



Land Use Planning • Engineering Design • Environmental Permitting • Landscape Architecture • Surveying

March 11, 2008

Mr. Wood Hughes
Wood Hughes & Associates
909 Eagle's Landing Parkway, Suite 140-227
Stockbridge, GA 30281

RE: Jurisdictional Waters Determination
Willow Lane Extension
Henry County, Georgia

Dear Mr. Hughes:

Moore Bass Consulting, Inc. was retained by Wood Hughes & Associates to identify U.S. Army Corps of Engineers (ACOE) jurisdictional waters and waters of the State for the Willow Lane Extension Tract in Henry County, Georgia. The site is located south of Jonesboro Road and east and west of Willow Lane Extension. The following is a summary of our methodology and findings regarding jurisdictional waters and permit requirements relative to Section 404 of the Clean Water Act (Section 404) and the Georgia Erosion and Sediment Control Act of 1975 (Act). Section 404 is administered by the U.S. Army Corps of Engineers (ACOE). The Act is administered by the Georgia Department of Natural Resources, Environmental Protection Division (EPD).

The Willow Lane Extension Tract is approximately 62 acres in size. All draws and low areas within the study site were investigated for the presence of seepage areas, waterways, and jurisdictional wetlands. Topography of the study site is typical to the Georgia Piedmont physiographic region.

Jurisdictional Waters Findings

After reviewing available remote data (the McDonough, Georgia 7.5-minute U.S.G.S. Quadrangle Map, the U.S. Fish and Wildlife NWI Map, the Henry County Soil Survey, a USGS Aerial Photo (1997) and a Google Earth Aerial Photo (2005)), an on-site inspection was conducted for the determination of Section 404 jurisdictional waters and waters of the State within the study area. Our site inspection was conducted March 7 & 10, 2008. During this inspection, we followed the three-parameter approach described in the ACOE 1987 *Wetlands Delineation Manual* ("Manual").

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The Manual is the ACOE approved and accepted method for identifying Section 404 jurisdictional wetlands. It is based upon satisfying three criteria; hydrophytic vegetation, hydric soils, and wetland hydrology. For an area to be designated jurisdictional it must possess all three.

One perennial stream, one intermittent stream, two ephemeral streams, and two wetlands were located within the property boundaries.

Streams

Birch Creek is a perennial stream that flows through the southern portion of the site. The stream is approximately 15-20 feet wide with 3-6 feet streambanks. The substrate consists of silt, sand, clay, gravel and cobble. Birch Creek has two associated floodplain wetlands (Wetlands A and B) located east of Willow Lane Extension and north and south of the creek. The canopy surrounding the stream consists of red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). The subcanopy consists of willow oak (*Quercus phellos*), brookside alder (*Alnus serrulata*), Chinese privet (*Ligustrum sinense*), and river birch (*Betula nigra*). Because of the time of year, the herbaceous layer is sparse, consisting of Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax glauca*), blackberry (*Rubus betulifolius*) and microstigeum (*Eulalia vimenea*).

Stream AA is an ephemeral stream that flows during and shortly after rain events. The stream flows from the north side of Mt. Carmel Road in a south southeast direction flowing under Willow Lane Extension and eventually into Wetland A. Stream AA is approximately 3-6 feet wide with stream banks that vary from 2-4 feet near the upper portion of the stream and less than ½ foot as it nears the wetland area. The substrate consists of silt, clay and some loose gravel. The canopy surrounding the stream consists of mixed hardwoods and loblolly pine (*Pinus taeda*). The subcanopy consists of white oak saplings (*Quercus alba*), southern red oak saplings (*Quercus falcata*), willow oak, and Chinese privet. The herbaceous layer is sparse, consisting mainly of Japanese honeysuckle, blackberry, and greenbriar.

Stream BB is an ephemeral stream that branches off of Stream AA shortly before entering Wetland A. The stream is 1-2 feet wide with ½ foot stream banks. The substrate consists mainly of silt and clay. The canopy surrounding the stream consists of red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). The subcanopy consists of willow oak (*Quercus phellos*), brookside alder (*Alnus serrulata*), Chinese privet (*Ligustrum sinense*), and river birch (*Betula nigra*). Because of the time of year, the herbaceous layer is sparse, consisting of Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax glauca*), blackberry (*Rubus betulifolius*) and microstigeum (*Eulalia vimenea*).

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Stream CC is an intermittent stream located south of Birch Creek and east of Willow Lane Extension. The stream begins as flows from Wetland B channelize and a groundwater seep is evident. The stream flows in a northeast then north direction, eventually converging with Birch Creek. Stream CC is approximately 2-4 feet wide with 2-4 feet stream banks. The substrate consists of clay, silt and gravel. The canopy surrounding the stream consists of red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). The subcanopy consists of willow oak (*Quercus phellos*), brookside alder (*Alnus serrulata*), Chinese privet (*Ligustrum sinense*), and river birch (*Betula nigra*). Because of the time of year, the herbaceous layer is sparse, consisting of Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax glauca*), blackberry (*Rubus betulifolius*) and microstigeum (*Eulalia vimenea*).

Wetlands

Wetland A is located along the northern side of Birch Creek, east of Willow Lane Extension. The hydrology of this wetland is provided by flooding of Birch Creek during heavy rain events, multiple groundwater seeps, and a high groundwater table. The canopy within the wetland area consists of red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). The subcanopy consists of willow oak (*Quercus phellos*), brookside alder (*Alnus serrulata*), Chinese privet (*Ligustrum sinense*), and river birch (*Betula nigra*). Because of the time of year, the herbaceous layer is sparse, consisting of Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax glauca*), blackberry (*Rubus betulifolius*) and microstigeum (*Eulalia vimenea*). Wetland indicators for this area include soils saturated in the upper 12 inches, areas of inundation, water marks, tree buttressing, and gleyed/low-chroma soils.

Wetland B is located on the southern side of Birch Creek, east of Willow Lane Extension. The hydrology of this wetland is provided by multiple groundwater seeps, Stream AA, a high groundwater table and flooding of Birch Creek during heavy rain events. The canopy within the wetland area consists of red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). The subcanopy consists of willow oak (*Quercus phellos*), brookside alder (*Alnus serrulata*), Chinese privet (*Ligustrum sinense*), and river birch (*Betula nigra*). Because of the time of year, the herbaceous layer is sparse, consisting of Japanese honeysuckle (*Lonicera japonica*), greenbriar (*Smilax glauca*), blackberry (*Rubus betulifolius*) and microstigeum (*Eulalia vimenea*). Wetland indicators for this area include soils saturated in the upper 12 inches, areas of inundation, water marks, tree buttressing, and gleyed/low-chroma soils.

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ACOE Permitting

All streams, wetlands, lakes, and ponds in this report are considered waters of the United States and fall under ACOE jurisdiction. Section 404 requires the ACOE to regulate most discharges of dredge or fill material into waters of the U.S., including wetlands. The phrase "discharges of dredge or fill material" essentially includes all land disturbing activities accomplished via use of mechanized equipment. Waters of the U.S. include most waters (i.e., ephemeral, intermittent, or perennial stream/creeks, rivers, tributaries, etc.), water bodies (i.e., ponds, lakes, etc.), and wetlands.

The ACOE carries out their Section 404 responsibilities by issuance or denial of permits. The ACOE has developed two permitting routes to authorize impacts to jurisdictional waters. The first route is the Nationwide Permit Program. Permit authorities outlined in the Nationwide Permit Program most often apply to smaller-scale impacts. This program has 50 different Nationwide Permits (NWP) for various minor impact activities within jurisdictional waters, including wetlands. Typically, a project will qualify for NWP if proposed impacts are less than ½-acre of waters of the U.S., including 300 linear feet of stream. The timeframe to obtain a NWP authorization is 45-days. According to the Federal Register, the ACOE must determine if the application is complete within 30 days of the receipt of the application and they can request additional information to make the PCN complete only once. The ACOE has an additional 15 days to issue or deny the permit.

The second, more rigorous route is referred to as the Individual Permit (IP) Process. The IP is normally triggered by projects with larger potential for direct or indirect environmental impacts. An IP is required when proposed impacts are more than ½-acre of waters of the U.S., including more than 300 linear feet of stream. This process requires a 30-day public notice period, solicits project specific comments from the general public, gives certain authority in the permit decision to EPA, the Fish & Wildlife Service and other Federal/State environmental agencies, and requires an analysis of less damaging alternatives to the proposed activity.

A conceptual site plan was not available for review at the time of this report. If there are any stream or wetland impacts proposed and they are kept under ½-acre of impact to Waters of the U.S., including 300 feet of stream, a NWP 39 can be used to permit this project. NWP 39 is used to permit impacts associated with the construction of commercial, industrial, or institutional developments up to ½ acre of impact to Waters of the U.S., including 300 linear feet of stream. If the proposed impacts are greater than ½-acre, an Individual Permit is required.

EPD Permitting

The Georgia Department of Natural Resources Environmental Protection Division (EPD) is mandated with enforcing the rules and regulations of the Georgia Erosion and Sediment Control Act of 1975 (Act). The Act was established to strengthen and extend

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the present erosion and sedimentation control activities and programs of Georgia and to provide for the establishment and implementation of a state-wide comprehensive soil erosion and sedimentation control program to conserve and protect the land, water, air, and other natural resources of the state.

According to the Act, "state waters includes any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state, which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation."

The EPD enforces a 25-foot buffer along the banks of all state waters as required by the Georgia Erosion and Sediment Control Act of 1975 (Act). The Act states "there is established a 25-foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action..." The purpose of the state water buffer is to protect the waters of the State of Georgia from erosion and sediment deposition because these activities can cause pollution and degraded water quality in these waters. As a secondary effect it can cause damage to aquatic resources.

The state waters buffer requirement talks about wrested vegetation. According to Webster's Dictionary, wrested means "to pull, force, or move by violent wringing or twisting movements." Accordingly, buffers are placed on state waters where the flow of water is so forceful that it actually pulls the vegetation away from the edge of the state water. Typically this buffer is applied to streams where due to the velocity of water flowing through the channel, plants can't live.

The Act hands down enforcement to the local "issuing authority", which is defined as the governing authority of any county or municipality, which is certified pursuant to subsection (a) of code section 12-7-8. Section 12-7-8(a) states that if a county has enacted ordinances that meet or exceed the state requirements, they may be designated as an issuing authority. DeKalb County is the issuing authority for this project.

The intermittent stream meets the criteria of a State Water and is subject to the state waters buffer requirement. Henry County enforces a 50-foot undisturbed buffer from the point of wrested vegetation with an additional 25-foot impervious setback for a total of 75 feet. Henry County also enforces a 25-foot buffer on all wetland areas.

Again, a conceptual site plan was not available for review at the time of this report. If encroachments to the stream or wetland buffers are proposed, a Buffer Variance would be necessary from Henry County and/or the EPD.

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Conclusion

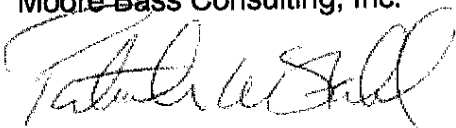
Determination of Section 404 jurisdictional waters and waters of the State within the study area were assessed by reviewing remote data (the McDonough, Georgia 7.5-minute U.S.G.S. Quadrangle Maps, the U.S. Fish and Wildlife NWI Map, the Henry County soil survey, a USGS Aerial Photo (1997), and a Google Earth Aerial Photo (2005)), along with a site inspection on March 10, 2008. One perennial stream, one intermittent stream, two ephemeral streams, and two wetlands were located within the property boundaries.

These waters are considered waters of the U.S. and are under the jurisdiction of the ACOE. A conceptual site plan was not available for review at the time of this report. If there are any stream or wetland impacts proposed and they are kept under ½-acre of impact to Waters of the U.S., including 300 feet of stream, a NWP 39 can be used to permit this project. NWP 39 is used to permit impacts associated with the construction of commercial, industrial, or institutional developments up to ½ acre of impact to Waters of the U.S., including 300 linear feet of stream. If the proposed impacts are greater than ½-acre, an Individual Permit is required.

The intermittent stream located on-site also meets the criteria of State waters and are subject to the state waters buffer requirement. Henry County requires a 50-foot undisturbed buffer from the point of wretched vegetation with an additional 25-foot impervious setback, for a total of 75 feet. Henry County also requires a 25-foot buffer on all wetland areas. Again, a conceptual site plan was not available for review at the time of this report. If encroachments to the stream or wetland buffers are proposed, a Buffer Variance would be necessary from Henry County and/or the EPD.

Thank you for the opportunity to assist you with this project. If there are any questions regarding this matter, please contact me at your convenience. We look forward to working with you in the near future.

Sincerely,
Moore-Bass Consulting, Inc.



Patrick W. Stahl
Biologist II

Enclosures