

DEPARTMENT OF THE ARMY
Wilmington District, Corps of Engineers
Post Office Box 1890
Wilmington, North Carolina 28402

Applicant: Mountain Development, LLC
Action ID: 2007-3367

Date: August 8, 2008
Waterway: Little Willow Creek
Folly Creek
French Broad River

**ENVIRONMENTAL ASSESSMENT, 404(B)(1) ANALYSIS, FINDING OF NO SIGNIFICANT
IMPACT (FONSI), AND STATEMENT OF FINDINGS**

This document constitutes my Environmental Assessment, Finding of No Significant Impact, Statement of Findings, and review and compliance determination according to the 404(b)(1) guidelines for the proposed work.

This permit action is being taken under authority delegated to the Wilmington District Engineer by the Secretary of the Army and the Chief of Engineers by Title 33, Code of Federal Regulations, Part 325.8, pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899.
- Section 404 of the Clean Water Act.
- Section 103 of the Marine Protection, Research and Sanctuaries Act.
- Section 4(e) of the Outer Continental Shelf Lands Act of 1953.

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1. Location, Existing Site Conditions, Project Description, Changes to Project:

a. **Location:** The Seven Falls Golf and River Club is located south of Etowah in Henderson County, North Carolina. To access the site from Asheville, take I-26 West to Exit 49B (US Highway 64). Continue on US Highway 64 to Blantyre and turn left onto Blantyre Road. Then, turn left onto Pleasant Grove Road. The site will be to the north and south of Pleasant Grove Road in the 700 block. In general, the site is bordered to the north by the French Broad River, to the south by Jeter Mountain and Jeter Mountain Road, to the east by Judd Wilson Mountain and Folly Road, and to the west by Shuford Mountain. Coordinates for the site are 35.286153° N and 82.596333 °W.

b. **Existing Site Conditions:** The project site consists of wooded land and old agricultural fields. Elevations range from approximately 2,080 feet above mean sea level (MSL) on the northern portion of the property within the French Broad River floodplain to 3,220 feet above MSL on the southern portion of the property south of Folly Road and at a summit of Jeter Mountain. Many natural communities are present on site and wildlife was observed utilizing the area.

During site visits conducted by ClearWater Environmental Consultants, Inc. (CEC), two natural community types, as identified in the *Classification of Natural Communities of North Carolina (Third Approximation)* were identified on the property: Montane Alluvial Forest and Acidic Cove Forest. In addition to the natural community types listed above, the site also contains red oak-hickory forest, old fields, wetlands, stream channels, and open water ponds. The following is a summary of each of the seven habitat types identified on site.

Montane Alluvial Forest

This forest type is situated in stream and river floodplains at moderate to high elevations. They are occasionally flooded and contain alluvial soils. This forest type is located adjacent to the French Broad River on the northern portion of the property. This forest type has an open to dense shrub layer and a sparse to dense herbaceous layer. The canopy is a mixture of bottomland and mesophytic tree species. Dominant tree species observed on site include green ash (*Fraxinus pennsylvanica*), sweetgum (*Liquidambar styraciflua*), sycamore (*Platanus occidentalis*), four wing silverbell (*Halesia tetraptera*), river birch (*Betula nigra*), basswood (*Tilia americana*), American hornbeam (*Carpinus caroliniana*), and red maple (*Acer rubrum*). Shrubs observed on site include spicebush (*Lindera benzoin*), sweetshrub (*Calycanthus floridus*), tag alder (*Alnus serrulata*), elderberry (*Sambucus canadensis*), black willow (*Salix nigra*), yellow root (*Xanthorhiza simplicissima*), giant rivercane (*Arundinaria gigantea*), and silky dogwood (*Cornus amomum*). Vines observed include poison ivy (*Toxicodendron radicans*), trumpet creeper (*Campsis radicans*), and Japanese honeysuckle (*Lonicera japonica*). Examples of herbaceous species in this forest type include jewelweed (*Impatiens capensis*), tear thumb (*Polygonum sagittatum*), and Halberd leafed violet (*Viola hastata*).

Acidic Cove Forest

The Acidic Cove Forest community type is located in sheltered areas at low to moderate elevations. They are primarily narrow, rocky gorges, steep ravines, and low gentle ridges within coves. Soils are generally rocky and acidic. On site, this community type is scattered throughout the central and southern portions of the property. They are located adjacent to stream channels and within the stream channels' associated valleys. In general, these areas have a dense forest canopy with a limited number of mesophytic trees. Dominant tree species observed include white pine (*Pinus strobus*), Canadian hemlock (*Tsuga canadensis*), yellow birch (*Betula lutea*), black gum (*Nyssa sylvatica*), red oak (*Quercus rubra*), and white oak (*Quercus alba*). The shrub layer is well developed and often forms

dense thickets. Shrub species observed and characteristic of the Acidic Cove Forest located on site include great rosebay rhododendron (*Rhododendron maximum*), mountain laurel (*Kalmia latifolia*), dog hobble (*Leucothoe axillaries*), American holly (*Ilex opaca*), and red maple (*Acer rubrum*). Less common shrub species observed include blueberry (*Vaccinium pallidum*), deerberry (*Vaccinium stamineum*), and sassafras (*Sassafras albidum*). The herbaceous layer is generally not well developed in these communities but some common species observed on site include Christmas fern (*Polystichum acrostichoids*), galax (*Galax aphylla*), and Indian cucumber root (*Medeola virginiana*).

Red Oak-Hickory Forest

The Red Oak-Hickory Forest type is located on dry slopes and ridge tops. On site, this community type is scattered throughout the central and southern portions of the property. Dominant tree species include Virginia pine (*Pinus virginiana*), white oak (*Quercus alba*), southern red oak (*Quercus falcata*), sweet pignut hickory (*Carya glabra* var. *odorata*), mockernut hickory (*Carya tomentosa*), and shagbark hickory (*Carya ovata*). Other trees observed were sourwood (*Oxydendrum arboreum*), black gum (*Nyssa sylvatica*), and yellow poplar (*Liriodendron tulipifera*). Conifers such as red cedar (*Juniperus virginiana*), white pine (*Pinus strobus*), Virginia pine (*Pinus virginiana*), and Canadian hemlock (*Tsuga canadensis*) were observed but rare in this habitat. Species observed in the midstory include sassafras (*Sassafras albidum*), flowering dogwood (*Cornus florida*), and American holly (*Ilex opaca*). Shrubs observed in this habitat include mountain laurel (*Kalmia latifolia*), great rosebay rhododendron (*Rhododendron maximum*), huckleberry (*Gaylussacia baccata*), American hazelnut (*Corylus americana*), maple leaf viburnum (*Viburnum acerifolium*), blueberry (*Vaccinium pallidum*), and deerberry (*Vaccinium stamineum*). Vines such as common greenbriar (*Smilax rotundifolia*) and saw tooth greenbriar (*Smilax bona-nox*) were observed, as well. The herbaceous layer is sparse and patchy. Common species observed in this layer include false Solomon's seal (*Maianthemum racemosum*), false yellow foxglove (*Aureolaria flava*), goldenrod (*Solidago* spp.), whorled coreopsis (*Coreopsis major*), spotted wintergreen (*Chimaphila maculatum*), woodland sedge (*Carex rosea*), and panic grasses (*Panicum* spp.).

Old Field

This anthropogenic community is a direct result of agricultural and dairy farming practices. This community is located on the north and northwest side of the property. These areas are devoid of a canopy and lack substantial woody vegetation. Plant species identified in this area include pokeberry (*Phytolacca americana*), blackberry (*Rubus* spp.), lanceleaf pliantain (*Plantago lanceolata*), Queen Anne's lace (*Daucus carota*), dock (*Rumex crispus*), evening primrose (*Oenothera biennis*), horsenettle (*Solanum americanum*), buttercup (*Ranunculus* spp.), thin leaf mountain mint (*Pycnanthemum tenuifolium*), mountain mint (*Pycnanthemum* spp.), and butterfly weed (*Asclepias tuberosa*). Composites observed in the herbaceous layer include alternate leaf wing stem (*Verbesina alternifolia*), crownbeard (*Verbesina occidentalis*), ironweed (*Vernonia noveboracensis*), whorled coreopsis (*Coreopsis major*), beggars ticks (*Bidens cernua*), fleabane (*Erigeron philadelphicus*), sunflower (*Helianthus* spp.), Indian pliantain (*Cecelia muehlenbergii*), round leaf eupatorium (*Eupatorium rotundifolium*), goldenrod (*Solidago* spp.), and aster (*Aster* spp.). Grasses observed include corn (*Zea mays*), foxtail millet (*Setaria italica*), barnyard grass (*Echinochloa crus-galli*), fescue (*Festuca* spp.), panic grass (*Panicum* spp.), and velvet grass (*Holcus lanatus*).

Wetlands

There are 5.28 acres of wetlands on site and these areas exhibit the presence of hydric soil and hydrophytic vegetation; and evidence of wetland hydrology and are considered adjacent since they directly abut other jurisdictional features. The wetlands on this site are composed of emergent

wetlands and a mixture of stream head seeps. Dominant trees observed were red maple (*Acer rubrum*) and black willow (*Salix nigra*). Shrub species observed included Chinese privet (*Ligustrum sinense*), elderberry (*Sambucus canadensis*), silky willow (*Salix sericea*), tag alder (*Alnus serrulata*), swamp haw (*Viburnum nudum*), pepper bush (*Clethra acuminata*), dog hobble (*Leucothoe axillaries*), and yellow root (*Xanthorhiza simplicissima*). Dominant species in the herbaceous layer include microstegium (*Microstegium vimineum*), downy lobelia (*Lobelia pubera*), jewelweed (*Impatiens capensis*), stinging nettle (*Urtica dioica*), ironweed (*Vernonia noveboracensis*), and green coneflower (*Rudbeckia lacinata*). Grasses and sedges were common and included soft rush (*Juncus effusus*), marginal rush (*Juncus marginatus*), American bur reed (*Sparganium americanum*), shallow sedge (*Carex lurida*), fringed sedge (*Carex crinita*), fox tail sedge (*Carex vulpinoidea*), yellow flatsedge (*Cyperus flavescens*), straw-color flatsedge (*Cyperus strigosus*), soft stem bulrush (*Scirpus validus*), and woolgrass bulrush (*Scirpus cyperinus*). Ferns observed include cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), and netted chain fern (*Woodwardia areolata*). A majority of wetlands on-site have been historically disturbed due to past agricultural activities and dairy operations. Most wetlands are herbaceous in nature and the soil has been compacted overtime. In general, these wetlands were determined to be fair/low quality.

Perennial Streams

Freshwater habitats include the streambeds and banks of Little Willow Creek and Folly Creek, their unnamed tributaries, and unnamed tributaries to the French Broad River. There are approximately 19.25 miles of stream channels within the property boundary. In general, these tributaries flow south to north and eventually into the French Broad River. Streams within the central and southern portion of the property are bordered by mature riparian forest. Stream channels within the northern portion of the property and flowing through the old fields lacking any significant riparian buffer.

Open Water

Five impoundments exist on the site. The largest impoundment is known as Gore Lake and is located near the western boundary of the property. This lake impounds an unnamed tributary to Little Willow Creek and is approximately 2.23 acres in size. Three smaller ponds exist in succession adjacent to Folly Creek. This system impounds 0.41 acres (collectively) of an unnamed tributary to Folly Creek. The fifth pond is located on the east side of the property and impounds 0.09 acres of an unnamed tributary to the French Broad River. There are a total of 2.73 acres of open water on site.

c. **Project Description:** The proposed project includes the development of a single-family residential development and a golf course with associated infrastructure. The residential development includes estate homes, cottages, and multi-family units. The golf course will occupy 250 acres in the west and northern portion of the property in addition to a practice facility to include a 9-hole, par three short course, putting and chipping greens, and a driving range. The practice facility will occupy 50 of the 250 acres on the northern portion of the property. Also included in development plans are a river club, town village, and swim and tennis facilities.

The applicant will permanently impact a total of 6,990 linear feet of stream channel, 1.48 acres of wetlands, and 0.57 acres of open waters to achieve the project purpose through the development of a residential golf and river club community. There are 46 permanent stream impacts, four temporary stream impacts, 10 permanent wetland impacts, and one open water impact associated with the proposed development. The tables below reflect the impact to aquatic resources associated with this development.

The applicant proposed the development of an Arnold Palmer Premier Golf Club. This will be an 18-hole championship golf course facility with a golf practice area. The practice area will include a driving range, putting and chipping greens, and a 9-hole par three short game area. There are no stream or wetland impacts associated with the short course or practice facility. Of the 18 fairways, 10 are proposed to have permanent filling activities. Table 1 depicts the impacts associated with the construction of the golf course. Total impacts are 2,391 linear feet of stream channel, 0.96 acre of wetlands, and 0.57 acre of open water. The largest stream channel impact of 515 linear feet is associated with impact G-2 and the largest wetland impact of 0.56 acre is associated with impact G-B.

Table 1: Golf Course Impacts

| Stream | | Wetland | | Open Water | |
|--------------|--------------|--------------|-------------|--------------|-------------|
| Impact | Linear Feet | Impact | Acres | Impact | Acres |
| G-1 | 141 | G-A | 0.18 | G-C | 0.57 |
| G-2 | 515 | G-B | 0.56 | Total | 0.57 |
| G-3 | 279 | G-D | 0.16 | | |
| G-4 | 358 | G-E | 0.06 | | |
| G-5 | 151 | Total | 0.96 | | |
| G-6 | 324 | | | | |
| G-7 | 238 | | | | |
| G-8 | 200 | | | | |
| G-9 | 185 | | | | |
| Total | 2,391 | | | | |

The project will also construct a road network, which will result in permanent impacts. Table 2 provides a description of impacts associated with roadway construction.

Table 2: Road Impacts

| Stream | | | | Wetland | |
|--------|-------------|--------|-------------|--------------|-------------|
| Impact | Linear Feet | Impact | Linear Feet | Impact | Acres |
| 1 | 761 | 19 | 120 | R-A | 0.15 |
| 2 | 100 | 20 | 60 | R-B | 0.21 |
| 3 | 170 | 21 | 120 | R-C | 0.03 |
| 4 | 60 | 22 | 85 | R-D | 0.01 |
| 5 | 50 | 23 | 75 | R-E | 0.06 |
| 6 | 380 | 24 | 110 | R-F | 0.06 |
| 7 | 100 | 25 | 85 | Total | 0.52 |
| 8 | 80 | 26 | 75 | | |
| 9 | 125 | 27 | 70 | | |
| 10 | 365 | 28 | 90 | | |
| 11 | 120 | 29 | 75 | | |
| 12 | 100 | 30 | 60 | | |
| 13 | 100 | 31 | 75 | | |
| 14 | 80 | 32 | 0 | | |
| 15 | 165 | 33 | 60 | | |

| | | | |
|-----------|-----|--------------|--------------|
| 16 | 80 | 34 | 50 |
| 17 | 100 | 35 | 80 |
| 18 | 80 | 36 | 233 |
| | | 37 | 60 |
| | | Total | 4,599 |

As depicted from the table above, approximately 4,599 linear feet of stream channel will be impacted by the construction of road crossings. The largest stream channel impact of 233 linear feet is associated with impact #36 and the largest wetland impact of 0.21 is associated with impact R-B. Eleven stream crossing impacts were avoided by utilizing bridges/spanning structures.

There are four utility crossings proposed on site that will temporarily impact jurisdictional stream channels. These utility lines will be excavated and then the streambed/banks will be returned to pre-construction contours. Table 3 outlines the impacts associated with the utility line construction. Approximately 150 linear feet of stream channel will be temporarily impacted by the installation of utility lines.

Table 3: Utilities

| Stream | |
|--------------|-------------|
| Impact | Linear Feet |
| U-1 | 30 |
| U-2 | 30 |
| U-3 | 30 |
| U-4 | 60 |
| Total | 150 |

Stream bank stabilization and enhancement will occur within the practice course and 18-hole golf course boundary. The purpose of these enhancement and stabilization activities is to restore the function of Little Willow Creek and its unnamed tributaries, while making aesthetic improvements and establishing a native plant community. This work is not associated with obtaining credit for compensatory mitigation and is being conducted voluntarily by the applicant. Historically, Little Willow Creek has been channelized and severely impacted by years of agriculture and dairy operations.

Enhancement and stabilization activities within the short golf course boundary will total approximately 4,070 linear feet. Stream bank work will occur on the left and right banks of the channel. Approximately 8,700 linear feet of Little Willow Creek flows through the 18-hole golf course in which a majority of this length will likely be enhanced/stabilized. A Nationwide Permit 13 application was issued on November 7, 2007 under Action ID: 20073543-345 for the proposed work.

d. **Changes to Project:** The applicant further minimized impacts to aquatic resources by reducing stream channel and wetland impacts associated with the golf course and roadway construction. For the golf course, stream channel impacts were reduced by a total of 688 linear feet and wetland impacts were reduced by a total of 0.69 acre. The table below summarizes the reduction of impacts on the golf course.

Table 4: Golf Course Impacts Reduction

| Streams | | | |
|----------------|----------------------------|-----------------|------------|
| Impact | Previously Proposed Impact | Modified Impact | Difference |
| G-5 | 601 | 151 | 450 |
| G-6 | 377 | 324 | 53 |
| G-9 | 370 | 185 | 185 |
| Totals | 1348 | 660 | 688 |

| Wetlands | | | |
|-----------------|----------------------------|-----------------|-------------|
| Impact | Previously Proposed Impact | Modified Impact | Difference |
| G-B | 1.15 | 0.56 | 0.59 |
| G-D | 0.26 | 0.16 | 0.10 |
| Totals | 1.41 | 0.72 | 0.69 |

The table below summarizes the reduction to stream channel impacts associated with road way construction. For road crossings, stream channel impacts were reduced by a total of 230 linear feet. The cul-de-sac served by the crossing at Impact 5 was redesigned and shifted east of the stream. However, lot access still requires a driveway crossing at that location which reduced impacts to 50 linear feet of stream channel. The road served by the crossings at Impacts 16, 37, and R-C was shifted to the south, which further avoided 0.28 acres of wetland impact as a result of pre-application meetings. The cul-de-sac served by the crossing at Impact 32 was redesigned and the impact was eliminated. The road served by the crossing at Impact 17 was redesigned and will be shifted downstream. This will reduce impacts from 160 linear feet to 100 linear feet.

Table 5: Road Impacts Reduction

| Streams | | | |
|----------------|----------------------------|-----------------|------------|
| Impact | Previously Proposed Impact | Modified Impact | Difference |
| 5 | 140 | 50 | 90 |
| 17 | 160 | 100 | 60 |
| 32 | 80 | 0 | 80 |
| Totals | 380 | 150 | 230 |

2. **Project Purpose:** The basic project purpose of the proposed development is to provide residential

housing and recreational opportunities. More specifically, the overall project purpose is to develop a viable, upscale, residential, community with a premier golf course and river club amenity in Henderson County.

3. **Scope of Analysis:** The proposed work will primarily benefit the applicant and residents of the development. Beyond the requirement to obtain a Section 404 permit, there is no additional federal involvement with this project. The site is approximately 1,400 acres in size and contains 5.28 acres of wetlands and 19.25 miles (101,640 linear feet) of stream channel located throughout the site. Throughout the 1,400-acre site, there are 46 permanent stream impacts, four temporary stream impacts, 10 permanent wetland impacts, and one open water impact associated with the proposed development. Due to the amount and location of jurisdictional areas and the scale of impacts associated with this project, the entire property boundary is included in our scope of analysis. There are two off-site mitigation areas, which are also included in our scope of analysis.

4. **Other Federal, State, and Local Authorizations Obtained or Required and Pending:**

a. **State water quality certification (401):** The North Carolina Division of Water Quality (DWQ) certification number 3724 was issued on January 25, 2008. Special conditions were issued, and a copy of these conditions is attached as Exhibit A.

b. **Coastal Zone Management (CZM) Consistency Determination:** Not Applicable.

c. **Other authorizations:** A Section 26A permit from the Tennessee Valley Authority is required since this project affects stream channels that are tributaries to the Tennessee River. Other than local planning/zoning requirements, there are no other authorizations known to be required.

5. **Complete Application and Public Notice:** The Corps received the application on September 7, 2007. The Corps considered the application complete on October 7, 2007. The Corps issued a public notice on November 15, 2007 and sent this notice to all interested parties including appropriate State and Federal agencies with a comment deadline of December 14, 2007.

6. **Alternatives [33 CFR 320.4(b)(4), 40 CFR 230.10]:**

a. **Avoidance (No action, uplands, and availability of other sites):** There are few, if any, single tracts of land in Henderson County large enough to accommodate a development such as the Seven Falls Golf and River Club. For this reason, the applicant was not able to find a single tract of land in Henderson County that met the project needs. The chosen site is a compilation of 38 individual parcels; the valley alone, is comprised of 12 parcels. This compilation of parcels has taken approximately two years to complete. Due to the lack of large parcels in Henderson County and the amount of time and effort it has taken to compile such a large number of parcels, all energies were focused on assembling a tract large enough to sustain a development of substantial size. For this reason, the applicant considered no other group of parcels for this development. It is also likely that any other off-site location of this size and in the immediate area would contain a similar type/extent of jurisdictional features due to the consistent topography and landscape position.

b. **Minimization (modified project designs, etc.):** During design of the proposed master plan, the applicant considered many development alternatives, which included impacts to substantially more streams than the proposed plan depicts. Prior to the submittal of this application, the applicant

conducted meetings with regulatory agency personal including the USACE, DWQ, and NC Wildlife Resources Commission (WRC) over a six-month period. Many of these changes were in response to consultant and agency comments. Specifically, other development plans required more impacts to streams and wetlands from golf course routing. Original golf course designs proposed over 3,600 linear feet of stream impacts. Additional avoidance and minimization efforts were completed by avoiding road crossing impacts by utilizing eleven bridges. All stream impacts associated with cart crossings will be minimized through the utilization of bridges. In addition to the restoration and stream enhancement proposals, the proposed master plan will preserve streams at preservation ratio greater than 10:1, thereby demonstrating that the applicant has designed the proposed project in order to avoid jurisdictional impacts to the greatest extent practicable. Because the site is covered in long linear stream segments, it would be impossible to avoid all streams while continuing to maintain a rational project design and the flexibility needed to construct a large-scale master planned community with a lengthy build out period.

c. **Conclusions of Alternatives Analysis:** Following my review of all project alternatives, the proposed alternative represents the least damaging practicable alternative. Although alternative properties exist, they either contained comparable amounts of streams or wetlands or were unsuitable due to severe elevation change on the property or contained extensive designated floodplain areas.

7. Evaluation of the 404(b)(1) Guidelines:

a. **Factual determinations:**

(1) Physical substrate: The project will require the placement of approximately 13,000 cubic yards into jurisdictional areas for the construction of the golf course and road crossings. Fill material will be placed in jurisdictional streams and wetlands and raise the bottom elevation of those areas. Any discharge will consist of suitable fill material and will not include any trash, debris, car bodies, asphalt, etc. The fill material will also be free of toxic pollutants in toxic amounts. Proper sediment and erosion control devices will be installed prior to and during construction to ensure that the bottom elevation of remaining streams and wetlands on the property will not change.

(2) Water circulation, fluctuation, and salinity: The discharged dredge and fill material should not adversely modify current water circulation patterns by obstructing flow, changing direction or velocity of water, or changing velocity or flow of circulation. Culverts will be installed at road crossings with jurisdictional impacts. All culverts will be buried to a depth that is equal to 20% of their diameter. Culverts that are larger than 48 inches will be buried to a depth of 12 inches. Impacts associated with road crossings will not inhibit channel flow. The discharge of fill material associated with this project is not anticipated to have any significant effect on the downstream hydrologic regimes. Because this project is located inland and away from tidally influenced waters and wetlands, no modification to the salinity of on-site or adjacent waters is expected.

(3) Suspended particulate/turbidity: The discharge of fill material associated with this project is not anticipated to have any significant effect on the downstream hydrologic regimes. Sediment and erosion control structures on the site will eliminate any substantial, long-term effects. However, during construction activities on the site, there may be a minimal increase in suspended particulates that may lead to increased turbidity downstream. The impacts resulting from suspended particulate/turbidity is expected to be minor and temporary in nature.

(4) Contaminant availability: Fill material will be placed in jurisdictional streams and wetlands. Any discharge will consist of suitable fill material and will not include any trash, debris, car bodies, asphalt, etc. The fill material will also be free of toxic pollutants in toxic amounts. Proper sediment and erosion control devices will be installed prior to and during construction to ensure that the bottom elevation of remaining streams and wetlands on the property will not change.

(5) Aquatic ecosystem effects: Approximately 0.96 acres of jurisdictional wetlands will be filled in addition to the placement of fill in 6,990 linear feet of stream channel. Fill in wetlands generally result in the removal of all functions that these areas currently perform. Any aquatic organisms living in those jurisdictional areas will be negatively affected as a direct result of the discharge of fill. However, the on-site voluntary stream enhancement, constructed storm water ponds, and preservation of remaining stream channels with riparian buffers will likely off set any short-term effect on the aquatic organisms in the impact area.

(6) Proposed disposal site: The proposed disposal site is the same location as the proposed impacts. There is no additional disposal site where fill material will be placed.

(7) Cumulative effects: The Seven Falls Golf and River Club is located within the French Broad River Subbasin 04-03-02. Approximately 75 percent of this subbasin is forested and the total land mass includes approximately 806 square miles (516,000 acres). The Seven Falls Golf and River Club is comprised of approximately 1,400 acres (2.2 square miles). All of the land mass for the Seven Falls Golf and River Club accounts for less than 0.30 percent of the land mass of the basin. Due to the relatively small scale of the development site when compared to the size of the overall watershed, it is not expected that the project would result in any significant cumulative effects on the watershed. Past activities within the subbasin and the Seven Falls Golf and River Club project boundary include logging, agricultural and residential development, and road building. Logging and agricultural activities have ceased at the Seven Falls Golf and River Club but remain active in other parts of the watershed. Agricultural and residential development, and road building in the vicinity remains active; continued and future development of the watershed is independent of activities proposed at the Seven Falls Golf and River Club. Impacts at the Seven Falls Golf and River Club include the installation of road crossings, construction of a golf course and river club, installation of utilities, and construction of all other associated infrastructure. Road impacts and wetland fills are necessary for the development of the site. Minimization activities have lessened impacts associated with road crossings and wetland fill and their effects cumulatively on the watershed will be minimal. Golf course maintenance that has the potential to produce cumulative and secondary effect on the environment; however, through responsible construction and maintenance practices, effects to the watershed and the environment will be minimal. No activity at the Seven Falls Golf and River Club are expected to impair the water resources on site or interfere with the productivity and water quality of the existing aquatic ecosystem. Water quality may actually improve with the removal of dairy operations and the plastics corporation and storm water treatment provided by the golf course. The applicant is protecting approximately 15 miles of streams with 30-foot upland buffers on

either side.

(8) Secondary effects: Secondary effects associated with this project are likely to be minimal. The discharge of fill material associated with this project is not anticipated to significantly impact the downstream aquatic environment. The downstream hydroperiod is not anticipated to be affected due to the construction of the proposed storm water facilities. Minor and temporary sedimentation may occur downstream during construction even with the proper installation of sediment and erosion control measures. Due to the minimal amount of impacts associated with this project and the construction of the storm water facilities, secondary effects associated with this project are minimal.

b. Restrictions on discharges:

(1) Alternatives (See Section 6):

(a) The activity is located in a special aquatic site (wetlands, sanctuaries and refuges, mudflats, vegetated shallows, coral reefs, riffle and pool complexes, etc.)

yes no

(b) The activity needs to be located in a special aquatic site to fulfill its basic purpose.

yes no

(c) All practicable alternatives have been reviewed in Section VI above. It has been demonstrated that the alternative with the fewest impacts on the aquatic ecosystem (least damaging alternative), has been identified.

yes no

(d) The least damaging alternative has no other significant environmental effects.

yes no

(2) Other program requirements:

(a) The proposed activity violates applicable State water quality standards, Section 307 prohibitions, or effluent standards.

yes no

(b) The proposed activity jeopardizes the continued existence of federally listed threatened or endangered species or affects their critical habitat.

yes no

(c) The proposed activity violates the requirements of a federally designated marine sanctuary.

yes no

(3) The activity will cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms; ecosystem

diversity, productivity and stability; and recreational, aesthetic, and economic values.

yes _____ no X _____

(4) Minimization of adverse effects:

(a) Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

yes X _____ no _____

(b) Compensatory Mitigation: Upon completion and implementation of all practical avoidance and minimization efforts, the project will impact 6,990 linear feet of stream channel, 1.48 acres of wetlands, and 0.57 acres of open water. To compensate for the proposed impacts, the applicant will provide both off-site and on-site mitigation. The streams were assessed to exhibit good aquatic function therefore, a 2:1 ratio was determined to be appropriate to compensate for loss of these aquatic functions. Based on this ratio, the applicant is responsible for providing a total of 13,980 linear feet of compensatory mitigation for stream channel impacts (Table 6). Stream mitigation will be in the form of off-site restoration and enhancement, on-site preservation, and payment into the in-lieu fee program known as the North Carolina Ecosystem Enhancement Program (NCEEP). The tables below summarize the basic mitigation requirement and stream mitigation proposed for the development of the Seven Falls Golf and River Club.

Table 6: Basic Mitigation Requirement

| Impact | Linear Feet of Impact | Compensatory Mitigation Ratio (x:1) | Basic Mitigation Requirement |
|--------------|-----------------------|-------------------------------------|------------------------------|
| Roads | 4,599 | 2 | 9,198 |
| Golf Course | 2,391 | 2 | 4,782 |
| Total | 6,990 | | 13,980 |

The applicant will restore and enhance two off-site stream channels. The first stream channel is an unnamed tributary to the French Broad River and is located within the Hollabrook Farms subdivision (Hollabrook). Approximately 3,275 linear feet of channel will be enhanced and restored which will yield 2,358 linear feet of enhanced stream channel and approximately 980 linear feet of restored stream channel for a total of 2,552 linear feet of mitigation credit. The second stream channel is an unnamed tributary to Wash Creek and is located in the future Laurel Park Nature Park. Restoration activities will occur on approximately 1,370 linear feet of stream channel, which will yield 1,370 linear feet of newly restored stream channel and subsequently 1,370 linear feet of mitigation credit.

All of the stream mitigation projects will utilize Natural Channel Design methods which is a geomorphologic approach to stream restoration based on an understanding of the valley type, general watershed conditions, dimension, pattern, profile, hydrology and sediment transport of natural substrate, stable channels reference conditions, and applying this understanding to the reconstruction or relocation of an unstable or new channel.

Additional credit needs will be fulfilled through payment into the NCEEP at 2:1 ratio and will yield

1,884 linear feet of credit. NCEEP has agreed to provide 1,884 linear feet of stream channel restoration utilizing the techniques described above. The remainder of the needed credit will be fulfilled through on-site preservation at a 10:1 ratio with 30-foot riparian buffers, which will be preserved through restrictive covenants. By conducting the on and off-site mitigation, the applicant will have adequately compensated for impacts to stream channels on the site. The proposed mitigation plan is in accordance with the Interagency Stream Mitigation Guidelines (April 2005) and RGL 02-02 and will be implemented utilizing the special conditions outlined in this assessment.

Table 7: Proposed Mitigation

| Stream | Linear Feet of Mitigation | Type | Mitigation Activity Ratio (x:1) | Total Credit |
|------------------------|---------------------------|--------------|---------------------------------|---------------|
| Hollabrook (off-site) | 2,358 | Enhancement | 1.5 | 1,572 |
| Hollabrook (off-site) | 980 | Restoration | 1 | 980 |
| Laurel Park (off-site) | 1,370 | Restoration | 1 | 1,370 |
| NCEEP | 1,884 | Restoration | 1 | 1,884 |
| On-Site | 81,743 | Preservation | 10 | 8,174 |
| Total | 88,335 | | | 13,980 |

Due to the quality and significant impairment of wetlands on site, the applicant is providing wetland mitigation at a ratio of 1:1 in which the applicant is responsible for mitigating impacts to 1.48 acres of wetlands (Table 8). The applicant will fulfill these mitigation requirements through the creation of littoral shelves around the three on-site ponds and payment into the NCEEP. The tables below summarize the basic mitigation requirement and wetland mitigation proposed for the development.

Table 8: Basic Mitigation Requirement

| Impact | Acres of Impact | Compensatory Mitigation Ratio (x:1) | Basic Mitigation Requirement |
|--------------|-----------------|-------------------------------------|------------------------------|
| Roads | 0.52 | 1 | 0.52 |
| Golf Course | 0.96 | 1 | 0.96 |
| Total | 1.48 | | 1.48 |

The littoral shelves will be constructed through conditions of this permit and result in the creation of 0.17 wetland mitigation credit...need more detail on littoral shelves. The remainder of the credit will be provided by the NCEEP which they will restore 1.5 acres of wetlands. The proposed mitigation plan is in accordance with RGL 02-02 and will be implemented utilizing the special conditions outlined in this assessment.

Table 9: Proposed Mitigation

| Wetland | Acreage of Mitigation | Type | Mitigation Activity Ratio (x:1) | Total Credit |
|----------------|-----------------------|-------------|---------------------------------|--------------|
| Littoral Shelf | 0.50 | Creation | 3 | 0.17 |
| NCEEP | 1.50 | Restoration | 1 | 1.50 |
| Total | 2.00 | | | 1.67 |

c. **Findings:** The project complies with the Guidelines provided the following special conditions are included as part of the requested permit.

Work Limits

- a) All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.
- b) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
- c) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.

Related Laws

- d) The North Carolina Division of Water Quality has issued a conditioned Water Quality Certification for your project, the conditions of that certification are hereby incorporated as special conditions of this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
- e) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-5083, Ext. 526 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

Project Maintenance

- f) The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

g) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands will be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

h) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

i) The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

j) The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

Enforcement

k) Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.

Time of Year Restrictions

l) In order to protect the egg and fry stages from sedimentation during the trout spawning period, no excavation or filling will be permitted in-stream or within the 25-foot buffer zone between the dates of October 15 and April 15 of any year without the prior approval of the North Carolina Wildlife Resources Commission and the Corps of Engineers.

Mitigation

m) In addition to the mitigation requirements listed below, you shall mitigate for unavoidable impacts to 6,990 linear feet of stream channel and 1.48 acres of wetlands associated with this project by payment to the North Carolina Ecosystem Enhancement Program (NCEEP) in the amount necessary to perform restoration to 1.48 acres of riparian hardwood wetlands and 1,884 linear feet of cool water stream in the French Broad River Basin (Cataloging Unit 06010105). Construction within jurisdictional areas on the property shall begin only after the permittee has made full payment with certified check to the NCEEP, and the NCEEP has made written confirmation to the District Engineer, that it agrees to accept responsibility for the mitigation work required, pursuant to Paragraph IV.D. of the Memorandum of Understanding between the North Carolina Department of Environment and

Natural Resources and the U.S. Army Corps of Engineers, Wilmington District, dated November 4, 1998.

n) As part of the mitigation requirements, the permittee will mitigate for unavoidable impacts to 6,990 linear feet of stream channels associated with this project by conducting off-site restoration/enhancement activities on approximately 4,708 linear feet of stream channel. The stream restoration/enhancement will be conducted according to the plan titled "Conceptual Plan for Stream Restoration at the Future Laurel Park Nature Park" dated July 24, 2007, utilizing natural channel design techniques at two off-site locations: Hollabrook Farms Subdivision and Laurel Park Nature Park. Activities prescribed by this plan shall be undertaken either before or concurrently with the commencement of any construction activities within jurisdictional areas authorized by this permit. Emergent, tree, and shrub species planted shall consist of species native to the Henderson County area. The requirements found in the mitigation plan shall be fully completed within one year of the date of issuance of this permit. The Corps of Engineers will be provided "as built" drawings of the new channels within 90 days of channel completion and subsequent monitoring will be conducted as described in the mitigation plan. The permittee shall monitor channel stability within the newly constructed channels through 2 bankfull events or 5 years, whichever is longer. Monitoring reports shall be supplied to the Corps of Engineers and the North Carolina Division of Water Quality no later than 90 days after the completion of monitoring for each year.

o) As part of the mitigation requirements, the permittee also agrees to preserve approximately 81,743 linear feet of stream channel on the property and associated 30-foot undisturbed riparian buffers on each side of the stream channels as depicted on the attached plans May 22, 2008. These areas will be preserved through the implementation of a restrictive covenant as described below in conditions (q) and (r).

p) The permittee will mitigate for unavoidable impacts to wetlands by payment into NCEEP as described above and also by constructing 0.50 acre of littoral shelves around three on-site ponds. Activities prescribed the plan titled "Conceptual Plan for Stream Restoration at the Future Laurel Park Nature Park" dated July 24, 2007 shall be undertaken either before or concurrently with the commencement of any construction activities within jurisdictional areas authorized by this permit. Emergent, tree, and shrub species planted shall consist of species native to the Henderson County area. The requirements found in the mitigation plan shall be fully completed within one year of the date of issuance of this permit.

q) The Permittee shall submit to the Corps for approval, a restrictive covenants for the purpose of maintaining proposed preservation areas in their natural state in perpetuity. Prohibited activities within the mitigation property shall specifically include, but not be limited to: the construction or placement of roads, walkways, buildings, signs, or structures of any kind (i.e., billboards, interior fences, etc.); filling, grading, excavation, leveling, or any other earth moving activity other than those associated with restoration/enhancement work or activity that may alter the drainage patterns on the property; the cutting, mowing, destruction, removal, damage or other alteration of any vegetation; disposal or storage of any debris, trash, garbage, or other waste material; except as may be authorized by subsequent modifications which are approved by the Corps of Engineers.

r) The restrictive covenants and plat, as approved by the Corps of Engineers, shall be recorded in the Register of Deeds for Henderson County prior to the sale or conveyance of any lots, phases, or other property within the subdivision. The permittee shall also cause to be recorded a plat, showing the

subdivision plan for the property, the boundary of the preservation areas, and the boundary of jurisdictional waters of the United States. The permittee shall enforce the terms of the restrictions set forth in the deed, and, prior to conveyance of the property, shall take no action on the property described in the deed inconsistent with the terms thereof.

s) The permittee and subsequent property owners shall take no action, whether on or off the mitigation property, which will adversely impact the stream habitat on the preservation property.

t) Condition (q), above, runs with the land. The permittee shall not sell, lease, or otherwise convey any interest in the mitigation property without subjecting the property to legally enforceable restrictions on the use of the property, to ensure its preservation in perpetuity, approved in writing by the Wilmington District Corps of Engineers.

u) The permittee will maintain the authorized work in good condition and in conformance with the terms and conditions of this permit. The permittee is not relieved of this requirement if he abandons the permitted activity without having it transferred to a third party.

v) If concrete is used during culvert installation (headwalls), a dry work area must be maintained to prevent direct contact between curing concrete and stream water. Uncured concrete affects water quality and is highly toxic to fish and other aquatic organisms.

w) For construction of culverts, measures will be included in the construction that will promote the safe passage of fish and other aquatic organisms. For all culvert construction activities, the dimension, pattern, and profile of the stream, (above and below a pipe or culvert), should not be modified by widening the stream channel or by reducing the depth of the stream. Culvert inverts will be buried at least one foot below the bed of the stream for culverts greater than 48 inches in diameter. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert.

x) This project has been coordinated with the North Carolina State Historic Preservation Office (SHPO), the Eastern Band of the Cherokee Indians (EBCI) and the Tennessee Valley Authority (TVA). It has been determined that the project has the potential to adversely affect six archaeological sites that have been determined to be eligible for listing in the National Register of Historic Places. A Memorandum of Agreement (MOA) that will mitigate for any adverse affect has been agreed upon by these parties, the permittee, and the U.S. Army Corps of Engineers and is attached as part of this permit. Your work is authorized by this permit provided it is accomplished in strict accordance with the conditions listed in the attached MOA.

y) If the permittee discovers any previously unknown historic or archeological remains while accomplishing the authorized work, he will immediately notify the Wilmington District Engineer who will initiate the required State/Federal coordination.

z) This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

8. Public Interest Review:

a. All public interest factors have been reviewed. The following public interest factors are

considered relevant to this proposal. Both cumulative and secondary impacts on the public interest were considered.

(1) Conservation. The applicant will preserve approximately 81,743 linear feet (over 15 miles) of stream channel. The applicant will also preserve the functions and values of these streams by establishing a 30-foot upland buffer on the right and left sides of the preserved channels. The total land mass of the upland buffers will be approximately 105 acres. These waters are ecologically important as cool water mountain streams, which empty into the French Broad River. These streams will be preserved in perpetuity through the implementation of appropriate legal and physical mechanisms.

(2) Economics (33CFR320.4(q)). The project will provide an overall benefit to the local economy of Henderson County. During and upon completion of construction of the golf course, the site will provide job opportunities associated with the development and maintenance of the course and associated residential development. In addition, having a golf course as part of the development will increase the property values in the development, as well as, in the local community. The project will also benefit the local economy by providing additional tax revenues.

(3) Aesthetics. Aesthetically, the golf course, river club, and residential development will be no different from any other amenity-based community in outlying areas. The project is not expected to diminish the aesthetic value of the area or cause disharmony from an aerial or neighboring view.

(4) General environmental concerns (33CFR320.4(p)). Other than stream, wetland, and open water impacts, proposed development activities within the project boundary will have no significant identifiable impacts upon other environmental components.

(5) Wetlands (33CFR320.4(b)). The discharge of dredge and fill material will adversely effect the impacted wetlands including wetland substrate, hydrology, and vegetation. Discharges can lead to a loss of wetland values, such as wildlife habitat, flood storage, and groundwater recharge. The discharge of fill material will impact 1.48 acres of wetlands on site. Approximately 3.8 acres of wetlands has been avoided which totals 72 percent of total wetlands on site. The proposed mitigation plan should adequately compensate for wetland impacts.

(6) Historic and cultural resources (33CFR320.4(e)). There are six archaeological sites located on the property that were determined to be eligible for inclusion into the National Register of Historic Places. These sites were determined to likely be adversely affected based on the proposed site plan and on-site preservation of these sites was ultimately ruled out. Through coordination with the North Carolina State Historic Preservation Office, the Eastern Band of Cherokee Indians Tribal Historic Preservation Office (EBCI/THPO), and the Tennessee Valley Authority, a memorandum of agreement (MOA) was established to conduct data recovery on all six eligible sites and thereby remove these resources from the property. The recording and adherence to this MOA will be implemented through special conditions of this permit authorization.

(7) Fish and wildlife values (33CFR320.4(c)). The proposed project will not impact any federally listed threatened or endangered species as protected under Section 7 of the Endangered Species Act. USFWS determined that there was potential habitat on-site in the French Broad River for the federally endangered mussel, *Alasmidonta raveneliana* (Appalachian Elktoe). The applicant conducted a survey in which no Appalachian Elktoe were found. USFWS concurred that the project will have no effect on federally listed threatened or endangered species as protected under Section 7 of

the Endangered Species Act by letter dated June 12, 2008. The site was also selectively surveyed by the North Carolina Wildlife Resource Commission for the state listed and federally listed (threatened due to similarity in appearance) bog turtle, *Glyptemys Muhlenbergii* in which none were found.

(8) Flood hazards. A portion of the northern section of the property is located within the floodplains of the French Broad River and Little Willow Creek. Overall, the proposed location of the residential community has a minimal risk of flooding. The practice area and areas of the golf course adjacent to Little Willow Creek are located within the floodplain and it is anticipated that these area will occasionally flood. There is the possibility that some tributaries on the property will flood occasionally due to natural fluctuations in weather patterns that increase precipitation. The activities taking place within the Seven Falls Golf and River Club project boundary are not expected to increase or decrease the natural rate of flooding at the site or downstream. The applicant is also required to get a permit from Henderson County to work in the floodplain. They have currently received a permit from the County to construct the practice range and wastewater treatment plant in the floodplain and are awaiting approval for the proposed Pleasant Grove Road re-alignment.

(9) Floodplain values (33CFR320.4(l)). Development of roads and some fairways will occur within the 100-year floodplain of the French Broad River; however, no homes will be within the floodplain areas. The majority of this floodplain is previously impacted by agricultural and dairy farming practices. Because of these past land uses, floodplain values have been jeopardized and compromised for many years. Development activities associated with the development of the Seven Falls Golf and River Club should not cause detriment to the already diminished floodplain values of the site. The applicant is also required to get a permit from Henderson County to work in the floodplain. They have currently received a permit from the County to construct the practice range and wastewater treatment plant in the floodplain and are awaiting approval for the proposed Pleasant Grove Road re-alignment.

(10) Land use. The proposed project will be in compliance with local zoning regulations and ordinances. The project is consistent with surrounding land use and development.

(11) Navigation (33CFR320.4(o)). All tributaries on site are tributaries to the French Broad River and the French Broad River flows along the northern boundary of the site. The French Broad River is a navigable-in-fact water at the Wilson Bridge east of Brevard; however, no development will occur within the French Broad River and no activities proposed at the Seven Falls Golf and River Club are anticipated to affect navigation.

(12) Shore erosion and accretion. Not applicable.

(13) Recreation. Proposed activities within the Seven Falls Golf and River Club project boundary will increase waterborne recreation in the project vicinity. The river club component of this development will provide opportunities for boating and fishing along and within the French Broad River. The project will also increase terrestrial-borne recreation by providing a facility for residential golfers. However, public access to these amenities will be restricted because of private ownership.

(14) Water supply (33CFR320.4(m)). The public water supply will not increase or decrease due to proposed activities within the Seven Falls Golf and River Club project boundary. Potable water will be supplied by the local municipal water facility. Irrigation water for the golf course will be stored from runoff and rainfall events in constructed ponds, which will be supplemented by the French Broad

River if the ponds cannot provide adequate water.

(15) Water quality (also 33CFR320.4(d)). The North Carolina Division of Water Quality (DWQ) certification number 3724 was issued on January 25, 2008. Special conditions were issued, and a copy of these conditions is attached as Exhibit A. No significant impacts to water quality are expected, however minor adverse impacts may result, including increases in turbidity during construction and some discharge of pollutants in the parking area runoff.

(16) Energy needs (33CFR320.4(n)). Activities taking place within the Seven Falls Golf and River Club project boundary, during construction and at full operation, are not expected to significantly increase energy demands beyond the capacity of the local facility. Energy will not be produced as a result of the proposed activities within the Seven Falls Golf and River Club project boundary.

(17) Safety. The proposed project will be designed with the maximum possible considerations for public safety. The proposed activities at the Seven Falls Golf and River Club will not increase or decrease public safety.

(18) Food and fiber production. The proposed activities within the Seven Falls Golf and River Club project boundary should not have a significant increase or decrease food and fiber production. The site was an operational dairy farm prior to the purchase of this property, which is no longer in existence.

(19) Mineral needs. The project fulfills no current mineral needs. No mining activities are proposed as part of the development of the Seven Falls Golf and River Club.

(20) Considerations of property ownership. Seven Falls, LLC currently owns and has options to purchase the remainder of the property for the proposed development.

b. Need for Proposed Project: The basic need for the proposed project is to provide residential housing and golfing opportunities. More specifically, the overall project purpose is to develop a viable, upscale, residential, community with a premier golf course and river club amenity in Henderson County. The project will largely supply private economic and recreational benefits to the applicant and residents of the community. The local economy may also benefit due to increased jobs in construction and maintenance of the facility, and increase in the local tax base.

c. Alternative Locations: The evaluation of alternative locations was considered but determined not be practicable. Any similar site would likely contain a similar extent of jurisdictional areas given the topography of the surrounding areas. Refer to Section 6 for further details.

d. Permanence of Effects: The project benefits to the applicant and public are expected to last throughout the life of the facility. Project impacts will be permanent, with the exception of impacts associated with construction.

e. Threatened or endangered species: The proposed project will not effect any federally threatened or endangered species. Refer to Section 8(a) 7 for more details.

f. Corps Wetland Policy: Based upon a review of the proposed impacts relative to the anticipated benefits of the project, it has been determined that the beneficial effects of the project

outweigh the detrimental impacts to the project.

g. Cumulative and Secondary Impacts: Cumulative and secondary impacts associated with this project are expected to be minor. Refer to Section 7a) 7 and Section 7a) 8 for more details. Due to the minimal amount of jurisdictional impacts, its location in the landscape, and the current development surrounding the site, I have determined that the cumulative and secondary impacts associated with this project are minimal.

h. Essential Fisheries Habitat (EFH): No adverse impacts to Essential Fish Habitat will result from the proposed project.

9. Public Hearing Evaluation (If Applicable):

There were requests for a public hearing from private citizens, which was denied due to the determination that there is sufficient information available to evaluate the proposed project, and there is no valid interest to be served by holding a hearing.

10. Comments, Responses, and Corps Analysis of Comments and Responses:

a. Public Notice Comments: The Corps has reviewed all of the comments submitted in response to the circulation of the public notice. Those comments and responses are summarized below.

(1) U.S. Environmental Protection Agency (EPA): No comments received.

(2) U.S. Fish and Wildlife Service (USFWS): By letter dated December 13, 2007, USFWS commented on the Individual Permit application and the public notice. The USFWS specifically outlined the following recommendations and comments:

(a) **Federally Listed Species:** The USFWS believes that habitat for the Appalachian elktoe may exist within the French Broad River along the northern section of the project site. The USFWS recommends that a survey for the Appalachian elktoe be conducted on site to ensure that the species is not affected by the project.

(b) **Tennessee Valley Authority:** The USFWS believes that a Nationwide Section 26a Permit from the Tennessee Valley Authority is likely needed for the project and subsequently copied TVA with their comments.

(c) **Minimization and Avoidance:** The USFWS is concerned about the direct impact to wetlands and streams; and the indirect and secondary impacts to remaining streams wetlands, and riparian areas on site. The USFWS believes there are additional avoidance and minimization measures that could be taken to further reduce the impacts this project will have on natural resources within the project area. The USFWS does not believe that the applicant has provided enough information to demonstrate that secondary and indirect effects will be minimized.

(d) **Mitigation:** The USFWS does not believe that the mitigation plan as proposed is sufficient to fully compensate for the aquatic impacts on site. Since the streams on the site were determined to exhibit 'good' water quality functions, USFWS recommended that impacts be mitigated at a 2:1 ratio as well as for wetland impacts.

(e) Specific on-site concerns: USFWS also commented on the need for a golf course given downward economic trends, cited concerns regarding proposed impacts to the floodplain and floodway of the French Broad River including impacts associated with the realignment of Pleasant Grove Road and the on-site wastewater treatment plant. USFWS also opposed the construction of the storm water treatment ponds and had concerns on impacts to riparian buffers on the site and thereby recommended a minimum of 100-foot wide buffers on perennial streams and 50-foot wide buffers on intermittent streams.

(f) General recommendations: USFWS provided many general recommendations to include the installation of stringent sediment erosion control measures, road impact reduction measures to include bridges, and implementation of low-impact development techniques.

(3) National Marine Fisheries Service (NMFS): No comments received.

(4) State Historic Preservation Officer (SHPO): By letter dated January 25, 2008, the SHPO stated that there are no known recorded archaeological sites within the project boundaries; however, the project area has never been systematically surveyed to determine the location or significance of archaeological resources. It was brought to SHPO's attention that a small cemetery is located within the project boundary.

(5) Tribal Historic Preservation Office (THPO): By letter dated December 11, 2007, the Eastern Band of Cherokee Indians (EBCI) Tribal Historic Preservation Office (THPO) submitted comments in response to the Public Notice. They commented that the project is located within the aboriginal territory of the Cherokee People and that potential cultural resources important to the Cherokee may be threatened due to potential adverse effects from ground disturbing activities. The EBCI/THPO requested that all archaeological, cultural resource and historical investigatory materials that have been completed by the applicant be sent to their office for review and comment.

(6) Other State and local agencies: By letter dated December 18, 2007, the North Carolina Wildlife Resource Commission (NCWRC) commented on the Individual Permit application and the public notice. The NCWRC specifically outlined the following recommendations and comments:

(a) On-site wetlands may provide habitat for state/federally listed for the bog turtle.

(b) Little Willow Creek could support rainbow trout if habitat was improved. Folly Creek may also support rainbow trout.

(c) Any culvert work in the Folly Creek watershed upstream of Big Falls Drive should be avoided during the rainbow trout spawning season (January 1 – April 15) of any year unless there is sampling to show they are not present in the watershed.

(d) The NCWRC believes that Appalachian Elktoe mussels may occur in the French Broad River near and downstream of the property.

(e) The NCWRC believes that avoidance and minimization of impacts to streams and wetlands have not been demonstrated with the proposed development plan. NCWRC specifically commented as to why the proposed storm water ponds seemed excessively large, recommended

additional minimization/avoidance of impacts R-A, G-1, G-3, G-4, G-5, and G-6 on the golf course, and listed specific road crossings that could be further minimized (15, 17, 22, 23, and 32).

(f) The NCWRC believes that the mitigation plan is not adequate to offset the proposed project impacts. NCWRC commented that on-site mitigation should be further explored to include the enhancement of Little Willow Creek and its unnamed tributaries. NCWRC also recommended on-site wetland restoration/enhancement versus off-site mitigation.

(7) Organizations: No comments received.

(8) Individuals: During the public comment period, two letters with attached petitions and four additional letters were received from concerned citizens of Henderson County. One petition had 13 signatories and the second petition had 163 signatories. Their general concerns are outlined as follows:

- (a) Several public commenters expressed their concerns regarding the number and nature of previous violation at the project site and environmental concerns regarding the applicant's development of other sites in Transylvania County.
- (b) Several public commenters expressed their concerns regarding the affects of stream impacts on trout resources at the project site.
- (c) Several public commenters expressed their concerns regarding the affects of development impacts on cultural and archaeological resources at the project site. One letter specifically mentioned that the site may host unknown slave graves and historic rock shelters utilized by native Americans.
- (d) Several public commenters expressed their concerns regarding the affects of stream, wetland, and development impacts on threatened and endangered species at the project site.
- (e) One public commenter requested mitigation efforts be centered on Gash Creek and Mill Pond Creek.
- (f) Several public commenters expressed concerns regarding development in the floodplain of the French Broad River.

(9) Others: No comments received.

b. Additional Coordination of Project Revisions: On February 15, 2008 and May 5, 2008, additional information was submitted which addressed comments received during the public notice comment period and a subsequent January 17, 2008 meeting between the applicants agent and the Corps. In the February 15, 2008 submittal, information was submitted regarding the following:

(a) Reduction of stream/wetland Impacts: the applicant reduced stream impacts associated with the golf course by 688 linear feet and by 230 linear feet associated with road crossings impacts based upon comments received from USFWS and NCWRC. The applicant also reduced wetland impacts associated with the golf course by 0.69 acres. Refer to Section 1(c) for more details.

(b) Threatened/Endangered Species Survey: The applicant agreed to conduct a survey for the Appalachian Elktoe as recommended by the USFWS. The survey area/design and contractor was approved by USFWS before commencement of the survey. Ultimately, the survey did not locate any Appalachian Elktoe and USFWS agreed with the results and determined that the project would not

affect any federally listed threatened/endangered species (by letter dated June 12, 2008).

(c) Mitigation: The applicant clarified that they had originally calculated the mitigation ratio at 2:1 to determine that approximately 13,980 linear feet of stream credit was needed to compensate for proposed impacts and therefore determined to meet the recommendations provided by USFWS and NCWRC. The applicant also stated that they believed that a 1:1 mitigation ratio (versus 2:1) was adequate to compensate for the wetland impacts on the site due to their low quality and historical disturbance.

(d) Cultural Resources: The applicant responded that they would conduct an archaeological survey on the site to determine if there were any resources eligible for inclusion in the National Register of Historic Places (NRHP).

In the May 8, 2008 submittal (via email), information was submitted regarding the following:

(a) Cultural Resources: Based upon the archaeological survey, six sites were identified as having the potential to be eligible for inclusion in the NRHP. The applicant provided a draft copy of an MOA that outlined preserving the sites in place. Additional coordination was conducted with the SHPO and THPO as outlined below to address this issue.

(b) Storm Water Treatment: The applicant clarified that the proposed storm water treatment ponds will be constructed to meet applicable guidelines and that there will be no direct, untreated discharge of storm water into the French Broad River.

(c) Waste Water Treatment Plant: The applicant responded that the facility will be located approximately 1,400 linear feet upstream of the confluence of Little Willow Creek and the French Broad River and that treated waste water will be piped directly to the French Broad River. The applicant also clarified that the facility will be located outside the 100-year floodplain and will be required to obtain a federal/state National Pollution Discharge Elimination System (NPDES) permit.

(d) Irrigation Pond for Golf Course: The applicant provided information supporting his position that the irrigation pond will not negatively affect the hydrology of the French Broad River. The applicant clarified that the irrigation pond will also be aesthetic in nature and provide water for the golf course when needed. The main water source for the pond will be groundwater and rain but will be supplemented by the French Broad River when necessary at a maximum of 3,000 gallon/minute.

c. Corps Analysis of Comments and Responses: Through on-going coordination with USFWS, NCWRC, TVA, SHPO, and EBCI/THPO, I believe that the Corps has adequately responded to the comments and recommendations received during this permit review. Below are additional coordination measures and responses that have occurred to respond and resolve all substantial concerns.

1) U.S. Fish and Wildlife Service: The Corps has carefully reviewed the comments provided by the USFWS and required the applicant to conduct a survey for the federally endangered Appalachian Elktoe based upon their recommendations. The applicant clarified that they were providing an appropriate mitigation ratio for stream and wetland impacts and we agree with the current mitigation plan as proposed which is in accordance with the Interagency Stream Mitigation Guidelines (April 2003) and RGL 02-02. We also believe that the applicant has adequately avoided/minimized impacts as indicated by their reduction in impacts based upon recommendations by USFWS and NCWRC. Concerning specific on-site issues, we believe that the applicant has adequately responded to

concerns regarding impacts to the floodplain and impacts associated with the construction of storm water treatment facilities, wastewater treatment facilities, and irrigation ponds.

2) N.C. Wildlife Resource Commission: The Corps has carefully reviewed the comments provided by the NCWRC and believes that the applicant has adequately addressed their concerns. Concerning the bog turtle, despite its lack of federal protection under Section 7 of the Endangered Species Act, the applicant allowed NCWRC staff to survey selected wetlands for the bog turtles' presence in which none were found. Regarding avoidance and minimization, the applicant reduced impacts to streams and wetlands associated with the golf course development. NCWRC recommended that six individual impact sites associated with the golf course be further evaluated in which the applicant reduced impacts at two of those sites. For impacts associated with road crossings, NCWRC recommended that five individual impact sites be further avoided and minimized in which the applicant reduced impacts on three out of those six sites. NCWRC also expressed concern regarding the selection of an off-site mitigation option versus on-site options. As described in Section 1(b), the applicant is voluntarily enhancing/stabilizing approximately 12,000 linear feet of Little Willow Creek and its unnamed tributaries without seeking mitigation credit so there will be on-site activities that meet NCWRC recommendation. In response to NCWRC's concern regarding trout spawning, the permit will be conditioned such that no in-stream work will be allowed between October 15 and April 15.

3) N.C. State Historic Preservation Office and Tribal Historic Preservation Office: Through numerous meetings and correspondence, the Corps and the applicant has adequately completed its responsibilities under Section 106 of the National Historic Preservation Act. Initially, there was some concern that the applicant intentionally violated Section K of the NHPA. Several archaeological sites were identified in the floodplain of the French Broad River during a general reconnaissance survey prior to the permit application being submitted. The applicant had begun work in high ground areas, which did not need a Department of the Army permit at that time. Once the application was submitted, we determined that our scope of analysis included the entire property and therefore required a survey of all potential areas within that property. Unfortunately, once a more detailed survey was actually required, these sites had been graded/filled and no further investigation could be conducted to determine if these sites were potentially eligible. Ultimately, both SHPO and THPO agreed with the Phase 1 survey report submitted which described six sites that were likely eligible for inclusion into the NRHP. Through on-going coordination between the applicant, the Corps, SHPO, and THPO, an MOA was ultimately developed which prescribe the recovery and removal of these six archaeological sites from the property. The MOA as signed by all consulting parties is implemented by special condition of this permit authorization.

The Advisory Council on Historic Preservation (ACHP) was informed of the project and was invited to participate as a consulting party. By letter dated July 3, 2008, the ACHP provided comments stating that their participation to resolve adverse effects on historic properties is not needed and that their only requirement will be to file the MOA with their agency once it is completed. Also, based upon recommendations by the EBCI/THPO, we contacted the United Keetoowah of Cherokee Indians and the Cherokee Nation to determine if they wanted to participate as a consulting party and be included as signatories on the MOA. No comments were received by the requested deadline, therefore, we have concluded that the requirements of Section 106 of the Historic Preservation Act has been fulfilled.

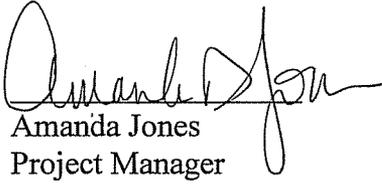
4) Public comments. We believe that the Corps and the applicant has adequately analyzed and responded to the concerns cited by the public comments. Many concerns were related to fish and wildlife values, which are addressed through our previous coordination with USFWS and NCWRC.

The concerns regarding cultural resources on the site were carefully reviewed which led to further coordination and resolution with the SHPO and THPO. Regarding previous violations on the site, these were related to violations in turbidity and other water quality standards as regulated by the N.C. Division of Water Quality (DWQ). Those violations were subsequently resolved with DWQ and no unauthorized activities associated with Section 404 of the Clean Water Act were ever cited. Other concerns were related to land use and change in aesthetics to the area, which we have determine to be minimal and traditionally outside the scope of our project review.

11. Determinations:

- a. **Public Hearing Request:** I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project, and there is no valid interest to be served by holding a hearing. Therefore, the requests for a public hearing are denied.
- b. **Civil Rights:** In accordance with Title III of the Civil Rights Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.
- c. **Section 176(c) of the Clean Air Act General Conformity Rule Review:** The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed *de minimis* levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this permit action.
- d. **Finding of No Significant Impact (FONSI).** Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.
- e. **Compliance with 404(b)(1) guidelines.** Having completed the evaluation in Section VII above, I have determined that the proposed discharge complies with the 404(b)(1) guidelines.
- f. **Public Interest Determination:** I find that issuance of a Department of the Army permit is not contrary to the public interest provided Permittee complies with the attached special conditions. Accordingly, I am hereby issuing the requested permit.

PREPARED BY:



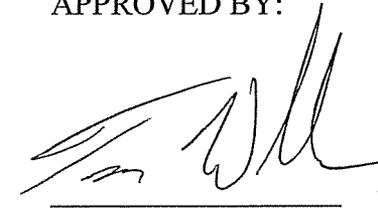
Amanda Jones
Project Manager

REVIEWED BY:



Tom Walker
Chief, Asheville Regulatory Field Office

APPROVED BY:



Jefferson M. Ryscavage
Colonel, U. S. Army
District Engineer