	8%	14%

## Commercial Outfitter Feedback

The Haw River Canoe & Kayak Company (Haw River Canoe), based out of Saxapahaw, NC offers guided tours, instructional courses, and equipment rental along the Haw River from Altamahaw to Bynum. During the recreational season Haw River Canoe operated and “outpost” at the County maintained parking lot adjacent to the project on weekends to provide rental equipment and serve as a pick-up and drop-off point for canoe and kayak trips.

According to Haw River Canoe’s owner Joe Jacob, the Bynum site provided rental equipment to 109 recreators from April 1- October 31, 2014. Mr. Jacob noted that this number could likely have been higher since they did not have a presence at the Bynum “outpost” every weekend during the recreational season due to staffing limitations.

Mr. Jacobs did report that an employee has been hired to staff the Bynum site every weekend for their 2015 season (April 1 – September 30) so he expects to see an increase in recreators in 2015.





# Attachment 4

## Project Signage Improvement Plan

Proper signage is an integral part of providing a safe and enjoyable experience for recreational users of the project site. The following project signage plan addresses the need for the Bynum Hydro project to install and maintain signage communicating recreational amenities and potential hazards.

Maps of the project area (Figures 1 & 2) show the location of proposed signs for the project. Representations of the individual signs for the project are illustrated in Figures 3-12.

The alphabetical lettering associated with each sign corresponds to markers in Figures 1 & 2.

The white polygon in Figure 2 represents the property line of the project lands.

**Figure 1 – Map of Project Area with Locations for Signage**



**Figure 2 – Project Signage with Property Line Highlighted**



### Project Identification Signage

Part 8 signs will display hydroelectric project name, FERC license number, and project owner (Figure 3). These signs will be placed at the Chatham County owned parking lot located on 15/501S, and on the powerhouse - **See Signs “A” in Figure 2 for proposed location.**

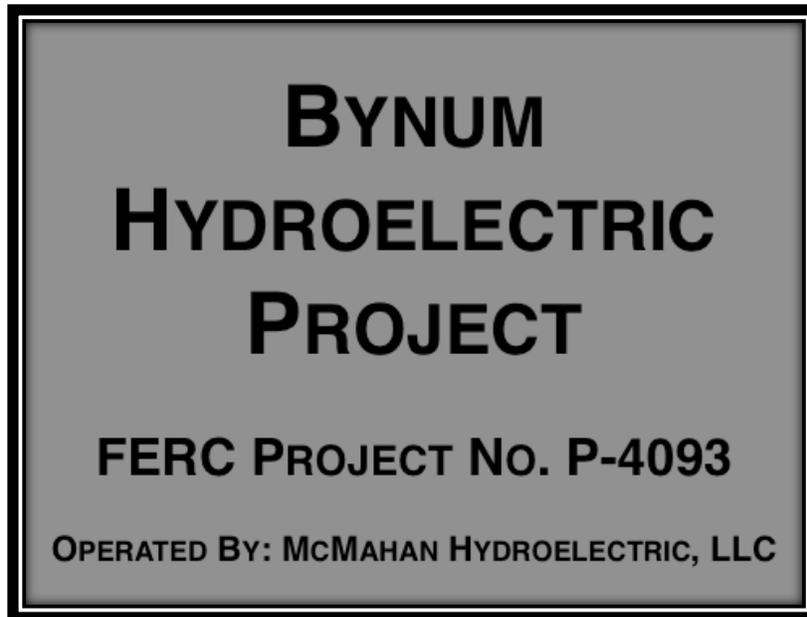


Figure 3 - Sign “A” – Project Identification Signs (2 signs)

### Project Safety Signage

A buoy type sign will be placed approximately 2000ft upstream of the dam alerting boaters to keep to the left (eastern) bank of the shore for safe portage around the dam (Figure 4). **See Sign “B” in Figure 1 for information regarding the proposed location of this sign.**



Figure 4 - Sign “B” - Dam Warning Sign

A buoy type sign will be placed at the intake waters of the project alerting recreators (Figure 5). **See Sign “C” in Figure 2 for proposed location.**



Figure 5 - Sign “C” – Intake Area Warning

Signs placed along both banks of the intake canal will inform recreators not to enter the canal waters (Figure 6). **See Signs “D” in Figure 2 for proposed locations.**



Figure 6 - Sign “D” – Canal Warning (12 signs)

### Portage and Recreational Access Signage

Portage and trail signs (Figure 7 – 12) will be used to direct recreators around the dam for safe portage and to the parking lot maintained by Chatham County Parks and Recreation Department. Signs will also be used to direct hikers from the dam area to the Lower Haw River Natural Area along the trail located on the western bank of the intake canal. Signs will also direct hikers from the Lower Haw River Natural Area to the dam area. **See signs “E”, “F”, “G”, “H”, “I”, and “J” in Figure 2 for proposed locations.**

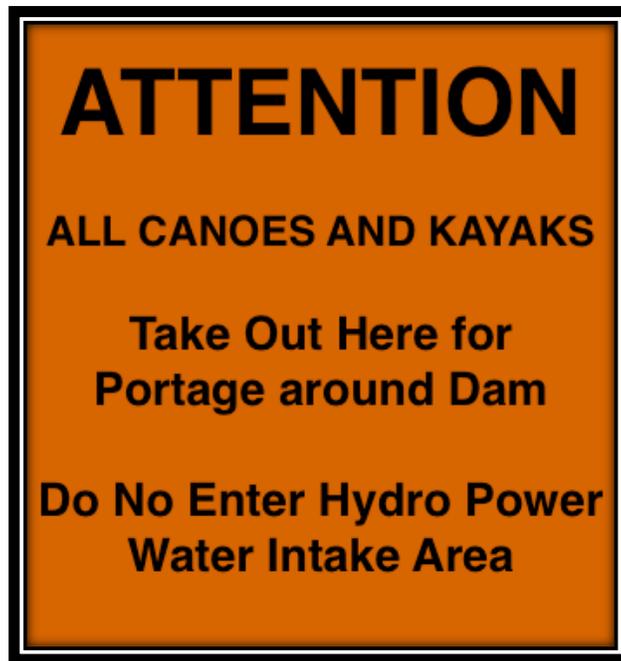


Figure 7 - Sign “E” - Canoe Takeout Area



Figure 8 - Sign “F”- Portage Marker Sign



Figure 9 - Sign “G” – Trail Marker



Figure 10 - Sign "H" – Trial Marker Sign



Figure 11 - Sign "I" – Trial Marker Sign



Figure 12 - Sign "J" – Trial Marker Sign