

2012

## **An Assessment of the Bald Eagle and Great Blue Heron Breeding Populations along High Rock, Tuckertown, Narrows, and Falls Reservoirs in Central North Carolina: 2012 Breeding Season**

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**AN ASSESSMENT OF THE BALD EAGLE AND GREAT BLUE HERON BREEDING POPULATIONS ALONG HIGH ROCK, TUCKERTOWN, NARROWS, AND FALLS RESERVOIRS IN CENTRAL NORTH CAROLINA: 2012 BREEDING SEASON**



**A Cooperative Project by:**  
**ALCOA POWER GENERATING INC.**  
**&**  
**CENTER FOR CONSERVATION BIOLOGY**  
**COLLEGE OF WILLIAM AND MARY &**  
**VIRGINIA COMMONWEALTH UNIVERSITY**

**AN ASSESSMENT OF THE BALD EAGLE AND GREAT BLUE HERON BREEDING  
POPULATIONS ALONG HIGH ROCK, TUCKERTOWN, NARROWS, AND FALLS  
RESERVOIRS IN CENTRAL NORTH CAROLINA: 2012 BREEDING SEASON**

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*Cover photo of Bald Eagle nest by B. Watts, 2012.*



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## **BACKGROUND**

### **Context**

Historically, the Bald Eagle was a common breeding species along major river systems, lakes and coastal areas throughout much of North America. The widespread use of persistent pesticides for crop management in the region resulted in dramatic declines over a 30-40 year period. By the late 1960s, most breeding populations had been decimated by eggshell thinning and associated low productivity. Concern for these populations prompted the elevation of the Bald Eagle to endangered status and led to a national effort to restore historic populations. Since the nationwide ban on many persistent pesticides in 1972, many populations have experienced gradual recoveries in productivity and total numbers. The state of North Carolina has seen an increase from no breeding pairs in the late 1960s to approximately 136 pairs as of 2008.

Work conducted by The Center for Conservation Biology in 1995 and 1996 at Alcoa Power Generating Inc.'s (APGI) Yadkin Project (FERC #2197) identified areas of consistent use by eagles in inland areas of North Carolina and suggested that nesting activity should be anticipated in the Yadkin-Pee Dee River basin. A survey of this system in 2001 provided confirmation of these suggestions. Since that survey annual efforts to monitor this population have continued. Results of the 2012 survey follow (a summary of all eagle nesting activity since 2001 is provided at the end of this report).

### **Objectives**

The objectives of the eagle survey on Yadkin Project reservoirs were 1) to document the status, distribution and productivity of nesting pairs in association with the Yadkin reservoirs and associated river corridors and 2) to increase our understanding of Bald Eagle natural history in interior regions of North Carolina. A third objective was to determine the status and distribution of breeding Great Blue Herons along the system of reservoirs.

## **METHODS**

### **Waterways**

Waterways covered by the Bald Eagle survey of 2012 included the four Yadkin Project reservoirs: 1) High Rock Reservoir, 2) Tuckertown Reservoir, 3) Narrows Reservoir, and 4) Falls Reservoir. The survey of High Rock Reservoir included the waterways between, and the mouth of, Grants Creek above 185 and the High Rock Reservoir Dam. The survey of Tuckertown Reservoir included waterways between the High Rock Reservoir Dam and the Tuckertown Dam. The survey of Narrows Reservoir included the waterways between Tuckertown Dam and Narrows Dam. The survey of Falls Reservoir included the waterway between Narrows Dam and Falls Dam.

## **Bald Eagle**

Nest Survey - All major waterways and tributaries associated with the study system were surveyed for breeding Bald Eagles. A high-wing Cessna 172 aircraft was used to systematically overfly the land surface at an altitude of approximately 100 m to detect eagle nests. Flights were flown between the shoreline and 1 km inland to cover the most probable breeding locations for Bald Eagles. All nests detected were plotted on 7.5 min topographic maps and given a unique alpha-numeric code. Each nest was examined to determine its structural condition, the type and condition of nest tree, and the condition of the surrounding landscape. The areas were searched for Bald Eagles and all detections were recorded. The survey was conducted on 17 March 2012.

Productivity Survey - All active Bald Eagle nests were rechecked to determine productivity. A Cessna 172 aircraft was used to fly low over nests to allow observers to examine nest contents and determine structural condition. The number of eaglets present was recorded along with their approximate ages. Observations of all Bald Eagles detected were recorded. The survey was conducted on 11 May 2012.

## **Great Blue Herons**

Breeding colonies of Great Blue Herons detected during survey flights were mapped and recorded. Colony locations were plotted on 7.5 min topographic quadrangles. Colonies were examined for size, substrate use, and breeding stage. Colony size estimates were rounded off using a graded scale as follows. A total count was made for colonies < 20 pairs. Estimates for colonies > 20 pairs were rounded off using a graded scale: nearest 5 for < 50, nearest 10 for 50 – 200, nearest 25 for 200 – 450.

## **SURVEY FINDINGS**

### **High Rock Reservoir**

#### **Bald Eagles**

Three Bald Eagle territories were observed to be occupied on High Rock Reservoir during 2012 surveys. The territory on upper Abbott's Creek had a single nest (DA-09-01). This nest contained a single chick early in the season but had been damaged during the spring and the chick appeared to have been lost. The territory on the upper end of High Rock Reservoir between Smith Grove and Trading Ford also had a single nest. Both previous nests within this territory were completely gone. The large white oak containing nest DA-01-01 was dead but the nest was active. The nest RO-10-01 is in the territory between St. Matthews Church and Panther Creek had a bird attending but was not productive. The older nest of this pair (RO-02-01) is absent.

**NEST: DA-01-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
DA-01-01	Davidson	Southmont	Y	Y	2

Nest Location

This nest is located along the north shoreline almost due east of Trading Ford. The nest tree is positioned on a bluff above the reservoir in a large white oak tree. The nest tree is recessed within the tree cluster such that it is difficult to observe the nest except from directly above. Nest is likely visible from the water from within the adjacent cove.

Nesting Activity

*Bird Activity* – On 17 March 2012 an adult was observed on the nest incubating with the second adult perched nearby. On 11 May 2012 2 chicks were standing in nest (estimated at 45 days old) and one adult was perched nearby.

*Nest Condition* – Nest structure is of moderate size. On 17 March 2012 nest was observed to have a deep cup that was well lined.

Nest Substrate

*Substrate Type* – Nest was built in a large white oak tree.

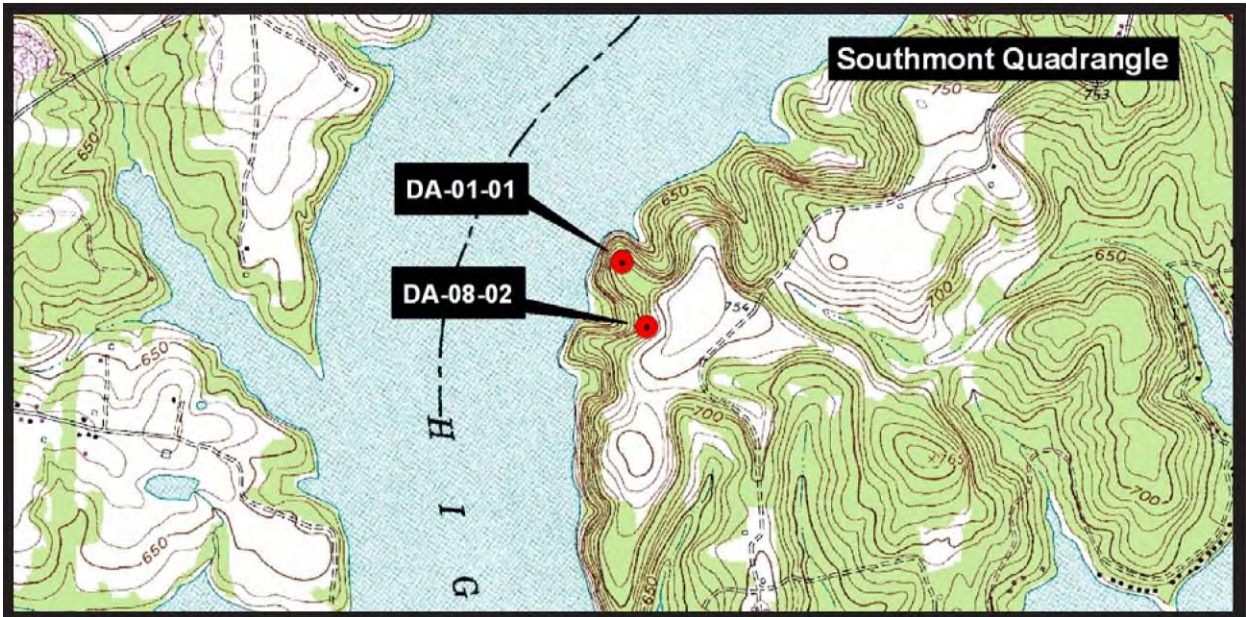
*Nest Position* – Nest is positioned in a deep stable crotch. Nest tree is on a knoll and in a supercanopy position above surrounding trees. Nest tree is in a commanding position on the landscape. Nest formerly had a deciduous crown, but now is fully exposed.

*Substrate Condition* – During the second flight in 2009, it appeared that the tree had been hit by lightning and was dying. The tree is now dead and has lost many branches from the crown.

Potential Disturbance

Nest is easily visible and in a dead tree. Nest tree is set back from shoreline such that disturbance from water should not be significant. Nest tree is in a fairly remote location with a buffer on the upland side. Disturbance potential appears to be limited.

Map location of Bald Eagle nest DA-01-01.



Aerial photos of nest DA-01-01 (photo 2012; B. Watts)





**NEST: DA-09-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
DA-09-01	Davidson	Southmont	Y	Y	1

Nest Location

This nest is located along the shoreline of Abbotts Creek east of the community of Cotton Grove and southwest of nest DA-08-01. The nest tree is isolated within a recently cleared area and was likely left because of the nest. The tree is near a new logging road. It may be visible from NC Route 3 and from the water.

Nesting Activity

*Bird Activity* – On 17 March 2012 an eagle was incubating. The second adult was not observed. On 11 May 2012 a single chick (approximately 28 days) was observed within the nest cup.

*Nest Condition* – The nest was built on lateral limbs surrounding a single leader. The nest was of moderate size for this limb configuration. On 17 March 2012 the nest was hanging from the tree at an angle. On 11 May 2012 the nest had nest material visible below the crotch and was slowly falling out of the tree. Much of the nest damage occurred during a wind storm in 2011.

Nest Substrate

*Substrate Type* – Nest was built in a thin loblolly pine tree. The tree was isolated within a recent clearcut. The tree appeared to be in good condition.

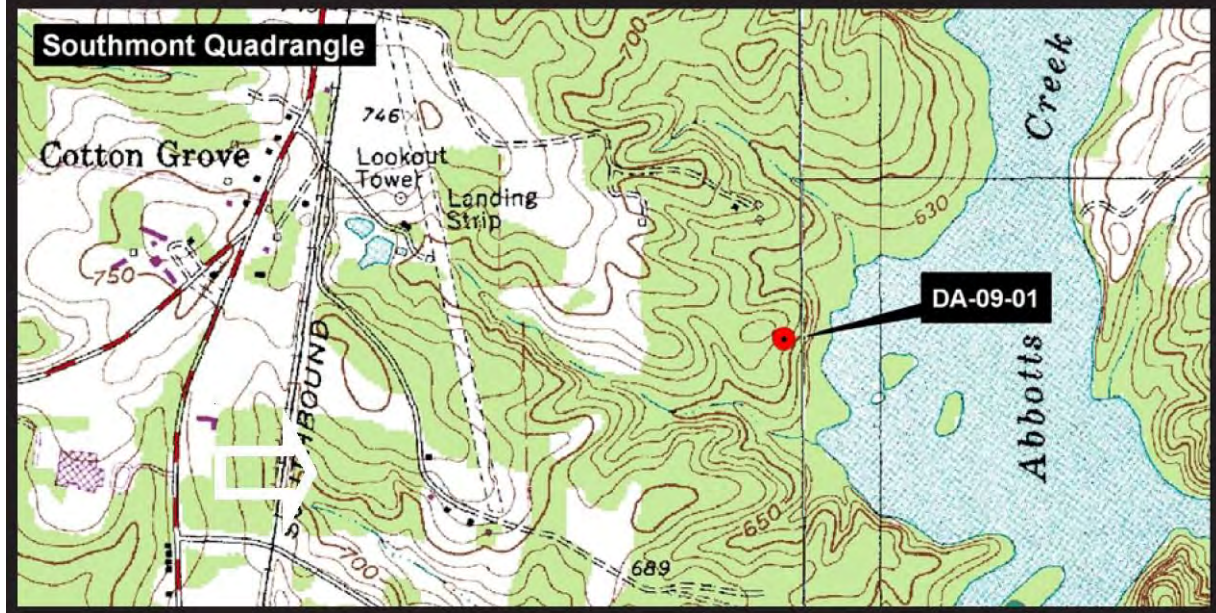
*Nest Position* – The nest was built on a whirl of lateral limbs around a single leader. The nest was under a full canopy such that sky exposure was less than 20%.

*Substrate Condition* – Nest tree was in good condition. Because of clearing of surrounding trees, it may be subject to wind throw in the future.

Potential Disturbance

The nest is isolated within a recent clearcut and is accessible by a new logging road. There was no evidence of ongoing logging activity when flights were flown. The nest is likely visible from the water and from North Carolina Route 3.

Map location of Bald Eagle nest DA-09-01.



Aerial view of Bald Eagle nest DA-09-01 (Photo 2012; B. Watts).



**NEST: RO-02-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
RO-02-01	Rowan	Gold Hill	Y	N	-----

Nest Location

This nest was located within a clearcut along the south shoreline of High Rock Reservoir between St. Matthews Church and Panther Creek and north of Bringle Ferry Road. The tree was isolated within a regenerating clearcut. The tree may not be visible from the water due to a pine buffer along the shoreline. The tree was first documented to be used for nesting in 2002 was later blown out and rebuilt in 2009.

Nesting Activity

*Bird Activity* – On 17 March 2012 there were no birds present and the nest was no longer in the tree. It is likely that this pair has moved to another location within the area, very likely the RO-10-01 nest in this report.

*Nest Condition* – The nest was completely absent from the tree.

Nest Substrate

*Substrate Type* – Nest was built in an isolated loblolly pine tree. The tree was isolated within a young regenerating pine stand. The tree appeared to be in good condition.

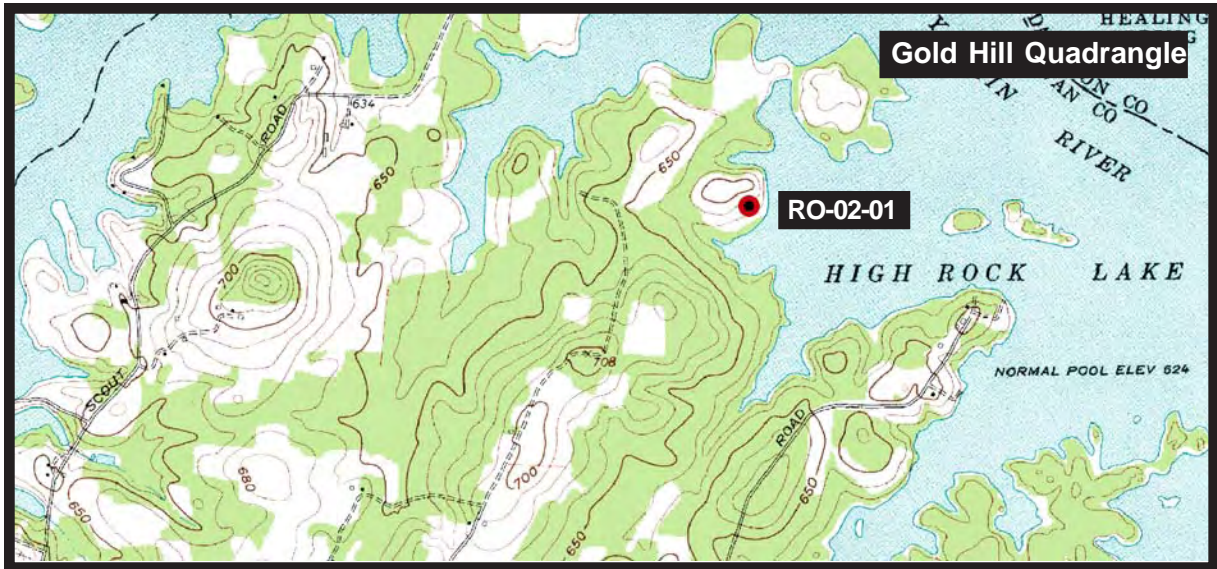
*Nest Position* – The nest was built on the surface of a pine crown where the crown had received some previous damage. There was no overhanging canopy such that the nest had 100% sky exposure.

*Substrate Condition* – Nest tree was in good condition.

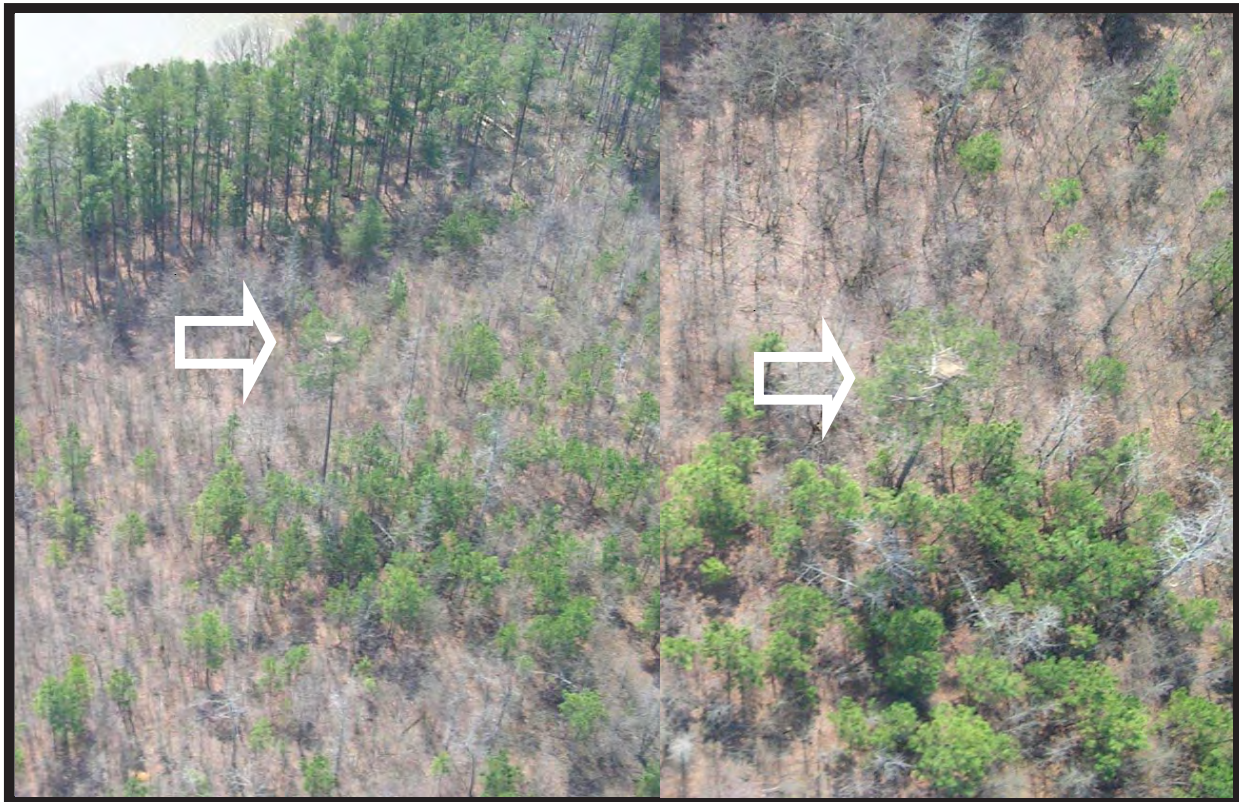
Potential Disturbance

The nest tree was isolated in a fairly recent clearcut. The site is remote from human disturbance. There is no road access into the site and it is unlikely that the nest is visible from the water due to a tree buffer along the shoreline.

Map location of Bald Eagle nest RO-02-01.



Aerial photos of nest RO-02-01 (photo 2009; B. Watts).



**NEST: RO-10-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
RO-10-01	Rowan	Gold Hill	Y	Y	2

Nest Location

This nest was located along the edge of a clearcut within a buffer strip of loblolly pines between the clearcut and the water. The nest is between St. Matthews Church and Panther Creek northwest and across the clearcut from RO-02-01. The tree may not be visible from the water due to a pine buffer along the shoreline and there are no public roads near this site.

Nesting Activity

*Bird Activity* – On 17 March 2012 there were two chicks (age 14 days) and a single adult on the nest. On 11 May 2012 two large chicks were observed within the nest.

*Nest Condition* – On 17 March 2012 the nest was in good structural condition and had a well-developed cup and lining. On 11 May 2012 the nest was still in good condition and did not appear to have sustained any damage during the season.

Nest Substrate

*Substrate Type* – Nest was built in a relatively young loblolly pine tree. The tree was positioned along the edge of a pine buffer between a regenerating pine stand and the water. Access into the nest was clearly from the upland side,

*Nest Position* – The nest was built in a top crotch of a young loblolly pine. Although the nest was near the crown, it was shaded with only 30-40% sky exposure.

*Substrate Condition* – Nest tree was in good condition.

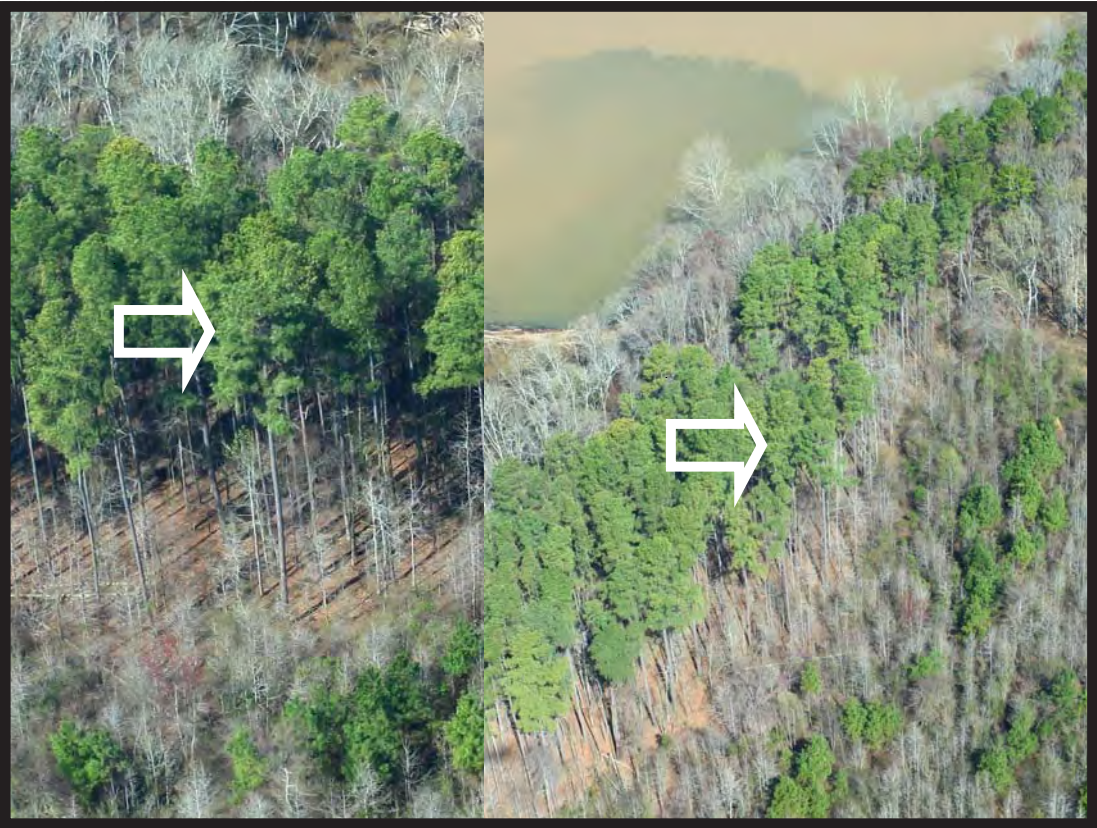
Potential Disturbance

The nest tree was along the edge of a fairly recent clearcut. The site is remote from human disturbance. There is no road access into the site and it is unlikely that the nest is visible from the water due to a tree buffer along the shoreline.

Map location of Bald Eagle nest RO-10-01.



Aerial photos of nest RO-10-01 (photo 2010; B. Watts).



## Great Blue Herons/Great Egrets

Ten breeding colonies of Great Blue Herons were detected on High Rock Reservoir. Colony size ranged from 7 to 240 pairs. Total population estimate for this reservoir was 463 breeding pairs. For the eighth year in a row, Great Egrets were found nesting on the reservoir. The largest concentration (55 pairs) were found mixed in with the largest colony of Great Blue Herons on the settling pond north of the intersection of Leonard Road and Long Ferry Road. Total population estimate for Great Egrets in the High Rock Reservoir was 60 breeding pairs.

### GBH-01

Code	County	Topo Quad	Pairs
GBH-01	Davidson	Southmont	29 Great Blue Heron

### Description

This Great Blue Heron colony was located on a small island near the Route 8 bridge in the mouth of Abbotts Creek. The island supports a mixed stand of loblolly pines and hardwoods. Nests were built in both pines and hardwoods. On 17 March, 2012, 56 pairs of Great Blue Herons were counted with 40% incubating and the remainder building. No Great Egrets were detected in the colony on either 17 March or 11 May, 2012. Over the past four years the island has become a significant roost site for Double-crested Cormorants.

*Map location of Great Blue Heron colony GBH-01.*



Aerial view of Great Blue Heron colony GBH-01 (Photo 2011; B. Watts).



## GBH-02

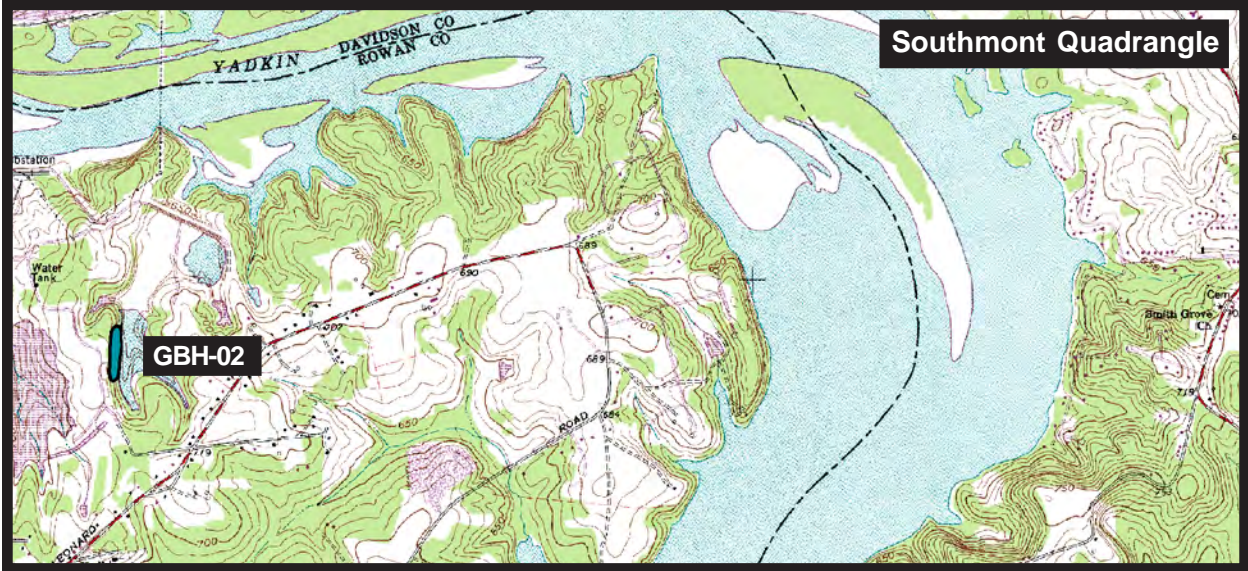
Code	County	Topo Quad	Pairs
GBH-02	Rowan	Southmont	240 GBHE, 55 GREG

### Description

This mixed Great Blue Heron and Great Egret colony was located along the western edge of one of Duke Power's settling ponds just north of the intersection of Leonard Road and Long Ferry Road. The pond was lined with a mixed stand of hardwoods and pines. A larger stand of pure loblollies was positioned further from the pond edge. Nests were built along the pond margin in both hardwoods and pines and throughout the pure pine stand. Nest distribution continued to be more restricted as in 2003 due to partial harvest of pine stand in 2002. On 17 March, 2012, 80% of Great Blue Herons were incubating and the remaining 20% were building nests. Great Egrets were nesting in the core of the subcolony occupying the pure pine stand. On 17 March, 2012, no egret pairs were present within the colony. On 11 May, 2012, 55 pairs were present, 50% incubating and 50% with chicks.



Map location of Great Blue Heron and Great Egret Colony Colony GBH-02.



Aerial view of the western portion of Great Blue Heron colony GBH-02 (Photo 2011; B. Watts).



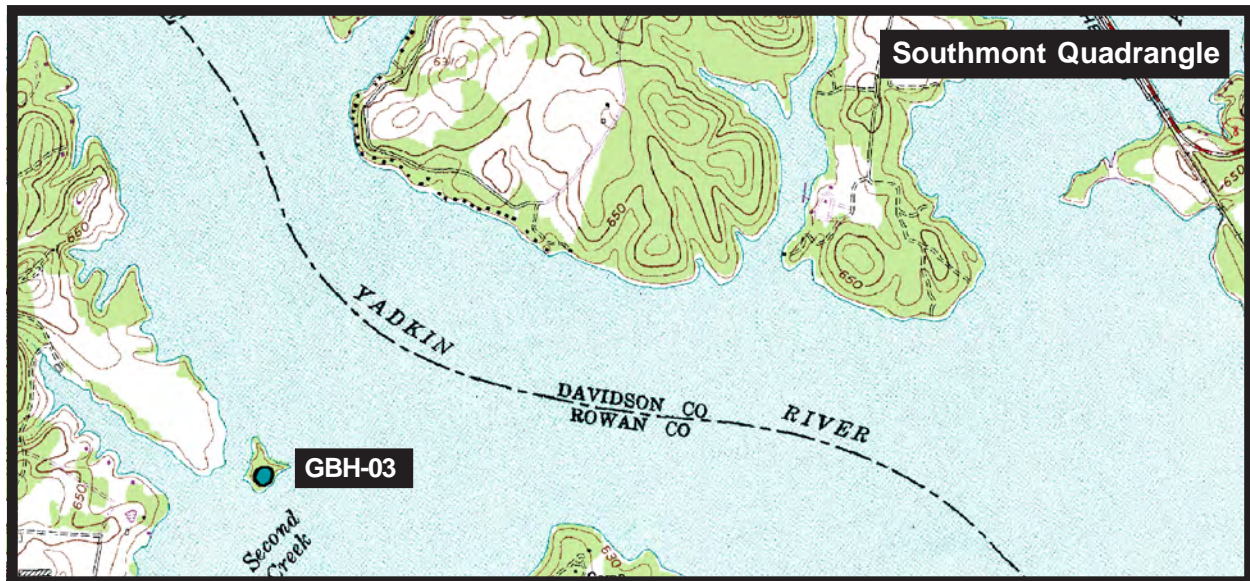
**GBH-03**

Code	County	Topo Quad	Pairs
GBH-03	Rowan	Southmont	7 Great Blue Heron

Description

This Great Blue Heron colony was located on a small, forested island in the mouth of Second Creek. The island was forested with a middle-aged loblolly pine stand. This colony increased from 21 nests in 2002 to 38 nests in 2003 to 33 nests in 2004 to 52 nests in 2005 to 55 nests in 2006 to 73 in 2007 to 75 nests in 2008 to 87 nests in 2009, 92 nests in 2010, 58 nests in 2011, to a low of 7 nests in 2012. On 17 March 2012 100% of pairs were building nests.

*Map location of Great Blue Heron colony GBH-03.*



Aerial view of Great Blue Heron colony GBH-03 (Photo 2006; B. Watts).



Aerial view of Great Blue Heron colony GBH-03 (Photo 2006; B. Watts).



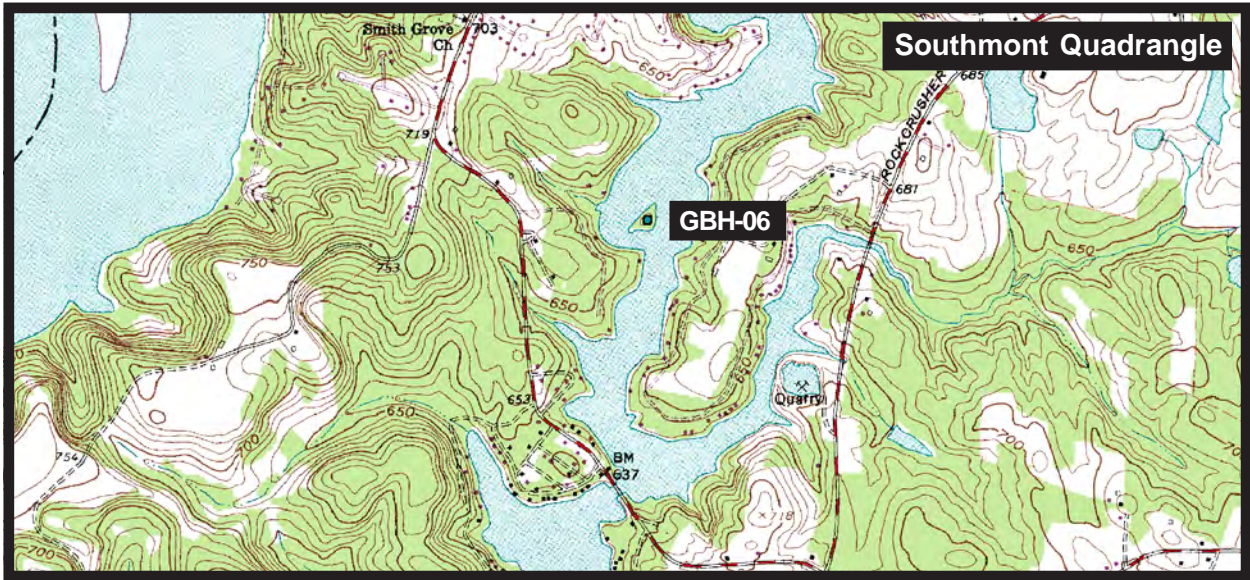
### GBH-06

Code	County	Topo Quad	Pairs
GBH-06	Rowan	Southmont	48 GBHE, 3 GREG

#### Description

This Great Blue Heron colony is located on a small forested island within Swearing Creek just above the Linwood Southmont Road bridge. The island is forested with a middle-aged pine stand. On 17 March 2012 there were 48 nesting pairs present compared to 55 pairs in 2011, 58 pairs in 2010, 55 pairs in 2009, 59 pairs in 2008, 68 pairs in 2007, and 73 pairs in 2006. An estimated 60% were incubating and 40% were building nests. On 11 May 2012 there were 3 pairs of Great Egrets all with chicks in the nest.

Map location of Great Blue Heron colony GBH-06.



Aerial view of Great Blue Heron colony GBH-06 (Photo 2011; B. Watts).



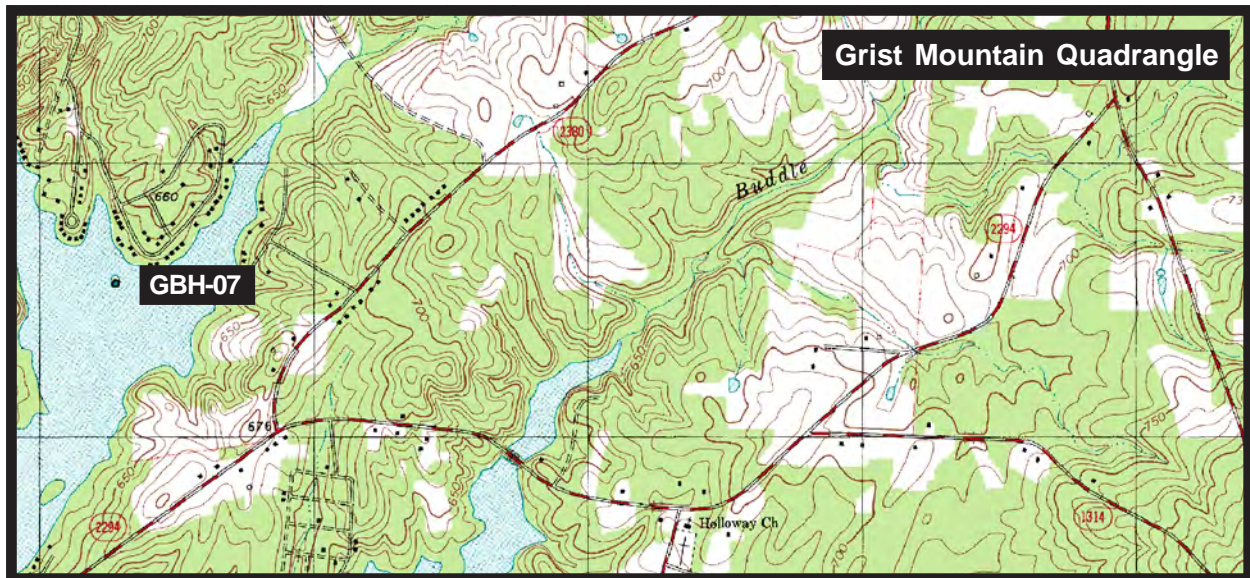
**GBH-07**

Code	County	Topo Quad	Pairs
GBH-07	Rowan	Grist Mountain	45 Great Blue Heron

Description

This Great Blue Heron colony was located on a small forested island within Abbotts Creek off shore of a small development at the end of Route 2373. The island was forested with a mix of pine and hardwood. On 17 March 2012 there were 45 pairs nesting on the island, compared to 42 in 2011. An estimated 60% of pairs were incubating.

*Map location of Great Blue Heron colony GBH-07.*



Aerial view of Great Blue Heron colony GBH-07 (Photo 2011; B. Watts).



**GBH-10**

Code	County	Topo Quad	Pairs
GBH-10	Davidson	Southmont	26 Great Blue Heron

Description

This Great Blue Heron colony was located on a small forested peninsula that forms the southeastern mouth of Abbotts Creek . The site was forested with a mix of pine and hardwood. On 17 March 2012, 26 pairs of Great Blue Herons were detected on this island. An estimated 20% were incubating, and 80% were nest building.

*Map location of Great Blue Heron colony GBH-10.*



Aerial view of Great Blue Heron colony GBH-10 (Photo 2006; B. Watts).



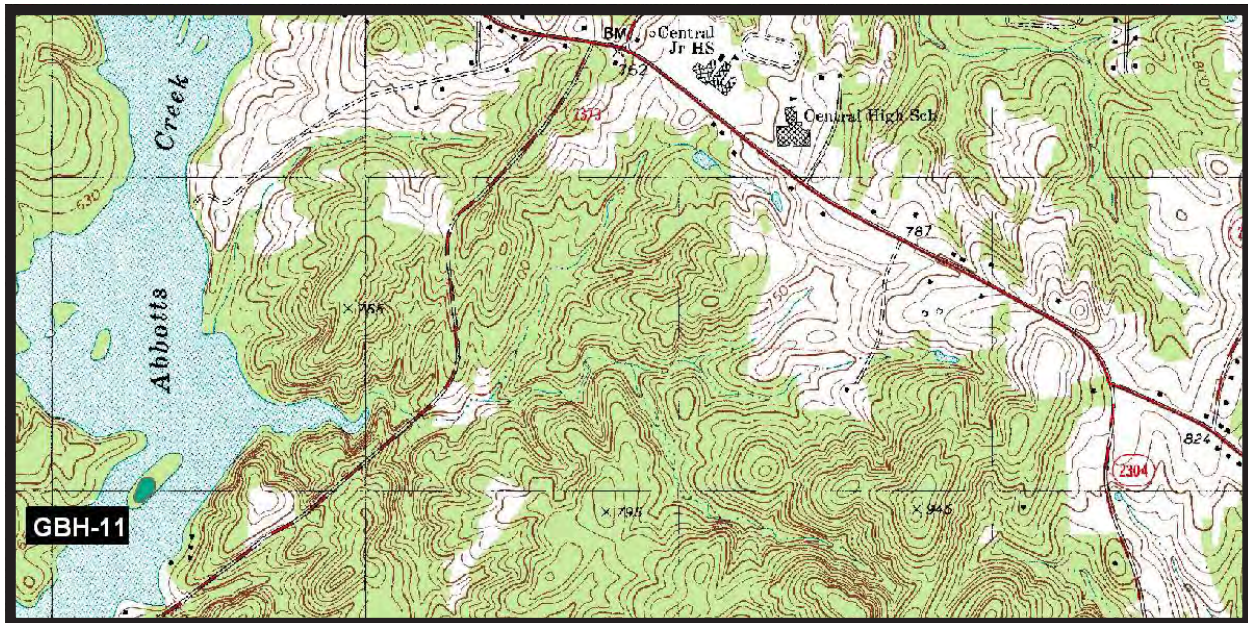
**GBH-11**

Code	County	Topo Quad	Pairs
GBH-11	Davidson	Grist Mountain	31 GBHE, 2 GREG

Description

This Great Blue Heron colony was located on a small forested island in Abbotts Creek. The site was forested with a mix of pine and hardwood. On 17 March 2012 there were 31 pairs nesting on the island. An estimated 30% of pairs were incubating and the remainder were building. Two pairs of Greg Egrets were detected on the 11 May 2012 survey, both pairs in the nest building stage.

*Map location of Great Blue Heron colony GBH-11.*



Aerial view of the southern portion of Great Blue Heron colony GBH-11 (Photo 2011; B. Watts).



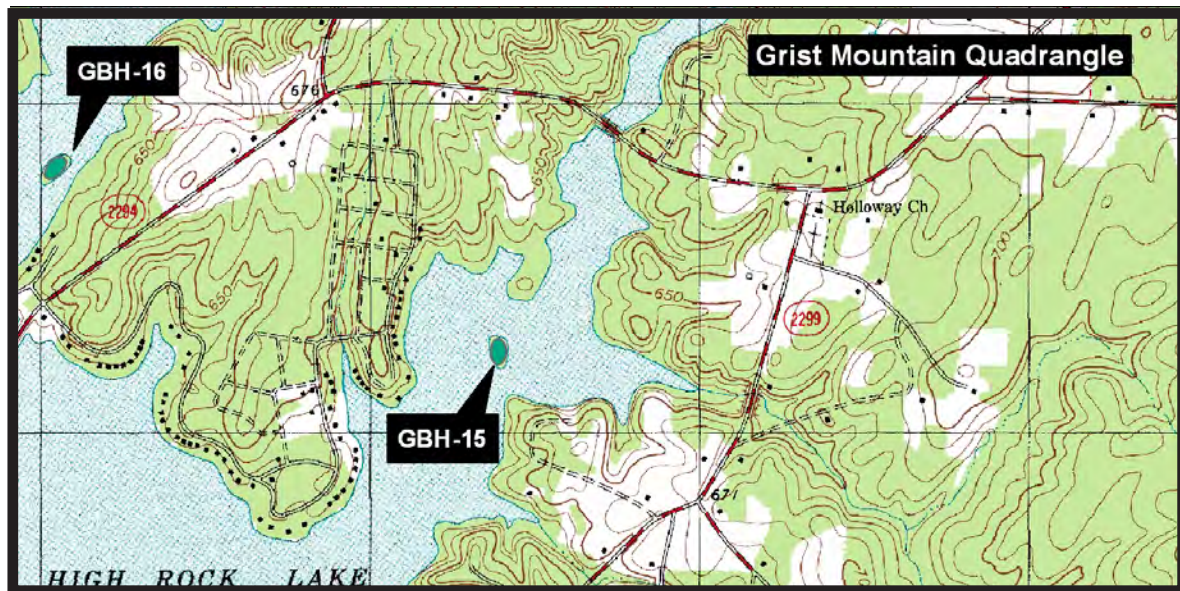
**GBH-15**

Code	County	Topo Quad	Pairs
GBH-15	Davidson	Grist Mountain	12 Great Blue Heron

Description

This Great Blue Heron colony was located on a small forested island in Abbotts Creek southwest of Holloway Church. The site was forested with a mix of pine and hardwood. On 17 March 2012 there were 12 pairs nesting on the island. Six pairs (50%) were building, 6 (50%) were in the incubation stage.

*Map location of Great Blue Heron colony GBH-15.*



Aerial view of Great Blue Heron colony GBH-15 (Photo 2010; B. Watts).





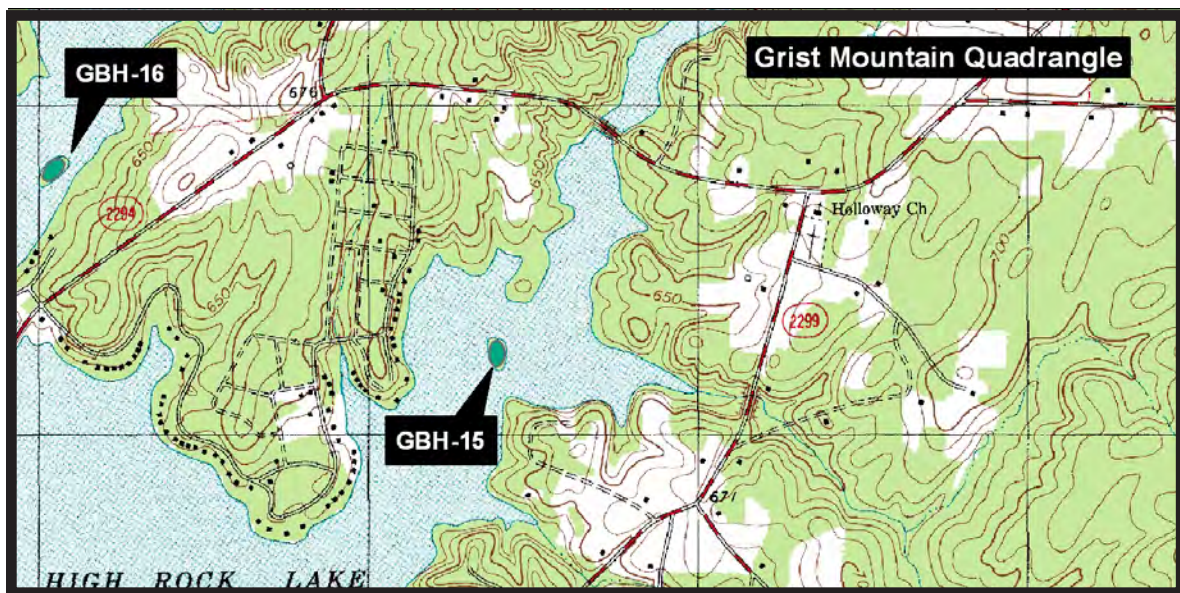
**GBH-16**

Code	County	Topo Quad	Pairs
GBH-16	Davidson	Grist Mountain	18 Great Blue Heron

Description

This Great Blue Heron colony was located on a small forested island in Abbotts Creek . The site was forested with a mix of pine and hardwood. On 17 March 2012 there were 18 pairs nesting on the island. An estimated 70% of pairs were incubating, with 30% in the nest building stage.

*Map location of Great Blue Heron colony GBH-16.*



Aerial view of Great Blue Heron colony GBH-16 (Photo 2010; B. Watts).



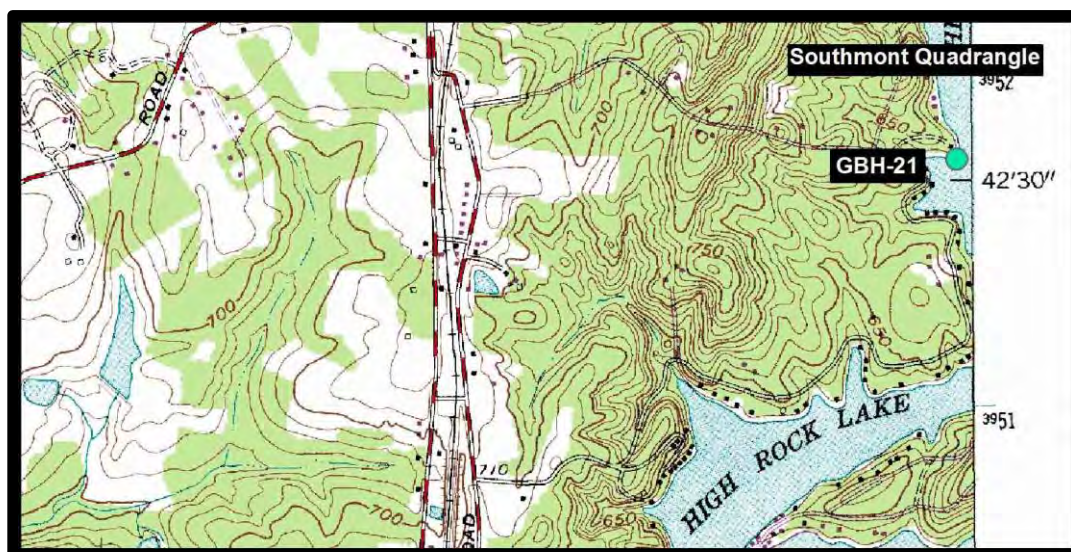
**GBH-21**

Nest Code	County	Topo Quad	Pairs
GBH-21	Davidson	Grist Mountain	7 Great Blue Heron

Description

This Great Blue Heron colony is located in a patch of forested land along Abbotts Creek at the end of Fern Creek Drive northeast of Feezor. The patch of forest is comprised of middle-aged pines. On 17 March 2012 there were 7 nesting pairs present. Four of the 7 (57%) were in incubation stage, and 3 (43%) were in nest building stage.

*Map location of Great Blue Heron colony GBH-21.*



Aerial view of Great Blue Heron colony GBH-21 (2012; B. Watts).



## Tuckertown Reservoir

### Bald Eagles

A single Bald Eagle territory was occupied within the Tuckertown Reservoir system for the tenth year. The nest (RO-02-02) was absent but the nest found nearby in 2010 (DA-10-01) was active.

#### NEST: RO-02-02

Nest Code	County	Topo Quad	Active Territory	Active Nest	Chicks Produced
RO-02-02	Rowan	High Rock	N	N	-----

#### Nest Location

This nest is located along the south shoreline just down from Cedar Creek. The nest tree is isolated within a recently clearcut area of private land above a farm. The tree is set back from the shoreline with a buffer strip of trees between the nest tree and the shoreline. The nest is not likely visible from the water due to tree buffer. The nest is likely visible from route 2152.

#### Nesting Activity

*Bird Activity* – No birds were observed in the vicinity of the nest on either 17 March or 11 May 2012. The nest has no remnant remaining.

*Nest Condition* – The nest was damaged in a wind storm in 2008. The nest is completely absent.

#### Nest Substrate

*Substrate Type* – Nest was built in an isolated loblolly pine. Nest tree was a specimen loblolly in an ideal condition to be used for a nest tree.

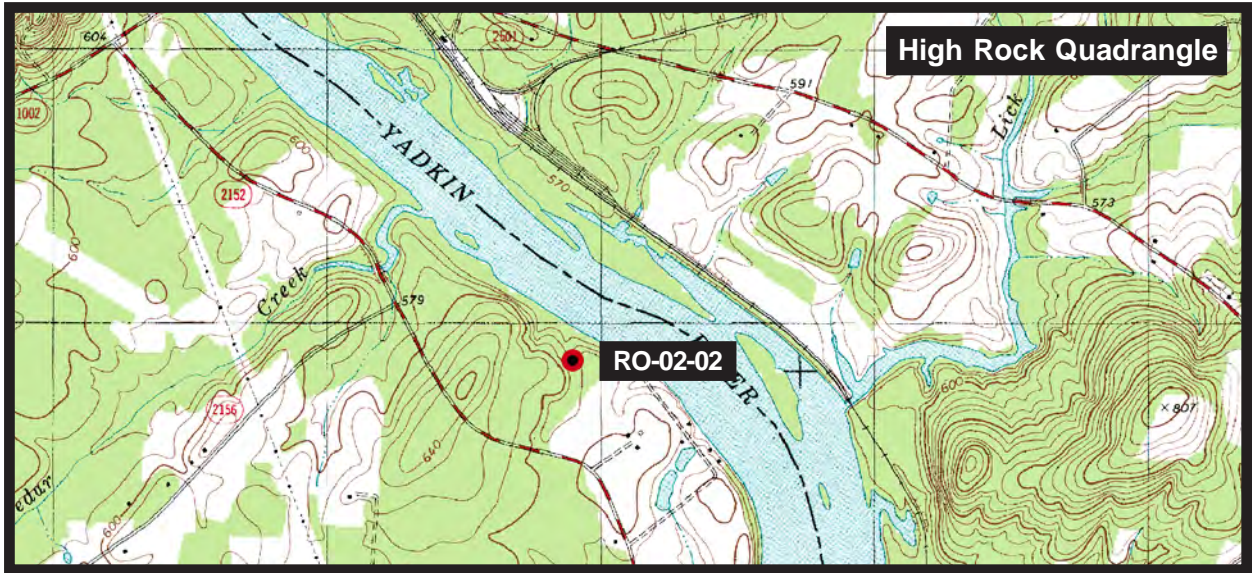
*Nest Position* – Nest was positioned in a top crotch deep below the crown. This configuration is the most common and apparently most stable position for eagle nests. Nest was under large crown with less than 20% sky exposure.

*Substrate Condition* – Nest tree appeared to be in good condition with no evidence of crown damage.

#### Potential Disturbance

Nest tree is in a fairly remote location with a considerable buffer on upland side and tree buffer on water side. Disturbance potential appears to be limited.

Map location of Bald Eagle nest RO-02-02.



Aerial view of location of Bald Eagle nest RO-02-02 (Photo 2007: B. Watts).



**NEST: DA-10-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
DA-10-01	Davidson	High Rock	Y	Y	0 chicks

Nest Location

This nest was located along the east shoreline between Lick and Cabin Creeks. The nest tree is within a buffer strip of loblolly pines between a regenerating pine stand and the water. The nest is likely visible from the water and from the railroad.

Nesting Activity

*Bird Activity* – On 17 March 2012 an adult was seen brooding at least 2 eagle chicks less than 10 days old. On 11 May 2012 no eagles were observed within the nest or nearby. The breeding attempt failed.

*Nest Condition* – The nest was in good structural condition.

Nest Substrate

*Substrate Type* – Nest was built in a loblolly pine. Nest tree was on the landward edge of a pine buffer between a regenerating pine stand and the water.

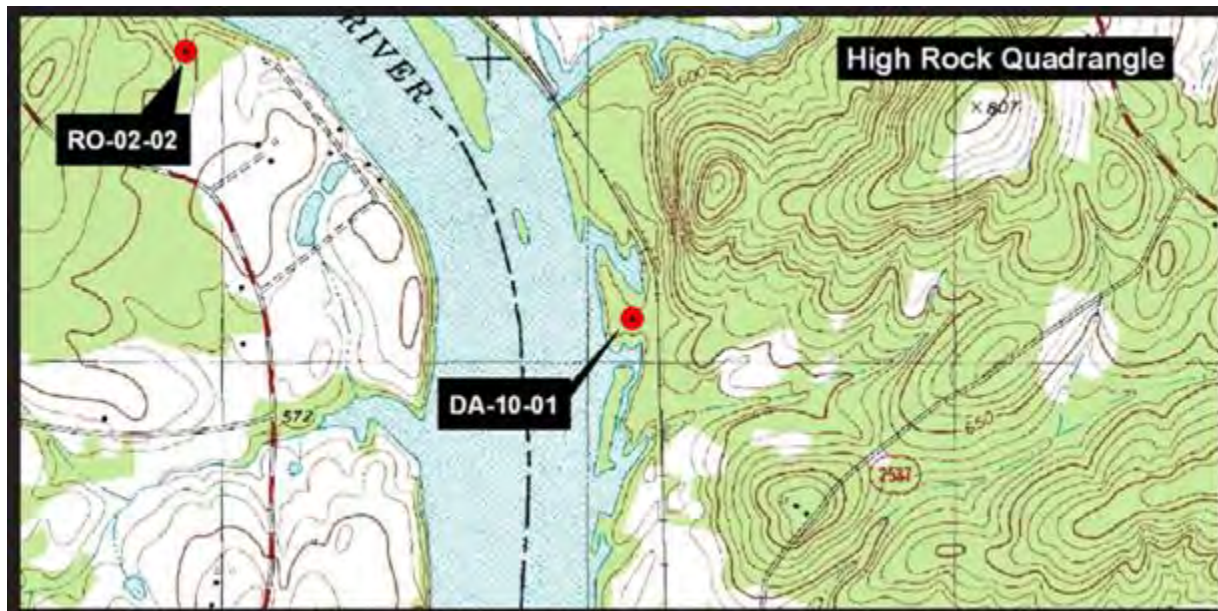
*Nest Position* – Nest was positioned on side limbs up against the main trunk and down below the crown. Nest had greater than 50% sky exposure.

*Substrate Condition* – Nest tree appeared to be in good condition with no evidence of crown damage.

Potential Disturbance

Nest may be visible from the water and the railroad tracks. Nest would be most accessible from the water side. The land is not near easy road access. Disturbance potential appears to be limited.

Map location of Bald Eagle nest DA-10-01.



Aerial view of Bald Eagle nest DA-10-01 (Photo 2012; B. Watts).



## Great Blue Herons/Great Egrets

A single colony of breeding Great Blue Herons was detected on Tuckertown Reservoir on an island just below the High Rock Dam. Total population estimate for this reservoir is 215 pairs of Great Blue Herons and 18 pairs of Great Egrets.

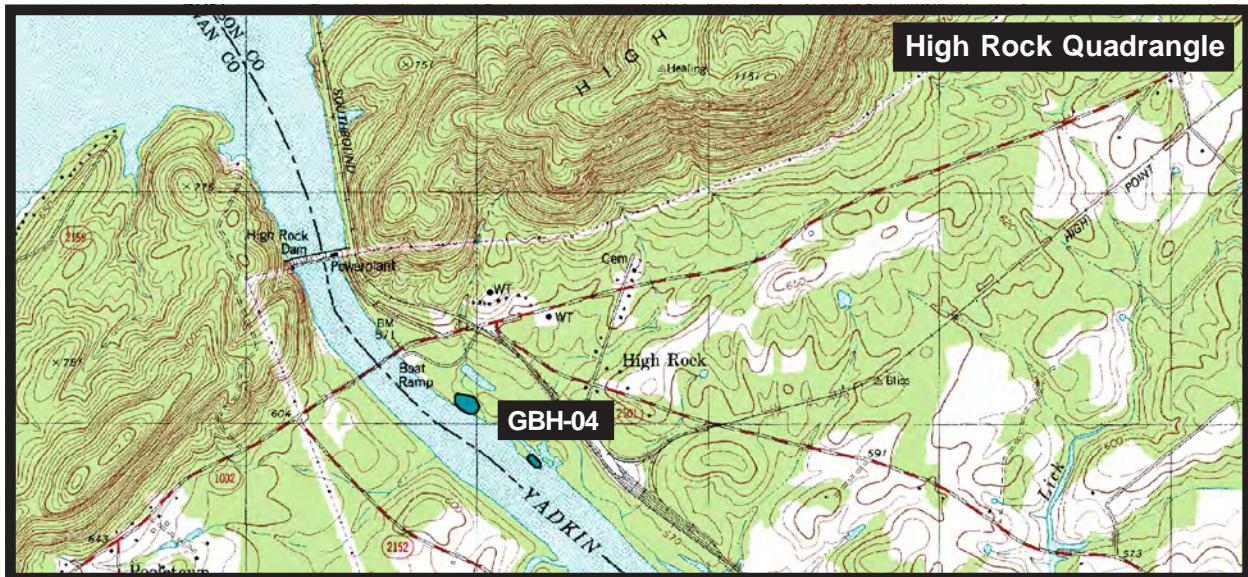
### GBH-04

Code	County	Topo Quad	Pairs
GBH-04	Davidson	High Rock	215 GBHE, 18 GREG

### Description

This mixed Great Blue Heron and Great Egret colony is located on a small forested island and the adjacent forested shoreline just below the High Rock Dam. This island is long and linear and contains a mixed stand of hardwoods and pines. The adjacent shoreline is pine-dominated. The colony is now restricted to use of the hardwood trees along the pond, whereas in previous years the colony used pine trees as well. On 17 March 2012 85% of Great Blue Herons were incubating and 8 pairs of Great Egrets were present (all in nest building stage). On 11 May 2012 18 pairs of Great Egrets were incubating.

### *Map location of Great Blue Heron colony GBH-04*



Aerial view of location of Great Blue heron colony GBH-04 (Photo 2011: B. Watts).



### Narrows Reservoir

#### Bald Eagles

One Bald Eagle nest is located along the shoreline of Narrows Reservoir. Another Bald Eagle territory (and former nest site) is located near Tuckertown Dam.

#### MO-03-01

Nest Code	County	Topo Quad	Active Territory	Active Nest	Chicks Produced
MO-03-01	Montgomery	Badin	Y	Y	0

#### Nest Location

This nest was located along a bluff set back from the shoreline on Uwharrie National Forest. The nest tree is within a scattered stand of supercanopy trees. The nest does not appear to be visible from the water along the shoreline but may be visible from logging road 6558.



### Nesting Activity

*Bird Activity* – On 17 March 2012 two adults were in the territory but there was no activity in the nest. On 11 May 2012 there were no adults nearby, and the nest had green branches as lining. It is likely that this pair made an early attempt that failed.

*Nest Condition* – Nest structure is of moderate size and similar in appearance to 2005 -2011. On 17 March 2012 the nest was in good structural condition, had a well-formed cup and fresh lining.

### Nest Substrate

*Substrate Type* – The nest was built in a live loblolly pine.

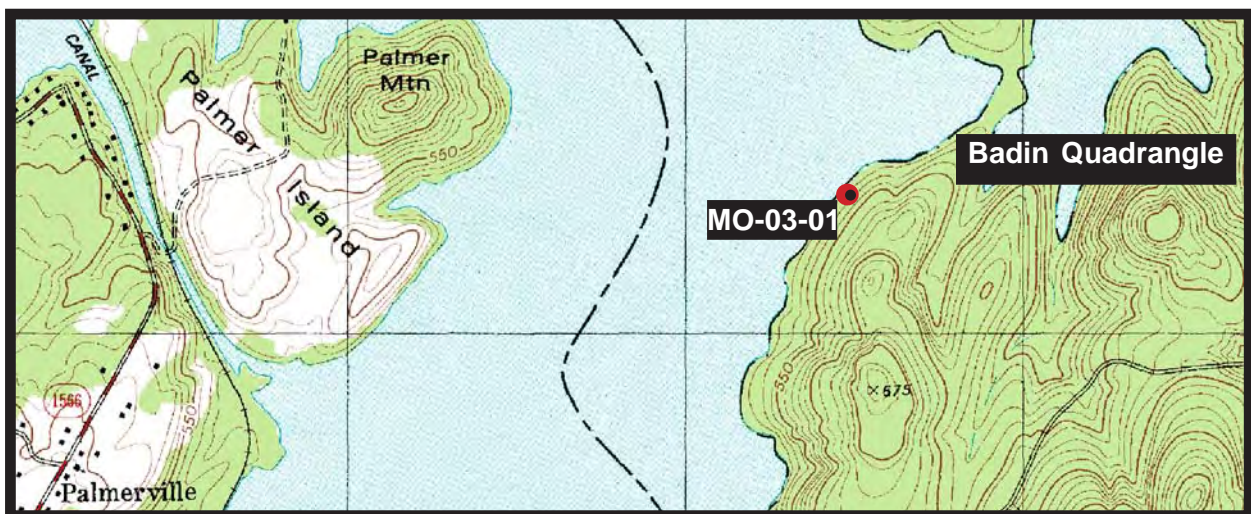
*Nest Position* – Nest is positioned on a lateral limb up against the trunk. Crown limbs are fairly sparse such that sky exposure was 70%.

*Substrate Condition* – Nest tree appeared to be in relatively good condition.

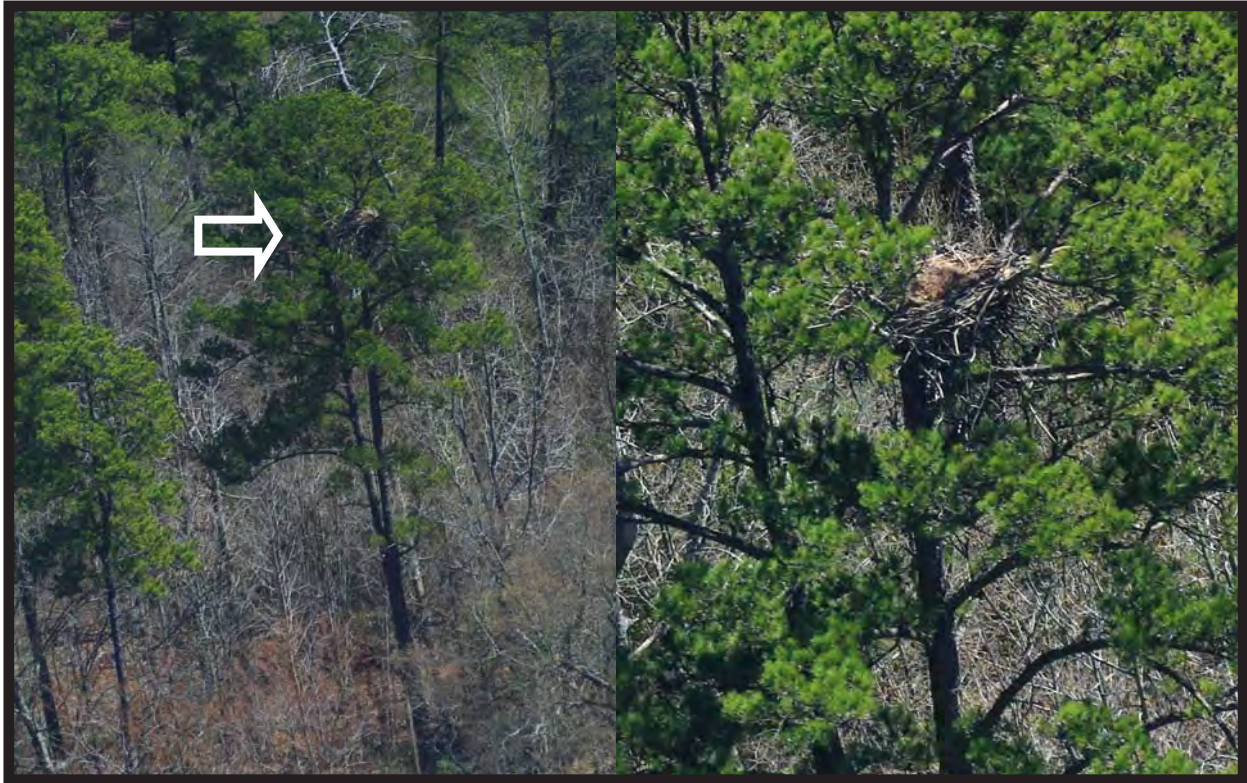
### Potential Disturbance

Nest tree was protected by a visual buffer of scattered trees. It does not appear to be visible from shoreline but may be seen and accessed from nearby logging road.

*Map location of Bald Eagle nest MO-03-01.*



Aerial photo showing location of Bald Eagle nest MO-03-01 (Photos 2011: B. Watts).



**NEST: ST-12-01**

Nest Code	County	Topo Quad	Active Territory	Active Nest	Chicks Produced
ST-12-01	Stanley	New London	Y	Y	2

Nest Location

This nest was located near a power line right of way southeast of Tuckertown Dam. The tree may not be visible from the water due to a pine buffer along the shoreline and there are no public roads near this site.

Nesting Activity

*Bird Activity* – On 17 March 2012 there were two chicks (age 18 to 20 days) and a single adult on the nest. On 11 May 2012 two fledging-age chicks were observed within the nest area.

*Nest Condition* – On 17 March 2012 the nest was in good structural condition and had a well-developed cup and lining. On 11 May 2012 the nest was still in good condition.

### Nest Substrate

*Substrate Type* – Nest was built in a loblolly pine tree. The tree is positioned along a power line corridor.

*Nest Position* – The nest was built in a top crotch of a loblolly pine. Although the nest was near the crown, it was shaded with only 30-40% sky exposure.

*Substrate Condition* – Nest tree was in good condition.

### Potential Disturbance

The nest tree was along a power line corridor. The site is remote from human disturbance. There is no road access into the site and it is unlikely that the nest is visible from the water due to a tree buffer along the shoreline.

*Map location of Bald Eagle nest ST-12-01.*



Aerial view of Bald Eagle nest ST-12-01 (Photo 2012; B. Watts).



**NEST: MO-11-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
MO-11-01	Montgomery	New London	Y	N	-----

Nest Location

This nest was located within a thinned stand of old pine northeast of the Tuckertown Dam. The nest tree is on high ground above the reservoir but below and east of the main bluff. The tree is not likely visible from the water but may be reached from a dirt road.

Nesting Activity

*Bird Activity* – On 17 March 2012 no birds were detected within the territory. No birds were detected on 11 May 2012.

*Nest Condition* – The nest is now absent from the tree.

Nest Substrate

*Substrate Type* – Nest was built in a loblolly pine that was isolated within a scattered stand. The tree and nest had good crown access from all sides.

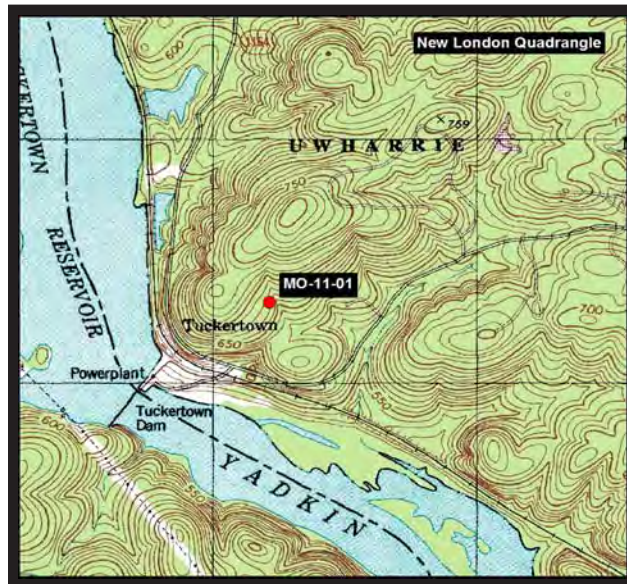
*Nest Position* – The nest was built on a lateral array of limbs against the primary leader. The nest was low in the tree but had about 50% sky exposure.

*Substrate Condition* – Nest tree was in good condition.

Potential Disturbance

The nest tree was in a stand of older loblollies that had been thinned. The site is not visible from the water. There is a dirt road running through the stand that would provide access to the tree. It is not clear if the nest is visible from that road.

Map location of Bald Eagle nest MO-11-01.



Aerial photos of nest MO-11-01 (photo 2011; B. Watts).



## Great Blue Herons/Great Egrets

Six colonies of breeding Great Blue Herons were detected within Narrows Reservoir during 2012. Total population estimate for this reservoir was 249 pairs. For the third year, Great Egrets were discovered nesting on this reservoir. Five Great Egret pairs nested within GBH-05. For the second time within the entire reservoir system 215 Double-crested Cormorants were found nesting in GBH-08, up from 83 in 2011.

### GBH-05

Code	County	Topo Quad	Pairs
GBH-05	Montgomery	Badin	185 GBHE, 5 GREG

### Description

This mixed Great Blue Heron and Great Egret colony was located on a small forested island near the Pine Haven residential development at the confluence of Beaverdam and Reynolds Creeks. The drainage is highly developed in this area with considerable boat traffic. The island supports a middle-age stand of loblolly pines that has numerous canopy gaps. Nests were built throughout the stand. The colony was estimated to contain 185 pairs of Great Blue Herons and 5 pairs of Great Egrets. On 17 March 2012 approximately 85% of Great Blue Heron pairs were incubating and 3 Great Egret pairs were building. On 11 May 2012 5 pairs of Great Egrets were incubating within the colony.

### Map location of Great Blue Heron colony GBH-05



Aerial views of Great Blue Heron and Great Egret colony GBH-05 (Photos 2006: B. Watts).





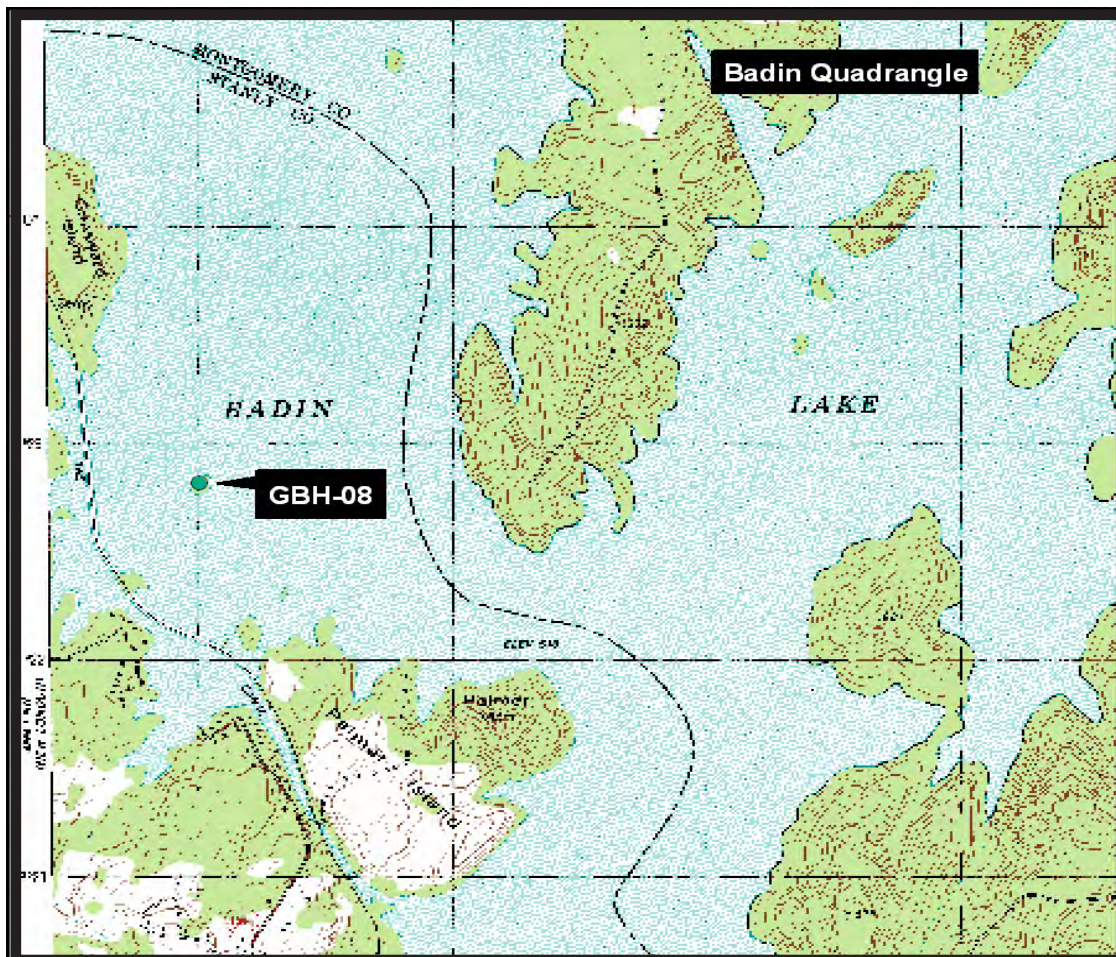
**GBH-08**

Code	County	Topo Quad	Pairs
GBH-08	Stanly	Badin	25 GBHE, 215 DCCO

Description

This mixed Great Blue Heron and Double-crested Cormorant colony was located on a small forested island along the western shoreline of Badin Lake between Graveyard Island and Palmer Island. The island is well isolated from shoreline but subject to regular boat traffic. Nests were scattered in loblolly pines throughout the center of the island. On 17 March 2012 50% of the 25 pairs were incubating and remaining were building. On 11 May 2012 215 pairs of Double-crested Cormorants were found nesting within the colony. Half of these birds were incubating, the other 50% had chicks.

*Map location of Great Blue Heron and double-crested cormorant colony GBH-08.*



Aerial views of Great Blue Heron and Double-crested Cormorant colony GBH-08 (Photos 2011: B. Watts).



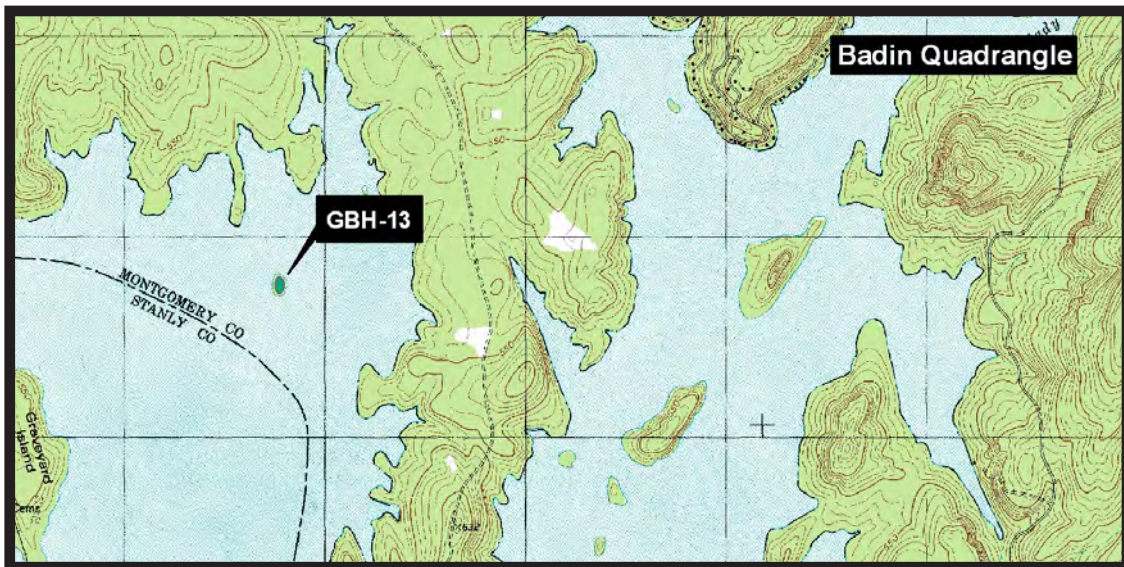
**GBH-13**

Code	County	Topo Quad	Pairs
GBH-13	Stanly	Badin	5 Great Blue Heron

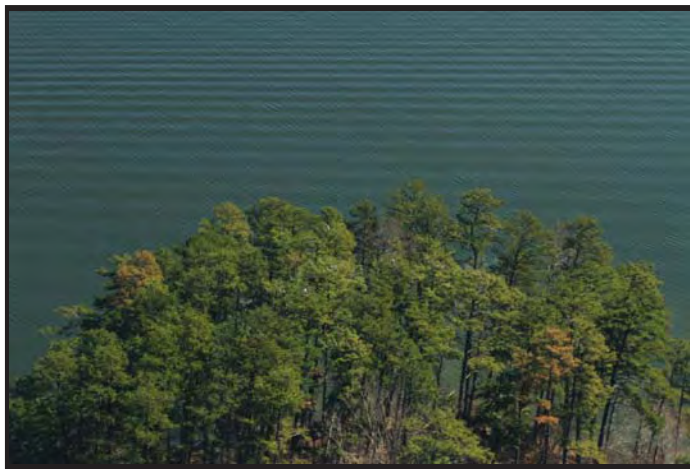
Description

This Great Blue Heron colony was located on a small forested island near the eastern shoreline of Badin Lake and northeast of Graveyard Island. The island is well isolated from shoreline. The forest was a mix of hardwoods and loblolly pines. Nests were scattered in loblolly pines throughout the center of the island. On 17 March 2012 all pairs were in the nest building stage.

*Map location of Great Blue Heron colony GBH-13.*



Aerial view of Great Blue Heron colony GBH-13 (Photo 2011: B. Watts).



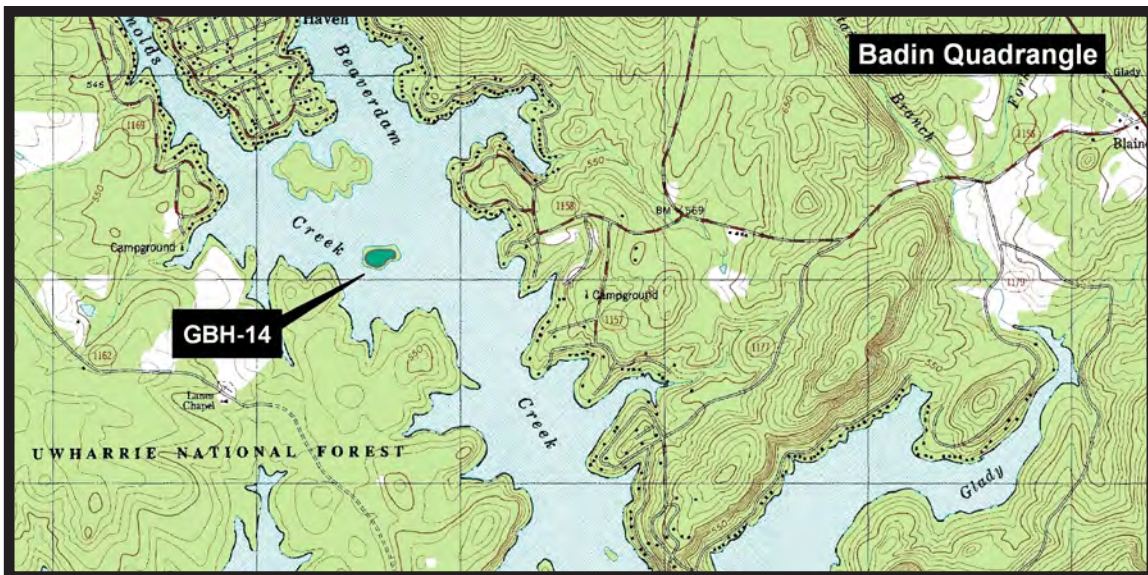
**GBH-14**

Code	County	Topo Quad	Pairs
GBH-14	Montgomery	Badin	22 Great Blue Heron

Description

This Great Blue Heron colony was located on a small forested island within the confluence of Reynolds and Beaverdam Creeks. The island is well isolated from the shoreline. The forest was dominated by loblolly pines. Nests were scattered across the island but in two clusters. On 17 March 2012 60% of pairs were incubating and the remainder in the nest building stage.

*Map location of Great Blue Heron colony GBH-14.*



*Aerial view of Great Blue Heron colony GBH-14 (Photo 2009: B. Watts)*

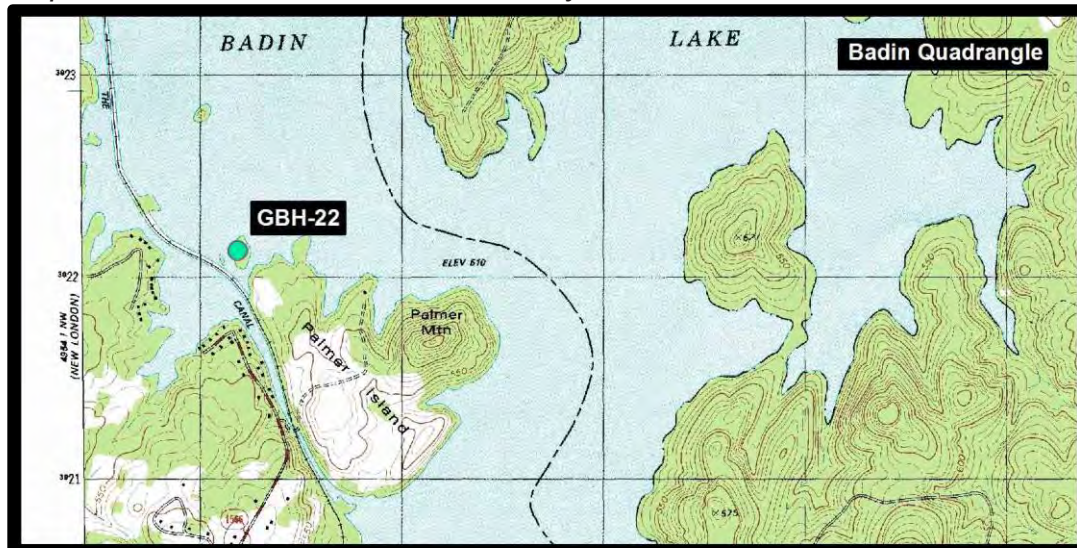


**GBH-22**

Nest Code	County	Topo Quad	Pairs
GBH-22	Stanley	Badin	12 Great Blue Heron

Description

This Great Blue Heron colony is located in a patch of forested land along Badin Lake on the northwest corner of Palmer Island. On 17 March 2012 there were 12 nesting pairs present. On this date 10% were in incubation stage, and 90% were in the nest building stage.

*Map location of Great Blue Heron colony GBH-22.*

Aerial view of Great Blue Heron colony GBH-22 (2012; B. Watts).



## Falls Reservoir

### Bald Eagles

One Bald Eagle nest was present along this waterway during 2012. The nest (ST-07-01) in a white oak below the dam was completely gone. The replacement nest (ST-08-01) was also absent. The nest (ST-10-01) was active.

#### NEST: ST-08-01

Nest Code	County	Topo Quad	Active Territory	Active Nest	Chicks Produced
ST-08-01	Stanly	Badin	Y	N	-----

#### Nest Location

This nest was located within a stand of mixed forest near the shoreline on Morrow Mountain State Park. The nest tree is just north of an active parking lot. The nest was in a forest stand with buffers on all sides. The nest is likely visible during the winter months from both the water and the parking lot.

#### Nesting Activity

*Bird Activity* – On 17 March and 11 May 2012 no birds were associated with this territory.

*Nest Condition* – On 17 March 2012 this nest was absent.

#### Nest Substrate

*Substrate Type* – The nest was built in a supercanopy loblolly pine. The tree was one of several scattered older pines supercanopy over hardwoods.

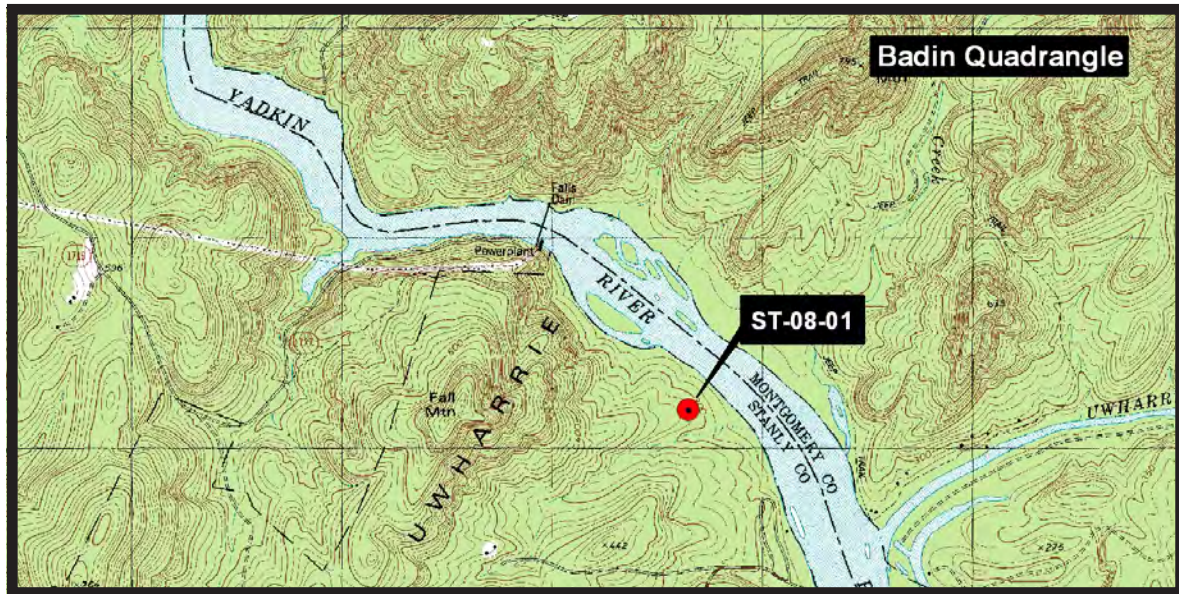
*Nest Position* – The nest was built in a deep crotch in a very low position under the tree crown. The nest surface likely had only 10-20% sky exposure due to its low position.

*Substrate Condition* – The nest tree was in good condition.

#### Potential Disturbance

Nest tree was protected by a forest buffer on all sides. However, the nest was likely visible from both the parking lot and from the water during winter and summer. The nest is fairly close to a public parking lot that appears to receive considerable use. There is potential for human disturbance at this site although there is no current nesting territory here.

Map location of Bald Eagle nest ST-08-01.



Two different aerial views of nest ST-08-01 (photo 2008, 2011: B. Watts).



**NEST: ST-10-01**

<b>Nest Code</b>	<b>County</b>	<b>Topo Quad</b>	<b>Active Territory</b>	<b>Active Nest</b>	<b>Chicks Produced</b>
ST-10-01	Stanly	Badin	Y	Y	at least 1

Nest Location

This nest was located within a stand of mixed forest near the shoreline on Morrow Mountain State Park. The nest tree is northwest of ST-08-01. The nest was in a forest stand with buffers on all sides. The nest is likely visible during the winter months from both the water and the parking lot.

Nesting Activity

*Bird Activity* – On 17 March 2012 an adult was near the nest that had 2 chicks approximately 18 days old. On 11 May 2012 a single chick was near the nest on a limb.

*Nest Condition* – On 17 March 2012 this nest was in good structural condition with a well-formed cup and lining. The nest was of moderate size.

Nest Substrate

*Substrate Type* – The nest was built in a supercanopy loblolly pine in a cluster of similar sized trees.

*Nest Position* – The nest was built in a spray of limbs surrounding a single-leader top. The nest surface had less than 30% sky exposure.

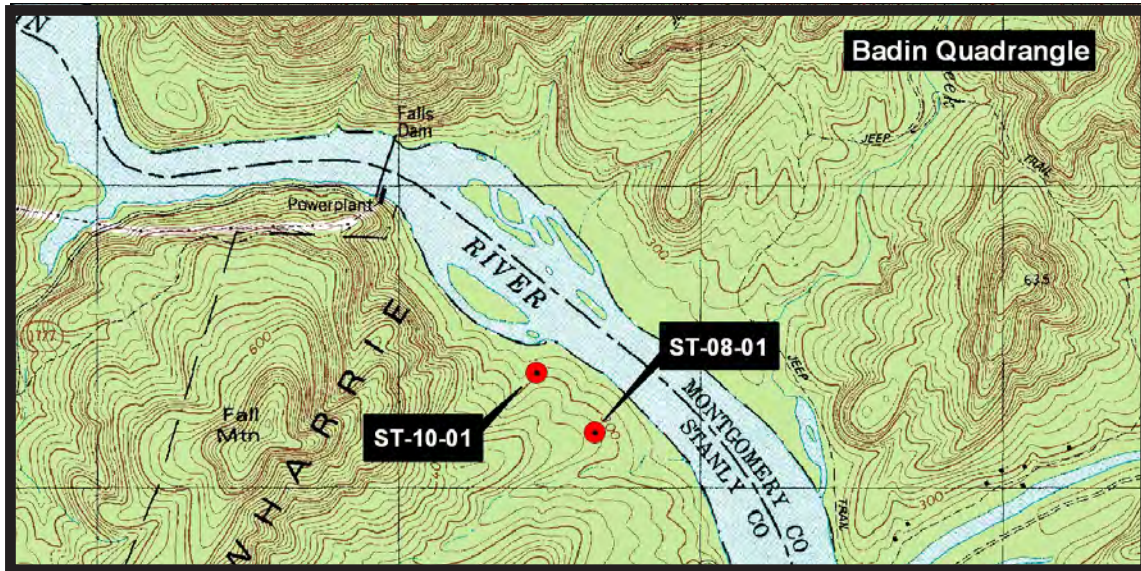
*Substrate Condition* – The nest tree was in good condition.

Potential Disturbance

Nest tree is protected by a forest buffer on all sides. The nest is close to the water and may be visible during the winter. Given the location, potential for human disturbance seems low.



Map location of Bald Eagle nest ST-10-01.



Aerial view of nest ST-10-01 (photo 2011: B. Watts).



### Great Blue Heron

No Great Blue Heron colonies were detected on Falls Reservoir. Nesting habitat is fairly limited on this waterway. The small forested islands located on the upper reach are the most likely location for future breeding. However, potential for colonization appears limited.

