



North Carolina Department of Environment and Natural Resources

Division of Water Resources

Pat McCrory
Governor

Thomas A. Reeder
Director

John E. Skvarla, III
Secretary

**FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT FOR THE CHARLOTTE MECKLENBURG UTILITIES DEPARTMENT
MODIFICATION OF INTERBASIN TRANSFER CERTIFICATE**

Pursuant to the requirements of the Surface Water Transfers Act [G.S. 143-215.221] and the State Environmental Policy Act (G.S. 113A), the Charlotte Mecklenburg Utilities Department (CMUD) has prepared an environmental assessment (EA). This EA has been prepared to support CMUD's request to eliminate Condition 3 from its Interbasin Transfer (IBT) Certificate, issued by the Environmental Management Commission (EMC) on March 14, 2002 under the provisions of G.S. 143-215.221.

The IBT Certificate issued by the EMC allows CMUD to transfer 33 million gallons per day (MGD) from the Catawba River Basin to the Rocky River Basin. Due to concerns that impacts to the Carolina heelsplitter, a federally-listed endangered species, had not been sufficiently evaluated, the EMC created a condition to exclude Goose Creek from the area to be served by the interbasin transfer:

Condition 3 of the certificate states:

The Goose Creek subbasin in Mecklenburg County is removed from the area to be served by the IBT. A moratorium on the installation of new interbasin transfer water lines (water lines crossing the ridgeline) into Goose Creek subbasin is in effect until the impacts of additional urban growth on the endangered species are fully evaluated.

At the time the certificate was issued, it was assumed that Goose Creek Watershed protection measures would be addressed in an environmental study developed for a new wastewater plant under consideration by Union, Cabarrus, and Mecklenburg Counties. The wastewater treatment plant effort has since been abandoned and watershed protection needs within Goose Creek have been addressed through separate local and state level initiatives, most specifically the Town of Mint Hill's 2010 Post-Construction Ordinance (PCO). The Town of Mint Hill's PCO addresses the action items listed in the NC Department of Environment and Natural Resources Site Specific Water Quality Management Plan for the Goose Creek Watershed 15A NCAC 2B .0600-.0609, approved by the EMC in 2008.

As stated in 15A NCAC 02B .0601, *"The purpose of the actions required by this site-specific management strategy is for the maintenance and recovery of the water quality conditions required to sustain and recover the federally endangered Carolina heelsplitter (Lasmigona decorata) species. Management of the streamside zones to stabilize streambanks and prevent sedimentation are critical measures to restore water quality to sustain and enable recovery of the federally endangered Carolina heelsplitter."*

Some of the mitigation and protection measures specifically required by the PCO and currently being implemented by the Town of Mint Hill include:

1611 Mail Service Center, Raleigh, North Carolina 27699-1611
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-707-9000 FAX: 919-733-3588
Internet: www.ncwater.org

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- I. The control of storm water for projects disturbing 1 acre or more of land
 - Requires Storm Water Management Permit for new development activities that disturb 1 acre or more and result in increased impervious area.
 - Controls and treats difference in runoff from pre- to post-development conditions for 1-year, 24-hour storm.
 - Removes 85% of total suspended solids.
 - Exceeds runoff volume requirement of EMC rule by requiring that storm water treatment systems be installed to control the volume leaving the project site at post-development for the 1-year, 24-hour storm.
 - Town of Mint Hill accepts maintenance and operational responsibility so as to preserve and continue a BMP's design functions.
- II. The control of wastewater discharges and toxicity for streams supporting the Carolina heelsplitter
 - No new NPDES wastewater discharges or expansions to existing discharges
 - No new onsite sanitary sewage systems within riparian buffers
 - No activity that would result in direct or indirect discharge is allowed if it causes toxicity to Carolina heelsplitter
 - When possible, action shall be taken to reduce ammonia to achieve 0.5 mg/L or less of total ammonia.
- III. The establishment and maintenance of riparian buffers
 - Exceeds EMC requirement by requiring buffers on all intermittent and perennial streams as well as ponds, lakes, and reservoirs based on NC DWQ's *Identification Methods for the Origins of Intermittent and Perennial Streams*.
 - Requires undisturbed riparian buffers within 200 feet of waterbodies within the 100-year floodplain and 100 feet of waterbodies not within the 100-yr floodplain.
 - Direct discharges of runoff to streams are not allowed.
- IV. Other requirements
 - Sewer lines and associated structures must be a minimum of 50 feet from jurisdictional wetlands associated with the floodplain.
 - Undisturbed Open Space is required for new development.

The Division of Water Resources has determined that the analysis of the potential environmental impacts set forth in the EA and mitigative measures set forth in the PCO support a Finding of No Significant Impact such that preparation of an environmental impact statement will not be required. This decision is based upon the requirements of 15A NCAC 2B .0600-.0609, information in the attached EA, and review by governmental agencies. This FONSI completes the environmental review record, which is available for inspection and comment for 30 days at the State Clearinghouse.



Thomas A. Reeder
Division of Water Resources

1 2/19/13
Date

FOR LEAD STATE AGENCY USE ONLY

Conclusion Statement *(Must be completed and signed by responsible state agency and submitted with the EA document to the State Clearinghouse.)*

Select the appropriate statement below:

After preparation/review of this EA, the responsible state agency has concluded there is a *Finding of No Significant Impact (FONSI)* and will not be preparing an *Environmental Impact Statement (EIS)*. (Attach any additional information regarding this conclusion that you deem important to this finding.)

The agency has completed this EA and is hereby submitting it for review and comment. After a consideration of the comments received, the agency will proceed with a *FONSI* or prepare an *EIS*.

NC DENR/DWR
Agency

Signed



Submission Instructions

Note to non-state agency document preparer:

Documents completed for state agencies must first be sent to the appropriate agency for approval and completion of the *Conclusion Statement* prior to State Clearinghouse submission. Contact the appropriate agency for its submission procedures. Documents prepared for the N.C. Department of Environment and Natural Resources will be subject to departmental review prior to submission to the State Clearinghouse.

An EA should not exceed 25 pages in length, excluding exhibit materials. **Sixteen (16)** copies of this document with the cover letter and *Conclusion Statement* should be submitted to the State Clearinghouse, N.C. Department of Administration, Room 5106c, 116 West Jones Street, Raleigh, North Carolina 27603. **Mailed copies** need to be sent to State Clearinghouse, 1301 Mail Service Center, Raleigh, N.C. 27699-1301. For the review schedule and submission deadline dates, call the State Clearinghouse at (919) 807-2324.



North Carolina Department of Administration

Pat McCrory, Governor

Bill Daughtridge, Jr., Secretary

April 8, 2013

Ms. Toya Ogallo
NCDENR
Division of Water Resources
1611 Mail Service Center
Raleigh, North Carolina 27699-1611

Re: SCH File # 13-E-4300-0339; EA/FONSI; Proposed project is for the addition of the Goose Creek Watershed to IBT Certificate.

Dear Ms. Ogallo:

The above referenced environmental impact information has been reviewed through the State Clearinghouse under the provisions of the North Carolina Environmental Policy Act.

No comments were made by any state/local agencies in the course of this review. Therefore, no further environmental review action on your part is required for compliance with the Act.

Sincerely,

A handwritten signature in cursive script that reads "Crystal Best".

Crystal Best

State Environmental Review Clearinghouse

cc: Region F

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

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

Location Address:
116 West Jones Street
Raleigh, North Carolina

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

E456

COUNTY: MECKLENBURG

H12: OTHER

STATE NUMBER: 13-E-4300-0339

DATE RECEIVED: 03/05/2013

AGENCY RESPONSE: 04/01/2013

REVIEW CLOSED: 04/04/2013

MS LYN HARDISON
CLEARINGHOUSE COORDINATOR
DENR LEGISLATIVE AFFAIRS
GREEN SQUARE BUILDING - MSC # 1601
RALEIGH NC

REVIEW DISTRIBUTION

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CENTRALINA COG
DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: NCDENR
TYPE: State Environmental Policy Act
Environmental Assessment

DESC: Proposed project is for the addition of the Goose Creek Watershed to IBT Certificate.

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

Lyn B. Hardison

DATE: 4-1-13

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

E457

COUNTY: MECKLENBURG

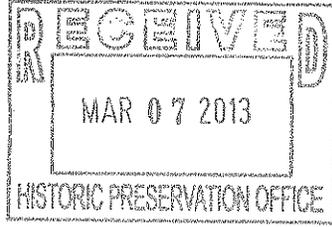
H12: OTHER

STATE NUMBER: 13-E-4300-0339

DATE RECEIVED: 03/05/2013

AGENCY RESPONSE: 04/01/2013

REVIEW CLOSED: 04/04/2013



MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

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due 3/25/13

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DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

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If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley

DATE: 3.19.13



MAR 11 2013

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

E458

COUNTY: MECKLENBURG

H12: OTHER

STATE NUMBER: 13-E-4300-0339
DATE RECEIVED: 03/05/2013
AGENCY RESPONSE: 04/01/2013
REVIEW CLOSED: 04/04/2013

MS CAROLYN PENNY
CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC

RECEIVED

MAR 7 2013

VC Environmental Program

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DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: NCDENR
TYPE: State Environmental Policy Act
Environmental Assessment

DESC: Proposed project is for the addition of the Goose Creek Watershed to IBT Certificate.

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If additional review time is needed, please contact this office at (919)807-2425.



AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

John D. Burch

DATE: 18 MAR 2013

No SFHA impacts

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

Anil Parikh E469

COUNTY: MECKLENBURG

H12: OTHER

STATE NUMBER: 13-E-4300-0339
DATE RECEIVED: 03/05/2013
AGENCY RESPONSE: 04/01/2013
REVIEW CLOSED: 04/04/2013

MS CARRIE ATKINSON
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION
STATEWIDE PLANNING - MSC #1554
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DEPT OF TRANSPORTATION

PROJECT INFORMATION

APPLICANT: NCDENR
TYPE: State Environmental Policy Act
Environmental Assessment



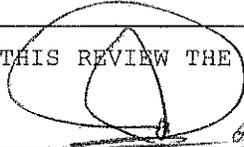
DESC: Proposed project is for the addition of the Goose Creek Watershed to IBT Certificate.

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If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

 ANIL PARIKH

DATE: 03/08/2013





North Carolina Department of Environment and Natural Resources

Pat McCrory
GovernorJohn E. Skvarla, III
Secretary

MEMORANDUM

TO: Toya F. Ogallo, Environmental Engineer
River Basin Management Section
Division of Water Resources -

FROM: Lyn Hardison 
Division of Environmental Assistance and Outreach
Permit Assistance & Project Review Coordinator

RE: Draft Environmental Assessment
Addition of the Goose Creek Watershed to IBT Certificate under the provisions of
G.S. 143-215.221 for Charlotte- Mecklenburg Utilities Department
Mecklenburg and Union Counties
DENR # 1580

Date: January 18, 2013

The Department of Environment and Natural Resources has reviewed the proposal for the reference project. Several of the agencies have concerns and questions pertaining to the endangered species present within the project area, removal of Condition 3 of the IBT Certificate and potential secondary and cumulative impact to the habitats of increase in development density. Please forward this memorandum and the attachments to the applicant so our agencies concerns can be addressed and the necessary adjustments can be made to the draft environmental assessment.

The Department encourages the applicant to continue communicating with the agencies prior to the completion of the report and moving forward with the projects.

Thank you for the opportunity to respond.

Attachment



North Carolina Department of Environment and Natural Resources
Office of Conservation, Planning, and Community Affairs

Pat McCrory
Governor

Linda Pearsall
Director

John E. Skvarla, III
Secretary

MEMORANDUM

Date: 9 January 2013

To: Lyn Hardison, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

From: Andrea Leslie, Freshwater Ecologist *Andrea Leslie*
North Carolina Natural Heritage Program (NHP)

Subject: Environmental Assessment for Addition of the Goose Creek Watershed to IBT Certificate under the provisions of G.S. 143-215.221 for Charlotte-Mecklenburg Utilities Department; DENR Project #1580

The Charlotte-Mecklenburg Utilities Department (CMUD) requests the elimination of Condition 3 in its Interbasin Transfer (IBT) Certificate, which prohibits an IBT in the Mecklenburg County portion of the Goose Creek watershed. This request would allow future infrastructure planning to support development activities in the area.

The Mecklenburg County portion of the Goose Creek watershed comprises the headwaters of Goose Creek, including upper portions of Goose Creek and its tributaries, Duck Creek and Stevens Creek. Portions of all three streams within Mecklenburg County and Union County are part of the Goose Creek Significant Natural Heritage Area (SNHA). The federally and state endangered Carolina heelsplitter (*Lasmigona decorata*) is found in both Goose and Duck Creeks. In addition to Carolina heelsplitter, the Goose Creek SNHA harbors a rare fish and five rare mussels, including the Carolina darter (*Etheostoma collis*, federal species of concern [FSC] and state Special Concern [NC-SC]), the Carolina creekshell (*Villosa vaughaniana*, FSC and state endangered [NC-E]), the Atlantic pigtoe (*Fusconaia masoni*, FSC and NC-E), the notched rainbow (*Villosa constricta*, NC-SC), the Eastern creekshell (*Villosa delumbis*, state significantly rare [NC-SR]), and the creeper (*Strophitus undulatus*, state threatened [NC-T]).

The EA describes rare and protected species in the Goose Creek watershed but did not include three rare mussel species present in the SNHA—the the notched rainbow, the Eastern creekshell, and the creeper. See the most recent description of the Goose Creek Aquatic Habitat in NHP's Union County Inventory at <http://portal.ncdenr.org/web/nhp/searchable-publications>. Atlantic pigtoe is described in the EA as state threatened, but it is state endangered (see http://www.ncwildlife.org/Portals/0/Conserving/documents/protected_species.pdf), as is Carolina creekshell.

Lifting of the IBT restriction in the Goose Creek watershed would allow CMUD to plan for additional water infrastructure to support more growth. Although this EA does not explicitly state CMUD's intentions to provide sewer infrastructure to the area, it does mention that this is a possibility. Sewer infrastructure would support growth of much higher intensity in the watershed.

The EA maintains that secondary and cumulative impacts of increased land use densities and development in the basin will not be significant due to the recently established mitigation measures. These mitigation measures include a set of regulations that meet those recommended by the NC Department of Environment and Natural Resources (DENR) Site Specific Water Quality Management Plan for the Goose Creek Watershed. We applaud the Town of Mint Hill for enacting these regulations in their Post-Construction Storm Water Ordinance, which includes stormwater management measures that exceed those recommended by the Site Specific Plan and riparian buffer protection on perennial and intermittent streams.

However, while we recognize the difficulty of implementing strong conservation-oriented regulations in a rapidly developing area, there will be more certainty of protecting the Carolina heelsplitter and other sensitive species if riparian buffer protection measures are strengthened to (1) protect 200 feet on all perennial streams and 100 feet on intermittent streams, (2) minimize the variances allowed from the buffer protection regulations, especially those allowing utility lines within the buffer and utility crossings over streams, and (3) widen the undisturbed buffer width for forestry activities and ensure that developers cannot use the forestry exemption to clear riparian vegetation before establishing development sites. In addition, stormwater regulations that require developments that exceed a 6% built-upon area (instead of 10% built-upon area) to control stormwater would be more protective; the NC Wildlife Resources Commission's comments provide additional details on recommended stormwater controls.

NHP appreciates the opportunity to provide comments on this project. If you have any questions, I can be reached at (828) 296-4720 or andrea.leslie@ncdenr.gov. Additionally, the mailing address for this office is 2090 US 70, Swannanoa, NC 28778.

e-copy:

Shari Bryant, NCWRC
Mark Cantrell, USFWS
John Fridell, USFWS
Ryan Heise, NCWRC



☒ North Carolina Wildlife Resources Commission ☒

Gordon Myers, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance Coordinator
NCDENR Division of Environmental Assistance and Outreach (DEAO)

FROM: Shari L. Bryant, Piedmont Region Coordinator *Shari L. Bryant*
Habitat Conservation Program

DATE: 7 January 2013

SUBJECT: Environmental Assessment for the Addition of the Goose Creek Watershed to IBT Certificate under the Provisions of G.S. 143-215.221, Mecklenburg and Union Counties. DENR Project No. 1580

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the subject document and we are familiar with the habitat values of the area. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667e), North Carolina Environmental Policy Act (G.S. 113A-1 through 113A-13; NCAC Title 01 Chapter 25), North Carolina General Statutes (G.S. 113-131 et seq.), and North Carolina Administrative Code 15A NCAC 101.0102.

Charlotte-Mecklenburg Utilities Department (CMUD) is requesting the removal of Condition 3 in its Interbasin Transfer (IBT) Certificate. Removing Condition 3 from the IBT Certificate will allow CMUD to extend water lines into the Goose Creek watershed. Water demand in the watershed currently is met through private wells and water systems, and limited CMUD service. It is expected a combination of private wells and water systems will be used to meet future water supply demand if Condition 3 is not removed from the IBT Certificate. Condition 3 placed a moratorium on installation of new IBT water lines (water lines crossing the ridgeline) into the Goose Creek watershed until the impact of additional urban growth on the Carolina heelsplitter was fully evaluated. The N.C. Department of Environment and Natural Resources developed the Site Specific Water Quality Management Plan for the Goose Creek Watershed (January 1, 2009) that includes control of stormwater for projects disturbing one acre or more, wastewater discharges (i.e. no new discharges), and toxicity to streams; it also establishes riparian buffers in the Goose Creek watershed. Subsequently the Town of Mint Hill revised its Post-Construction Stormwater Ordinance (March 11, 2010) to include provisions in the Site Specific Water Quality Management Plan. The EA concludes that removing Condition 3 from the IBT Certificate would be insignificant given the watershed mitigation measures that have been implemented by the Town of Mint Hill through its Post-Construction Ordinance.

Goose Creek, Stevens Creek, Paddle Branch, and Duck Creek in the Yadkin-Pee Dee River basin flow

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721

Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

7 January 2013
CMUD IBT – Goose Creek
DENR Project No. 1580

through the project boundaries. There are records for the federal and state endangered Carolina heelsplitter (*Lasmigona decorata*); the federal species of concern and state endangered Atlantic pigtoe (*Fusconaia masoni*) and Carolina creekshell (*Villosa vaughaniana*); the federal species of concern and state special concern Carolina darter (*Etheostoma collis*); the state threatened creeper (*Strophitus undulatus*); the state special concern notched rainbow (*Villosa constricta*); and the state significantly rare Eastern creekshell (*Villosa delumbis*) in the Goose Creek watershed. The Significant Natural Heritage Area – Goose Creek/Duck Creek Aquatic Habitat is located within the project boundaries. Also, Designated Critical Habitat for Carolina heelsplitter is located in portions of Goose Creek and Duck Creek.

Note: in the Environmental Assessment (EA), Section 3.3.3, Rare and Protected Species or Habitats (p. 13), the Atlantic pigtoe is listed as a federal species of concern and state threatened, and Carolina creekshell is listed as a federal species of concern. Both Atlantic pigtoe and Carolina creekshell should be listed as state endangered.

According to the EA, removing Condition 3 from the IBT Certificate does not allow new construction but would facilitate individual connections to existing water service and would allow the Town of Mint Hill to further conduct land use planning and CMUD to plan for future water infrastructure. While no construction of additional infrastructure is being evaluated in the EA, it is indicated that future infrastructure plans could trigger environmental reviews and the NC SEPA process depending on the characteristics of the projects.

We have two general concerns regarding the removal of Condition 3 from the IBT Certificate.

1. The EA and other documents included in the EA's appendix reference the installation of water AND sewer lines in the Goose Creek watershed. It is unclear whether the removal of Condition 3 from the IBT Certificate would allow not only water lines, but also sewer lines to be constructed in the Goose Creek watershed.
2. The Site Specific Water Quality Management Plan (SSMP) for the Goose Creek Watershed improves on measures needed to protect Carolina heelsplitter and its habitat. However, as we expressed in our comments during the review of the SSMP (Bryant, 24 June 2008), we are concerned that some of the measures are not sufficient to protect Carolina heelsplitter and its habitat.

Although we have concerns about the extension of water lines, we have significant concerns regarding the installation of sewer lines into the watershed. While the installation of water lines into the Goose Creek watershed has the potential to increase the density of development, the installation of sewer lines would support a significantly higher density of development within the Goose Creek watershed. It is unclear how sewer infrastructure would be installed within the watershed. We understand that some sewer installations (e.g., the pump station referenced in the EA) likely would trigger an environmental review and the NC SEPA process; however, some projects (e.g., extension of existing sewer lines) may not.

Changes in land use and increases in impervious surfaces may exacerbate channel degradation and sediment impacts to stream ecosystems due to increased stormwater runoff and elevated flooding. In addition, pollutants (e.g., sediment, heavy metals, pesticides, and fertilizers) washed from roads and developed landscapes can adversely affect and extirpate species downstream. In Section 6 of the EA, Mitigation of Adverse Impacts (p. 22), it concludes that implementation of the SSMP, and the incorporation of those recommendations into the Town of Mint Hill's Post-Construction Ordinance (PCO) would mitigate potential impacts, and no further significant secondary or cumulative impacts to the Goose Creek watershed are expected.

7 January 2013
CMUD IBT – Goose Creek
DENR Project No. 1580

According to the EA, Mint Hill's PCO requirements exceed the definitions for required actions as related to stormwater management in the SSMP. The full post-development volume for the 1-year, 24-hour storm is greater than the SSMP's requirement of treating the difference between pre- and post-development volumes. Also, the SSMP includes peak control for only the 1-year, 24-hour storm while the PCO adds peak control requirements for the 10-year, 6 hour and 25-year, 6-hour storms. For residential developments exceeding 10% built upon area, the PCO requires peak control for the appropriate storm frequency (i.e., 10, 25, 50, 100 yr, 6 hr storm) based on downstream flood analysis. If downstream analysis is not used the peak is controlled for 10-year and 25-year, 6 hour storms. According to the EA, controlling 1 year, 24-hour volume achieves peak control for the 2-year, 6 hour storm. The original PCO (June 30, 2007) required 100-foot buffers on all dashed streams and 200-foot buffers on all solid streams on USGS topographic maps. The PCO was updated to include the riparian buffers detailed in the SSMP, and now requires undisturbed riparian buffers within 200-feet of waterbodies within the 100-year floodplain and within 100 feet of waterbodies that are not within the 100-year floodplain. We commend the Town of Mint Hill for implementing stormwater controls that exceed the SSMP; however, we question why the more protective riparian buffers did not remain in the PCO.

Although the SSMP and the Town of Mint Hill's PCO improve on previous watershed protection measures, we remain very concerned that without more protective measures the secondary and cumulative impacts associated the higher density development facilitated by water (and sewer) in the watershed could result in further degradation of the aquatic habitat and possible extirpation of listed species in the Goose Creek watershed.

We continue to recommend the following measures to protect Carolina heelsplitter and its habitat in the Goose Creek watershed.

1. Maintain or establish a minimum 200-foot undisturbed native forested buffer along each side of perennial streams and a 100-foot undisturbed native forested buffer along each side of intermittent streams. Streams should be delineated according to U.S. Army Corps of Engineers or N.C. Division of Water Quality methodology.
2. Sewer lines, water lines, and other utility infrastructure should be kept out of the riparian buffer and the 100-year floodplain. All utility crossings should be kept to a minimum. The directional bore (installation of utilities beneath the riverbed, avoiding impacts to the stream and buffer) stream crossing method should be used for utility crossings.
3. New developments exceeding 6% imperviousness should be required to include stormwater controls designed to replicate and maintain the hydrographic condition (peak and volume controls) at the site prior to the change in landscape. At a minimum, stormwater control should treat the 2-year, 24-hour storm or bankfull event and provide adequate infiltration of stormwater.
4. No new fill or development in the 100-year floodplain.

Also, we encourage local ordinances, if not already in place, to prevent developers from using "forestry exemptions" during deforestation activities that ultimately become development sites. In the SSMP, only the first 10-feet of the riparian buffer directly adjacent to the stream is required to remain undisturbed, in the zone from 10 feet to 50 feet, 50% of the trees greater than 5 inches dbh may be removed; and in the outer 50 feet harvesting is allowed provided sufficient ground cover is maintained to diffuse and infiltrate surface runoff. Although some forestry activities within the riparian buffer may be acceptable (e.g., harvesting dead or infected trees), we continue to believe these riparian buffer widths are insufficient to protect water quality and aquatic habitat within the Goose Creek watershed.

7 January 2013
CMUD IBT – Goose Creek
DENR Project No. 1580

We are concerned about the installation of water (and sewer) lines in the Goose Creek watershed and the impact to Carolina heelsplitter and its habitat resulting from the secondary and cumulative impacts of the increase in development density. Therefore, if Condition 3 of the IBT Certificate is removed, please understand that we will revisit the issues concerning secondary and cumulative impacts on any future water or sewer projects in the Goose Creek watershed.

Thank you for the opportunity to comment on this project. If we can be of further assistance, please contact our office at (336) 449-7625 or shari.bryant@ncwildlife.org.

ec: Mark Cantrell, USFWS
John Fridell, USFWS
Andrea Leslie, NCNHP
Ryan Heise, NCWRC



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Charles Wakild, P. E.

Director

Pat McCrory
GovernorJohn Skvarla
Secretary

January 7, 2013

MEMORANDUM

TO: Lyn Hardison
Department of Environment and Natural Resources

FROM: Hannah Headrick, DWQ's SEPA Coordinator *AA*

SUBJECT: Mecklenburg and Union Counties
DWQ#14460; DENR#1580

The Division of Water Quality (DWQ) has reviewed the subject document.

Goose Creek (AU#s 13-17-18a and 13-17-18b) has a Fair macroinvertebrate bioclassification rating and has a history of standard violations for fecal coliform, bacteria, and turbidity. The Creek remains Impaired in the 2010 and 2012 Integrated Reports; however, the Creek is no longer on the 303(d) list because several management strategies are in place that are expected to address the impairments (including a TMDL for fecal coliform bacteria). Essentially, the stream went from category 5 (Impaired and needing a TMDL) to category 4 (Impaired with management strategy); being listed under category 4 does not indicate water quality conditions have improved.

While we are hopeful that The Town of Mint Hill's Post-Construction Ordinance (PCO) plan will protect water quality in Goose Creek, this has yet to be proven. Removal of condition 3 from CMUD's IBT Certificate will lead to increased growth and development and accompanying secondary and cumulative impacts that will negatively affect water quality. Mecklenburg County's delegated responsibilities are not slated to be audited until 2015, and existing instream water quality data have not shown improvements. Therefore, DWQ prefers that CMUD provide its annual monitoring reports to show what it has been doing towards meeting the PCO plan goals.

Also, the subject document focuses on Mint Hill and does not speak much to the rest of the Goose Creek watershed that will experience growth because of increased water availability. CMUD needs to show that it is successfully implementing Mint Hill's Stormwater and the Goose Creek Watershed Management Plan. It is recommended that CMUD provides both of these annual reports for the past few years as a part of this document.

Please contact me at (919) 807-6434 or hannah.headrick@ncdenr.gov if I can be of any additional help. Thank you.

Ecc: Mike Parker -- MRO

**Department of Environment and Natural Resources
Project Review Form**

1-9-13

Project Number # 1580	County Mecklenburg & Union	Date Received 12/05/2012	Date Response Due 12/22/2012
Environmental Assessment – Addition of the Goose Creek Watershed to IBT Certificate under the provisions of G.S. 143-215.221 for Charlotte-Mecklenburg Utilities Department			

This project is being reviewed as indicated below:

Regional Office	Sections	In-House Review
<input type="checkbox"/> Asheville	<input type="checkbox"/> Air	<input type="checkbox"/> Marine Fisheries <input type="checkbox"/> Waste Mgmt
<input type="checkbox"/> Fayetteville	<input checked="" type="checkbox"/> Water <i>of 12/19/12</i>	<input type="checkbox"/> Coastal Management <input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Mooresville	<input checked="" type="checkbox"/> Aquifer Protection <i>12/12/12</i>	<input type="checkbox"/> Water Resources Management
<input type="checkbox"/> Raleigh	<input type="checkbox"/> Land Quality Engineer	<input checked="" type="checkbox"/> Water Supply Section
<input type="checkbox"/> Washington	<input type="checkbox"/> UST	<input checked="" type="checkbox"/> Parks & Recreation
<input type="checkbox"/> Wilmington		<input checked="" type="checkbox"/> Water Quality
<input type="checkbox"/> Winston-Salem		<input type="checkbox"/> Water Quality (DOT)
		<input checked="" type="checkbox"/> Wildlife <u>Shari Bryant</u>
		<input type="checkbox"/> Wildlife (DOT) _____
	Date:	In-House Reviewer/Agency:

RECEIVED

DEC 06 2012

 NC DEPT OF ENVIRONMENT
AND NATURAL RESOURCES
MOORESVILLE REGIONAL OFFICE

Response (check all applicable)

<input type="checkbox"/> No objection to project as proposed	<input type="checkbox"/> No comment
<input type="checkbox"/> Insufficient information to complete review	<input type="checkbox"/> Other (specify or attach comments)

RETURN TO:

Lyn Hardison – Lyn.Hardison@ncdenr.gov
943 Washington Square Mall, Washington, NC 27889
Courier # 16-04-01

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number: 1580 Due Date: 12/2/12

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
<input type="checkbox"/>	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
<input type="checkbox"/>	Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
<input type="checkbox"/>	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
<input type="checkbox"/>	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input type="checkbox"/>	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
<input type="checkbox"/>	Permit to construct & operate Transportation Facility as per 15 A NCAC (2D.0800, 2Q.0601)	Application must be submitted at least 90 days prior to construction or modification of the source.	90 days
<input type="checkbox"/>	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
<input type="checkbox"/>	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950.		
<input type="checkbox"/>	Complex Source Permit required under 15 A NCAC 2D.0800		
<input type="checkbox"/>	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) At least 30 days before beginning activity. A fee of \$65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
<input type="checkbox"/>	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.		(30 days)
<input type="checkbox"/>	Mining Permit	On-site inspection usual. Surety bond filed with ENR Bond amount varies with type mine and number of acres of affected land. Any acre mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/>	North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
<input type="checkbox"/>	Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
<input type="checkbox"/>	Oil Refining Facilities	N/A	90-120 days (N/A)
<input type="checkbox"/>	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion	30 days (60 days)

PERMITS		SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	E470 Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations.	10 days N/A
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
<input type="checkbox"/>	State Lakes Construction Permit	Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
<input checked="" type="checkbox"/>	401 Water Quality Certification	<i>Buffer may be needed in future</i>	60 days (130 days)
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	55 days (150 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$50.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611		
<input type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
<input type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input type="checkbox"/>	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
<input type="checkbox"/>	Tar Pamlico or Neuse Riparian Buffer Rules required.		
* Other comments (attach additional pages as necessary, being certain to cite comment authority)			
<p><i>APS - no comments. date 12/7/12</i></p> <p><i>DWG - considering there is endanger species associated with loose creek & maximum buffers of up to 200 ft on each side have been established to protect the heel splitter, staff doesn't believe that removal of condition #3 is a prudent course of action.</i></p>			

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

Asheville Regional Office

2090 US Highway 70
Swannanoa, NC 28778
(828) 296-4500

Mooreville Regional Office

610 East Center Avenue, Suite 301
Mooreville, NC 28115
(704) 663-1699

Wilmington Regional Office

127 Cardinal Drive Extension
Wilmington, NC 28405
(910) 796-7215

Fayetteville Regional Office

225 North Green Street, Suite 714
Fayetteville, NC 28301-5043
(910) 433-3300

Raleigh Regional Office

3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919) 791-4200

Winston-Salem Regional Office

585 Waughtown Street
Winston-Salem, NC 27107
(336) 771-5000

Washington Regional Office

943 Washington Square Mall
Washington, NC 27889
(252) 946-6481



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

MEMORANDUM

TO: Toya F. Ogallo, Environmental Engineer
River Basin Management Section
Division of Water Resources -

FROM: Lyn Hardison 
Division of Environmental Assistance and Outreach
Permit Assistance & Project Review Coordinator

RE: Additional Comments
Draft Environmental Assessment
Addition of the Goose Creek Watershed to IBT Certificate under the provisions of
G.S. 143-215.221 for Charlotte- Mecklenburg Utilities Department
Mecklenburg and Union Counties
DENR # 1580

Date: January 23, 2013

Please find attached additional comments from US Fish and Wildlife Service which were received in this office after the response due date.

These comments should be forwarded to the applicant and made a part of our previous comment package.

Thank you for the opportunity to respond.

Attachment



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

January 18, 2013

Ms. Lyn Hardison
Environmental Assistance Coordinator
North Carolina Department of Environment and Natural Resources
Division of Environmental Assistance and Outreach (DEAO)
Washington Regional Office
943 Washington Square Mall
Washington, North Carolina 27889

Dear Ms. Hardison:

Subject: Environmental Assessment for the Addition of the Goose Creek Watershed to the Interbasin Transfer Certificate under Provisions of G.S. 143-215.221, Mecklenburg and Union Counties, North Carolina

We have reviewed the subject Environmental Assessment (EA) and offer the following comments in accordance with the provisions of the Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. 1531-1543), and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e).

According to the EA, Charlotte-Mecklenburg Utilities Department (CMUD) is requesting the removal of Condition 3 in the Interbasin Transfer (IBT) Certificate. Condition 3 of the IBT Certificate currently limits the extension of water lines carrying water from the IBT into the Mecklenburg County portion of the Goose Creek watershed that includes the headwaters of the main stem of Goose Creek and its tributaries--Duck Creek, Stevens Creek, and Paddle Branch--until the impacts to the federally listed and state-listed endangered Carolina heelsplitter (*Lasmigona decorata*) from additional urban growth made possible by the IBT are fully evaluated. The EA describes and evaluates measures to address the potential impacts.

According to information provided in the EA, the Town of Mint Hill has revised its Post-Construction Ordinance (PCO) to incorporate measures that meet or exceed the measures required by the North Carolina Department of Environment and Natural Resources' (NCDENR) 2009 Site-Specific Water-Quality Management Plan for the Goose Creek Watershed (SSWQMP). In view of this, the EA concludes that the effects of increased growth and

development made possible by the removal of Condition 3 of the IBT will not be significant to the Carolina heelsplitter. We cannot agree with this conclusion.

Endangered Carolina Heelsplitter. As you are aware, the Carolina heelsplitter has been documented to occur in the main stems of both Goose Creek and Duck Creek, and portions of both of these streams have been designated by the U.S. Fish and Wildlife Service (USFWS) as critical habitat for the species. Critical habitat is defined in the ESA as habitat essential to the conservation of the species and which may require special management considerations or protection.

The Carolina heelsplitter is one of the most critically endangered species in the southeastern United States. Although there are currently considered to be 11 surviving populations of the species, based on the most recent survey data, all of these extant populations are small to extremely small, are isolated from one another, are restricted to scattered sites in short stream reaches, and most are in significant decline. During the most recent monitoring surveys for the species, more than ten live individuals were found in only six of the surviving populations (a total of only 152 live Carolina heelsplitters were recorded for all 11 populations combined). The Goose Creek/Duck population was one of these six populations. In the other five populations, fewer than five individuals were documented in each population, and in most cases only one or two individuals were found; in one case only a single shell was found. This makes the Goose Creek/Duck population extremely important to the survival and recovery of the Carolina heelsplitter.

In addition to the Carolina heelsplitter, nine other species of native freshwater mussels have been documented from the Goose Creek system—the Atlantic pigtoe (*Fusconaia masoni*) (federal species of concern; state-listed as endangered), Carolina creekshell (*Villosa vaughaniana*) (federal species of concern; state-listed as endangered), creeper (*Strophitus undulatus*) (state-listed as threatened), notched rainbow (*Villosa constricta*) (state-listed as special concern), eastern creekshell (*Villosa delumbis*) (state-listed as significantly rare), Carolina lance (*Elliptio angustata*), Eastern elliptio (*Elliptio complanata*), variable spike (*Elliptio icterina*), and Atlantic spike (*Elliptio producta*).

The Goose Creek population is declining. Residential and commercial growth in the Goose Creek watershed in Mecklenburg and Union Counties has contributed to a significant degradation of the aquatic habitat in Goose Creek and a serious decline in the Carolina heelsplitter population within the Goose Creek system. Monitoring conducted by the North Carolina Wildlife Resources Commission (NCWRC), the North Carolina Department of Transportation, our staff, and others has documented a marked decline in the range and abundance of all native mussel species in the Goose Creek system. Four species--the Atlantic pigtoe, Atlantic spike, eastern creekshell, and notched rainbow--appear to have been extirpated from the system in recent years (John Fridell, Asheville Field Office, USFWS, personal observation, 2005-2012). During surveys from 1989 through 1990, Keferl (1991) documented the Carolina heelsplitter in approximately 7.2 kilometers (approximately 4.5 miles) of the main stem of Goose Creek; and during surveys in 2000, biologists with the NCWRC documented the species in a total of approximately 8.8 kilometers (5.5 miles) of the main stem of Duck Creek (NCWRC 2000). Based on the most recent survey data, the Goose Creek/Duck Creek population

appears to be restricted to less than (<) 3.0 kilometers (<1.9 miles) of the main stem of Goose Creek and <6.0 kilometers (<4.3 miles) of Duck Creek.

Habitat is declining. Stream-channel and stream-bank stability, required by freshwater mussels, have been degraded in a number of areas throughout the watershed. In many areas of the creeks, channel substrate has been scoured down to bedrock, and much of the remaining smaller substrates the heelsplitter and other native mussels require (i.e., cobble, gravel, and coarse sand) are unstable. In other scattered reaches of Goose and Duck Creeks, the channel is choked with large quantities of shifting sand and sediments that are too unstable to support native mussel species (Fridell, personal observation, 2005-2012). Changes in the streams' hydrology due to the loss of forest cover and an increase in impervious surface area resulting from development activities within the Goose Creek watershed are believed to be the major factors contributing to this channel/bank instability. In addition, because more rainwater is running off into the stream channel, these factors appear to be major contributors to a significant lowering of the base flows in Goose and Duck Creeks due to a lack of infiltration and groundwater recharge.

In addition to the effects to the stability and quality of aquatic habitats associated with the effects of development and other land-disturbance activities in the watershed, water quality in the Goose Creek system has been significantly impaired. Water-quality monitoring in Goose Creek (conducted by the North Carolina Division of Water Quality [NCDWQ], our staff, and a private consultant) has documented levels of several pollutants harmful to freshwater mussels (i.e., ammonia, heavy metals, sediment, and nutrients) that exceed the state's water quality standards and action levels, and the NCDWQ has placed this stream on the list (303d list) of the state's impaired waters (NCDWQ 2000, 2006, 2012). Although point-source discharges resulting from development are a major source of this impairment, stormwater runoff has been implicated as a significant factor contributing to elevated levels of many of these pollutants (Bales et al. 1999, Chen et al. 2001, NCDWQ 2003, Allan 2005, Mecklenburg County Water Quality Program [MCWQP], and NCDWQ 2005). Goose Creek is listed as impaired for violations of the fecal coliform standards from its source to the Rocky River. A Total Maximum Daily Load has been prepared (MCWQP and NCDWQ 2005).

As a result of water/habitat degradation (aquatic habitat degradation) in the Goose Creek system, this population of the Carolina heelsplitter is rapidly declining in range and numbers and is likely to become extirpated in the near future without implementation of adequate measures to prevent further aquatic habitat degradation and to restore the species' habitat.

Post-Construction Ordinance is Not Adequate. Although Mint Hill's PCO has been revised to meet or exceed (according to the EA in the case of stormwater management control) the measures required by the SSWQMP, we do not believe the SSWQMP (and hence the PCO) goes far enough to be protective of the Carolina heelsplitter.

In the following documents: (1) the 2005 draft *Technical Support Document for Consideration of Federally-listed Threatened or Endangered Aquatic Species in Water Quality Management Planning for the Goose Creek Watershed* provided to the NCDWQ (prepared by an interagency team from the NCWRC, the North Carolina Natural Heritage Program, and our staff); (2) our April 11, 2007, letter to Ms. Colleen Sullins, then Deputy Director, NCDWQ, commenting on

the proposed rules for implementation of a SSWQMP for the Goose Creek Watershed; and (3) our June 30, 2008, letter addressed to Mr. Jeff Manning, Planning Section, NCWDQ, commenting on the proposed rules for implementation of the SSWQMP, we provided recommendations for the measures we believe are necessary to protect the Carolina heelsplitter from future development-related impacts to its habitat and to assist us in stabilizing and recovering the species in the Goose Creek watershed. Please reference these documents for additional information and references supporting and forming the basis of our recommendations on the subject document. We continue to believe that the recommendations provided in these three documents are appropriate, are necessary, and are supported by science.

Specifically, we believe the SSWQMP and the PCO are inadequate in the following areas:

1. The rules for the SSWQMP and the PCO apply only to new development activities that disturb ≥ 1 acre. Given the degree of water/habitat degradation Goose and Duck Creeks have already suffered and the corresponding decline in the Carolina heelsplitter population and the population levels of other aquatic species in the Goose Creek system, we believe the requirements of the PCO (and SSWQMP) should apply to any new clearing/ground disturbance activity regardless of the size or type of disturbance.
2. The rules for the SSWQMP require controlling only the difference in the pre- and post-development stormwater runoff for the 1-year, 24-hour storm and peak control for 1-year 24-hour storm. According to the EA, the PCO improves upon this requirement by requiring control of the total volume of the 1-year 24-hour storm and peak control of the 10-yr 6-hour and the 25-year 6-hour storm. Because of the degree of channel and stream-bank scouring and degradation that already occurs within the Goose Creek system due to poorly controlled stormwater runoff from disturbed and developed areas, we continue to recommend that any new clearing or ground disturbance activity, regardless of its size, be required to implement: (1) stormwater-control and -treatment measures (peak and volume controls) designed to replicate and maintain the pre-construction hydrograph and (2) measures to promote infiltration (e.g., rain gardens, vegetated wetland retention basins, etc.). Any stormwater measures should include a monitoring and maintenance plan.
3. Both the SSWQMP and PCO require forested riparian buffers within 200 feet of water bodies within the 100-year floodplain and forested riparian buffers within 100 feet of water bodies that are not within the 100-year floodplain. The North Carolina Ecosystem Enhancement Program (NCEEP) (2009) found a 31.67-percent deficiency of riparian areas within 100 feet of Goose Creek. We continue to recommend the requirement for the maintenance or establishment and protection of undisturbed, forested buffers on each side of streams that are naturally vegetated with trees, shrubs, and herbaceous vegetation that extend a minimum of 200 feet from the top of the banks of all perennial streams and a minimum of 100 feet from the top of the banks of all intermittent streams, or the full extent of the 100-year floodplain, whichever is greater. Impervious surfaces, ditches, pipes, roads, utility lines (sewer, water, gas, transmission, etc.), and other infrastructures, breaks, or disturbances that require maintained, cleared rights-of-way and/or compromise the functions and values of the forested buffers should not occur within these riparian

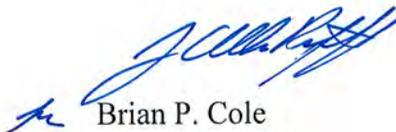
areas. In order to assist in addressing existing problem areas in the watershed that are contributing to aquatic habitat impairment and the decline of the Carolina heelsplitter, the PCO should encourage the reestablishment of riparian buffers in areas where they are currently lacking and require the establishment of riparian buffers when changes in land use occur.

4. Both the SSWQMP and the PCO provide for numerous exempted and allowable uses (certain types of airport facilities, roads, driveways, utility corridors, certain types of mining activities, etc.) and the granting of variances for land-clearing and land-disturbance activities and impervious and semi-impervious surfaces within the riparian buffers and floodplain, many of which do not require any mitigation. The construction of new impervious or partially pervious surface areas and breaks within the riparian buffers and 100-year floodplain significantly affects, and in many cases negates, the functions and values of the riparian buffers and floodplain in protecting and maintaining aquatic habitat and the Carolina heelsplitter (e.g., flood attenuation, groundwater recharge, pollutant removal, stream temperature maintenance, organic nutrient input, etc.) and increases the frequency and severity of flood events. Accordingly, we continue to recommend that no fill, no new impervious surfaces, or no creation of semi-pervious surfaces be allowed within the floodplain or the riparian buffers and that the riparian buffers remain **undisturbed**, except for those uses that would have no effect, or an insignificant effect, on the function and values of the buffers and floodplain. Any use or activity that has a measurable effect on the function of the buffers and floodplain should be allowed only in extremely rare cases and should require mitigative measures adequate to offset any adverse effects to the buffers and floodplain. We would be happy to meet with CMUD and Mint Hill to discuss those uses that we believe could be "exempted" or "potentially allowable" within the buffers.
5. Both the SSWQMP and the PCO state that "No activity that results in direct or indirect discharge is allowed if it causes toxicity to the Carolina heelsplitter . . ." and that "For any direct or indirect discharge that may cause ammonia toxicity to the Carolina heelsplitter freshwater mussel, action shall be taken to reduce ammonia (NH₃-N) inputs to achieve 0.5 milligrams per liter or less of total ammonia." Section 9 of the ESA makes it unlawful to "take" (defined to include harming, wounding, killing, harassing, etc.) federally listed fish and wildlife species, such as the Carolina heelsplitter, unless authorized by a permit or biological opinion issued by the USFWS. Accordingly, any activity (including the issuance of permits, regulations, etc., that allow or contribute to "take") that "causes ammonia toxicity to the Carolina heelsplitter" is likely to be in violation of the ESA. Based on the best information currently available to us concerning the toxicity of ammonia to the Carolina heelsplitter, we believe the achievement of 0.5 milligrams per liter or less of total ammonia on a chronic basis is reasonably likely to prevent death, harm, or injury to the Carolina heelsplitter. However, measures to achieve this standard must be taken before harm to the Carolina heelsplitter occurs. Accordingly, we recommend that the PCO outline measures that must be taken to ensure that "toxicity to the Carolina heelsplitter" is likely to be prevented. In addition, this rule should describe how (and by whom) ammonia levels in the system will be monitored and enforced in order to ensure that this standard is being met.

6. The SSWQMP allows for forestry activities, including the removal of 50 percent of trees ≥ 5 inches in diameter at breast height within 10 feet of the stream and clear-cutting (with no restrictions on rotational periods) within 50 feet of the stream. It is not clear to us whether the same is allowed through the PCO. We believe this is completely inappropriate within the Goose Creek watershed and is likely to result in extirpation of the Goose Creek/Duck Creek population of the Carolina heelsplitter as well as the loss of numerous other species within the Goose Creek system. This is especially likely if rules/ordinances are not in place to ensure that these forestry exemptions are not used to allow forest clearing prior to development activities.
7. Finally, in view of the level of degradation of aquatic habitat that has already occurred within the Goose Creek system, we continue to note the need for a restoration component in (or to compliment) the PCO so that existing poor water quality is remediated. The NCEEP (2009) found a 25-percent loss of natural area land cover (including forest and wetlands) between 1992 and 2007 in the Goose Creek watershed.

We appreciate the opportunity to review and comment on the subject EA. In summary, we remain concerned about the installation of water lines into the Goose Creek watershed and do not agree that the measures and rules discussed and described in the EA and PCO are adequate to protect the Carolina heelsplitter in Goose and Duck Creeks from future impacts from development activities and land-use changes within the watershed. Accordingly, we believe that additional urban growth within the Goose Creek watershed resulting from the removal of Condition 3 from the IBT Certificate will contribute to already degraded conditions and further compromised habitat in the Goose Creek system. If you have any questions, need additional information, or would like to meet to discuss any of our comments, please contact Mr. John Fridell of our staff at 828/258-3939, Ext. 225, or Mr. Mark Cantrell, Ext. 227.

Sincerely,



Brian P. Cole
Field Supervisor

cc:

Ms. Shari L. Bryant, Eastern Piedmont Region Permit Reviewer, North Carolina Wildlife Resources Commission, P.O. Box 129, Sedalia, NC 27342-0129

Ms. Andrea Leslie, Western Freshwater Ecologist, North Carolina Natural Heritage Program, 2090 U.S. Highway 70, Swannanoa, NC 28778

Ms. Sarah McRae, North Carolina Department of Environment and Natural Resources, Natural Heritage Program, 1601 Mail Service Center, Raleigh, NC 27699-1601

Literature cited:

- Allan, C. J. 2005. Water Quality and Stream Stability Monitoring for Goose Creek, Mecklenburg and Union Counties, North Carolina, 2001-2003 (draft final). Department of Geography and Earth Sciences, UNC Charlotte, Charlotte, NC.
- Bales, J. D., J. C. Weaver, and J. B. Robinson. 1999. Relation of Land Use to Streamflow and Water Quality at Selected Sites in the City of Charlotte and Mecklenburg County, North Carolina, 1993-98. U.S. Geological Survey Water-Resources Investigations Report 99-4180, Raleigh, NC.
- Chen, Z., C. Perrin, S. Gale, and J. Fisher. 2001. A Preliminary Review of Five-year Water Quality Trends in Goose Creek. North Carolina Division of Water Quality and North Carolina State University. Raleigh, NC.
- Keferl, E. P. 1991. A Status Survey for the Carolina heelsplitter (*Lasmigona decorata*), a Freshwater Mussel Endemic to the Carolinas. Unpublished report to the U.S. Department of the Interior, Fish and Wildlife Service. 51 pp.
- Mecklenburg County Water Quality Program and North Carolina Division of Water Quality. 2005. Total Maximum Daily Loads for Fecal Coliform for Goose Creek, North Carolina [Waterbody ID NC_13-17-18a and 13-17-18b] Final Report Submitted to EPA April 2005.
- North Carolina Division of Water Quality. 2000. North Carolina's 2000 § 303(d) List. Water Quality Section, Raleigh, NC.
- , 2003. Yadkin-Pee Dee River Basinwide Water Quality Management Plan. Water Quality Section, Raleigh, NC.
- , 2006. North Carolina's 2006 § 303(d) List. Water Quality Section, Raleigh, NC.
- , 2012. North Carolina's 2012 § 303(d) List. Water Quality Section, Raleigh, NC.
- North Carolina Ecosystem Enhancement Program. 2009. Goose Creek & Crooked Creeks Local Watershed Plan Phase I Summary Report. 273 pp.
- North Carolina Wildlife Resources Commission. 2000. Atlantic Slope mussels and fish. Pp. 1-25 in Annual Performance Report, Vol. IX, July 1999-June 2000, Nongame and Endangered Wildlife Program. 49 pp.

MEETING SUMMARY

Update: Environmental Assessment for the Addition of the Goose Creek Watershed to CMUD's 2002 IBT Certificate

ATTENDEES: Mark Cantrell/USFWS
John Fridell/USFWS
Alan Ratzcliff/USFWS
Shari Bryant/WRC (phone)
Ron Weathers/CMUD

Barry Shearin/CMUD
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PREPARED BY: CH2M HILL

DATE: February 4, 2013

The purpose of this meeting was to discuss Charlotte-Mecklenburg Utilities Department's (CMUD) preparation of an environmental document to remove the condition in their IBT Certificate limiting transfer of water to the Goose Creek watershed within Mecklenburg County.

1) Who: Introductions and Roles and Responsibilities Overview

Note: Shari Bryant joined us by conference call

2) Where: Review of Mapping

- a) Goose Creek Watershed boundaries within Mecklenburg County and the Town of Mint Hill
 - i) Discussion regarding private individual wells in the watershed. Mark asked if they are low yield or if other water quality problems are present.
Yields are sufficient. Some residents complain of brown water but this is not a health concern. Another concern is that private water providers are more expensive than public utilities
- b) Development patterns in the watershed
 - i) Mark asked what land use changes are expected in the watershed.
The Bridges shopping mall, on hold for a while, seems to be ready to move forward. Some commercial development is expected around the mall; most development in the watershed should be residential. Zoning currently reflects a majority of residential land uses.
 - ii) Barry stated that developers are asking CMUD if service is available in the watershed.
 - iii) Shari asked about the presence of CMUD water and sewer service.
Right now public sewer is not available. A private collection system run by Aqua pumps wastewater out of the basin before discharge.

3) What & When: Review of CMU's IBT Certificate, EMC Plan for Goose Creek Watershed, and Town of Mint Hill Ordinance

These documents and how they were developed were discussed.

- a) 2002 IBT Certificate
- b) 2009 EMC Site Specific Water Quality Plan for Goose Creek Watershed Plan endorsed
- c) 2010 EMC Delegation of Authority to Implement Site Specific Water Quality Plan to Mecklenburg County

- d) 2010 Town of Mint Hill updated post construction ordinance
- i) The ordinance is available at:
<ftp://ftp1.co.mecklenburg.nc.us/WaterQuality/PCO%20Ordinances/MintHillPCOFinal.pdf>
 - ii) Zoning and future land use mapping (as of August 2011) are available at:
<http://www.minthill.com/documents/7/Zoning-2011-08-24x36.PDF>
<http://www.minthill.com/documents/7/2010%20CLUP%20Map%20-%20Adopted.PDF>
 - iii) In the review of Table 7 which compares the 2009 EMC Plan and the 2010 development ordinance, Mark asked what if anything in the ordinance went above and beyond that outlined in the 2009 plan.
 - More control of peak runoff
 - Local administration of PCO (by Mecklenburg County, not the Town of Mint Hill) has its benefits
 - (a) BMP inspection and maintenance program is stronger than anything the state could do with its limited resources. Stormwater fee funding supports the program (consistent funding source).
 - (b) BMPs inspected a minimum of every 5 years (more often in recent years) and maintenance is conducted
 - (c) PCO is tied into the NPDES Phase II stormwater permit for the Town, so any change to the PCO would have to go back to the state for approval. This is unique to Mecklenburg County.
 - (d) Discussion regarding lessons learned from BMP maintenance program. Rusty stated that LID measures such as rain gardens tend to be clogged by fine particles and need maintenance. Something to watch in Goose Creek watershed as similar BMPs would be used in the watershed as development occurs.
 - iv) Review of buffer program
Rusty stated that mapping of streams that would qualify for buffers has been conducted using NC Division of Water Quality methodology so that the County is not reliant on developers to do their own mapping.
 - v) John asked about floodplain protection in the watershed. Mecklenburg County has a strong program and has fairly recently updated mapping. Below is a link to the program and a map is being provided for reference.
<http://charmec.org/stormwater/StormWaterAgencies/Pages/FloodplainMapping.aspx>
 - vi) Brief review of septic tank inspection program in the watershed.
 - vii) John asked about variances to the PCO. Rusty stated that the variances are verbatim wording of the EMC Site Specific Plan.
 - viii) Rusty mentioned the Creek ReLeaf program in the County and how the goal was to restore buffers. He hopes to expand the program into the Goose Creek watershed.
<http://charmec.org/stormwater/VolunteerGetInvolved/Pages/CreekReLeafProgram.aspx>

4) Why: Provide CMUD & Town of Mint Hill with ability to plan and make service decisions

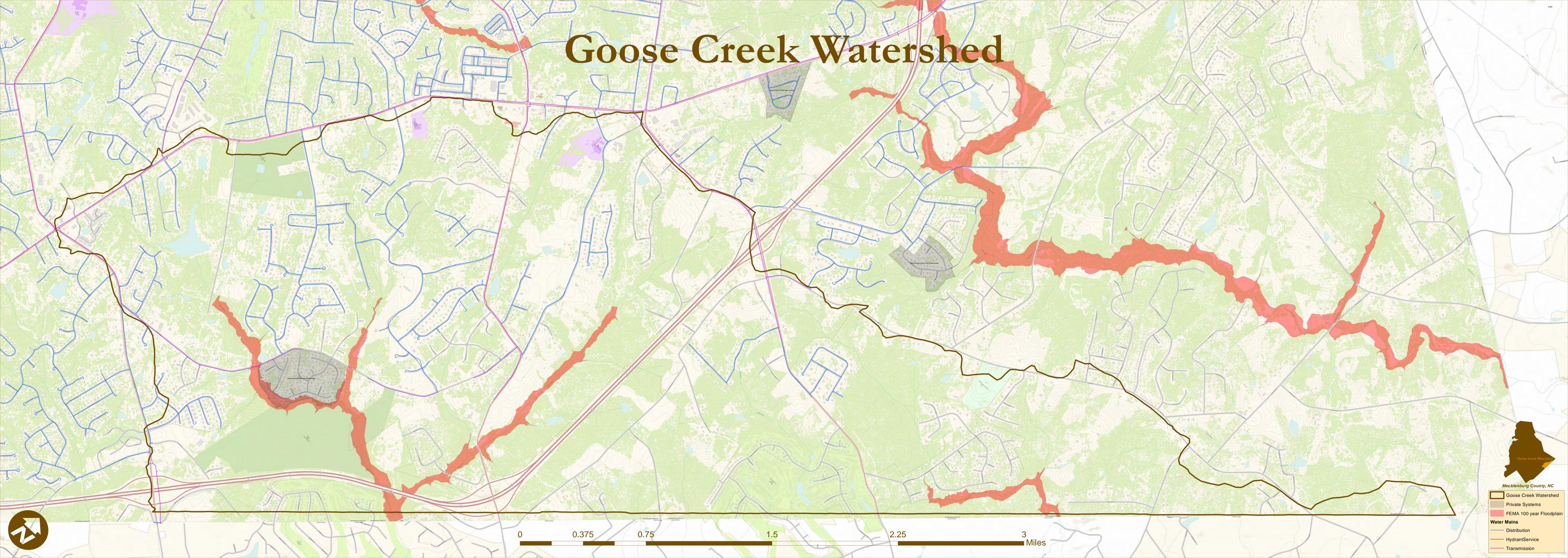
- a) The Town of Mint Hill has met the intent of the Site Specific Water Quality Plan by implementing and enforcing its updated development ordinance.
 - i) John asked about forestry activities in the watershed.
Rusty was not aware of any specifically in the watershed.

- ii) One component of the Plan is limiting ammonia. Rusty stated that ammonia is being monitored at the monitoring stations in the watershed and that no exceedences had been recorded to date. He stated how BMPs can reduce ammonia.
- iii) John mentioned how USFWS had requests for the Site Specific Plan that were not incorporated into the final document. These include:
 - (a) Limiting water line construction through buffers
 - (b) Limiting land development activities within the floodplain
 - (c) Limiting water line construction through floodplains and stream crossings by boring lines beginning outside the floodplain
 - (d) Believes 1 acre of development is too large of a trigger for ordinance enforcement
- b) Now mitigation is in place within the watershed, a key concern when Condition 3 was written into the IBT Certificate.
- c) Development plans within the watershed emerging with water needs met by private utility service or wells.
 - i) Mark asked if any “where” information is available regarding where future water lines would go. While development patterns cannot be predicted, it is assumed that over time water lines would be extended down all the major roads in the watershed.

5) Other Discussion

Discussion of the American eel. USFWS hopes that American eel can return to Goose Creek. It is a good host fish for mussels and USFWS would like to see it listed for protection.

Goose Creek Watershed



Mecklenburg County, NC

- Goose Creek Watershed
- Private Systems
- FEMA 100 year Floodplain
- Water Mains**
- Distribution
- Hydrant Service
- Transmission

0 0.375 0.75 1.5 2.25 3 Miles



APPENDIX 3
Agency Comments
Environmental Assessment - Addition of the Goose Creek Watershed to IBT Certificate

Comment	Author	Comment	Response	EA Section
1	Natural Heritage Program, Andrea Leslie	Applaud Mint Hill for enacting the Post-Construction Storm Water Ordinance but there will be more certainty of protecting the Carolina heelsplitter and other sensitive species if buffers are strengthened to (1) 200 feet on perennial streams and 100 feet on intermittent streams, (2) minimize the variances allowed from the buffer protection regulations, especially those allowing utility lines within the buffer and utility crossings over streams, and (3) widen the undisturbed buffer width for forestry activities and ensure that developers cannot use the forestry exemption to clear riparian vegetation before development.	No action necessary.	Sect 6.2
		Remain concerned that SCI associated with higher density development could result in further degradation and possible extirpation of listed species in the Goose Creek watershed.	Mitigation proposed aligns with Site Specific Water Quality Management Plan. See Table	Sect 6
		Correction: Atlantic pigtoe is described in the EA as state threatened, but it is state endangered. As is Carolina creekshell.	Correction made.	Sect 3.3.3
		See most recent description of Goose Creek Aquatic Habitat in the Union County Inventory.	Reference added. Note that this project pertains only to the Mecklenburg County portion of the Goose Creek watershed.	Sect 3.3.3
		Referenced support of more detailed stormwater protection measures described in Wildlife Resources Commission comments	See Comment 2.	Sect 6.2
2	Wildlife Resources Commission, Shari Bryant	WRC continues to remain concerned, as they commented during the review period for the Site Specific Plan in 2008, that some of the measures in the Site Specific Plan are not sufficient to protect the Carolina heelsplitter.	We acknowledge this history associated with the Site Specific Plan. The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	Sect 6.1, 6.2
		More protective if developments that exceed a 6% built-upon area required control of stormwater than the current 10% built-upon area. At 6%, at minimum stormwater controls should treat 2-year, 24-hr storm or bankful event and provide adequate infiltration of stormwater.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	Sect 6.2
		It is unclear whether removal of Condition 3 would allow not only water lines, but sewer lines as well. Significant concerns regarding the addition of sewer because significantly higher density development could occur than with water lines only.	The focus of this EA is on the removal of Condition 3 which only addresses water service. Condition 3 does not limit sewer lines.	General
		100-year floodplain: Utility infrastructure should be kept out of the buffers and 100-year floodplain. No new fill or development in the 100-year floodplain.	To the extent practical, CMUD's water utility infrastructure, if installed, would be kept out of the buffers and 100-year floodplain. Mecklenburg County has in place a strong floodplain protection program and fill and/or development within the 100-year floodplain are strictly limited.	Sect 6.3

		If condition 3 is removed, please understand that WRC will revisit issues concerning SCI on any future water or sewer projects in the watershed.	We acknowledge that any future water or sewer line projects would be independently permitted.	General
3	Division of Water Quality , Hannah Headrick	SCI will negatively affect water quality.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	Sect 4
		Yet to be proven if PCO will protect water quality. Existing water quality data have not shown improvements.	As a result of the economic downturn, little development has occurred in the Town of Mint Hill since the Post Construction Ordinance was adopted. Mecklenburg County will continue its monitoring program and continue annual reporting.	Sect 6.2
		DWQ prefers that CMUD provide annual monitoring reports to show what it has been doing towards meeting the PCO plan goals. Include annual reports for past few years as part of document.	Mecklenburg County conducts monitoring within the watershed. Annual reporting is conducted as part of the Goose Creek Fecal Coliform Recovery Program and data is included in Appendix A-1. Other water quality data are located in Appendix A-2, Mecklenburg County Water Quality Data.	Sect 6.2
		Document does not speak much to the rest of the Goose Creek watershed outside of Mint Hill that will experience growth because of increased water availability.	This project is specific to the service area of CMUD and is entirely within Mecklenburg County. The entire Goose Creek watershed within Mecklenburg County is within the planning jurisdiction of the Town of Mint Hill. Figure 2 depicts these boundaries. This project does not include the portion of the watershed within Union County.	General
4	Division of Water Quality	Removal of Condition 3 is not a prudent course of action considering there is endangered species in the watershed.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	General
	Mooresville Regional Office			
5	Aquifer Protection Section	No Comment	No action necessary.	
	Mooresville Regional Office			
6	U.S. Fish and Wildlife Service, Brian Cole	The EA concludes that the effects of increased growth and development made possible by removal of Condition 3 will not be significant to the Carolina heelsplitter. We cannot agree with this conclusion.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	General
	Brian Cole	Provided summary of recent surveys for the Carolina heelsplitter to document population decline and habitat degradation. USFWS conclusion: As a result of aquatic habitat degradation in the watershed, this population of Carolina heelsplitter is rapidly declining and is likely to become extirpated in the near future without implementation of adequate measures to prevent further aquatic habitat degradation and to restore the species' habitat.	By inclusion of these comments in the complete final EA document, these survey results are acknowledged.	Sect 3.3.3

		We do not believe the Site Specific Plan (and hence the PCO) goes far enough to be protective of the Carolina heelsplitter.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.	Sect 6
		Land disturbance: We believe that requirements of the PCO should apply to any new clearing activity regardless of the size or type of disturbance (current rules apply for disturbances greater than or equal to 1 acre). Recommended requirements include (1) measures designed to replicate and maintain the pre-construction hydrograph and (2) measures to promote infiltration. Any stormwater measures should include a monitoring and maintenance plan.	The Town of Mint Hill's Post Construction Ordinance is consistent with the Site Specific Plan regarding the 1-acre trigger and includes references to its Storm Water Design Manual, which includes requirements for operation and maintenance of BMPs. The Town of Mint Hill accepts maintenance responsibility following a 2-year warranty period. See Table 7.	Sect 6.2
		Buffers: We continue to recommend the requirement for maintenance or establishment and protection of undisturbed, forested buffers on each side of streams that are naturally vegetated that extend a minimum of 200 feet from the top of the banks of all perennial streams and a minimum of 100 feet from the top of the banks of all intermittent streams, or the full extent of the 100-year floodplain, whichever is greater.	The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules and exceeds the buffer delineation language of the Site Specific Plan. This results in better definition of intermittent streams in particular. See Table 7.	Sect 6.2
		Buffers: Disturbances which require maintained, cleared rights-of-way such as ditches or utility lines should not occur within the buffers.	To the extent practical, CMUD's water utility infrastructure, if installed, would be kept out of the buffers and 100-year floodplain. Mecklenburg County has in place a strong floodplain protection program and fill and/or development within the 100-year floodplain are strictly limited.	Sect 6.2
		Buffers: The PCO should encourage the reestablishment of riparian buffers in areas where they are currently lacking and require the establishment of riparian buffers when changes in land uses occur.	While not described in the Post Construction Ordinance, Mecklenburg County has begun a small buffer restoration program, planting trees within the defined buffers which currently are not forested. Public education programs regarding the benefits of buffers are also in place.	Sect 6.2
		Buffers: Too much potential for variances within the buffers. Recommend that no fill, no new impervious surfaces, or no creation of semi-pervious surfaces be allowed within the floodplain or the buffers and that the buffers remain undisturbed.	Potentially allowable activities with the buffer are reviewed by the Storm Water Administrator and do require mitigation if approved. The Division of Water Quality has the authority to challenge a decision for a period of 30 days after issuance. Variance requests require a multi-level approval process including the Storm Water Administrator (Mecklenburg County), the Storm Water Advisory Committee, and the Director of the Division of Water Quality who then presents it to the Environmental Management Commission. The Environmental Management Commission ultimately makes a decision on a variance request, which is consistent with their rule-making process for the Site Specific Plan.	Sect 6.2
		Buffers: Variances should require mitigative measures. We would be happy to meet with or discuss buffer concerns in more detail.	Section 305C(11) of the Post Construction Ordinance details the mitigation requirements for stream buffer impacts.	Sect 6.2

		<p>Ammonia toxicity: Based on currently available information, we believe the achievement of 0.5 milligrams per liter or less of total ammonia on a chronic basis is reasonably likely to prevent death, harm, or injury to the Carolina heelsplitter. We recommend that the PCO outline measures that must be taken to ensure "toxicity to the Carolina heelsplitter" is likely to be prevented (instead of more after-the-fact as currently written). This should include monitoring and enforcement plans.</p>	<p>Ammonia is monitored as part of Mecklenburg County's water quality monitoring program. The Post Construction Ordinance meets the requirements of the Site Specific Plan. We also recognize that ammonia toxicity is less likely to originate from stormwater sources and that it is an important component of Mecklenburg County's overall water quality monitoring program in the watershed. Point sources, the most likely source of elevated ammonia, are directly regulated by the Division of Water Quality.</p>	Sect 6.2
		<p>Forestry activities within buffers: Site Specific Plan allows for forestry activities including removing trees within the buffers. It is unclear if the PCO allows the same. This is inappropriate within the Goose Creek watershed and should include rules that do not permit forestry exemptions to be used for clearing prior to development activities.</p>	<p>The Post Construction Ordinance includes language regarding vegetation management under Section 305(C)(9). Forestry activities including removing trees is generally not permitted. For example, removal of individual trees which are in danger of causing damage to dwellings, other structures or human life is permitted. Pruning is also permitted.</p>	Sect 6.2
		<p>We continue to note the need for a restoration component in (or to compliment) the PCO so that existing poor water quality is remediated.</p>	<p>Mecklenburg County is currently in the planning stages of a significant restoration project within the watershed, partially within current County-owned property, as part of the County's Watershed Management Plan implementation.</p>	Sect 6.2
		<p>We believe that removal of Condition 3 will contribute to already degraded conditions and further compromised habitat in the Goose Creek system.</p>	<p>The Site Specific Plan was adopted by the Environmental Management Commission, after consideration of input through a formal rule-making process, for the purposes of maintenance and recovery of the water quality conditions required to sustain and recover the Carolina heelsplitter species. The Town of Mint Hill's Post Construction Ordinance meets the requirements of the Plan included in EMC rules. See Table 7.</p>	General