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DEVELOPER'S HANDBOOK

FOR

FRESHWATER WETLANDS

SC . Coastal Management Program

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South Carolina Coastal Council

US Army Corps of Engineers
Charleston District

ACKNOWLEDGEMENT

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ADDITIONAL ACKNOWLEDGEMENT

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PREFACE

The requirement to obtain a permit to place dredged or fill material in certain "Freshwater Wetlands" in the State of South Carolina is relatively new and has significantly impacted commerical, residential and industrial developers.

The involvement of the Corps of Engineers in regulating activities in freshwater wetlands started with the Federal Water Pollution Control Act Amendments of 1972. This law contains language that authorizes the Secretary of the Army, acting through the Chief of Engineers, to subject deposits of dredged or fill material to a permit requirement. In implementing the 1972 Act, the Corps limited its authority to those areas that had been traditionally regulated. The Corps of Engineers was challenged in Federal court on its decision to regulate only those areas that it had regulated in the past. As a result of this suit the Corps' authority to regulate wetlands was expanded to include all waters of the U. S. and their adjacent wetlands, including lakes. This new and expanded jurisdiction became affective in July 1975. In July 1982, the Corps of Engineers issued new regulatory rules which included several hundred changes. Most of these changes were of little or no significance and consisted of such things as changing the name of the Federal Water Pollution Control Act Amendments of 1972 to the Clean Water Act. The most significant and controversial change was the clarification and expansion of the nationwide permit program. Nationwide permits are authorizations issued by the Chief of Engineers that approve certain types of activities in specific waterbodies that are similar in nature and that have a minor impact on the aquatic resource either singularly or cumulatively. There are, at present, 26 nationwide permits that have been issued by the Chief of Engineers and others are currently under consideration.

Six months after the publication of the 1982 final regulations, 16 environmental organizations filed suit against the Department of the Army and the Environmental Protection Agency over several provisions of the Corps of Engineers interim final regulations. In February 1984, the Court approved a settlement agreement between the plaintiffs (the 16 environmental organizations) and the defendants (the Corps of Engineers and the Environmental Protection Agency) whereby the Army agreed to publish regulations proposing several policy and procedural changes and modifications to certain nationwide permits. The settlement agreement was endorsed by the Army (Corps of Engineers), the Department of Justice, the Environmental Protection Agency, and the 16 environmental organizations. In March of 1984, the Corps of Engineers published proposed rules as part of the settlement agreement for this suit. Among other things, these regulations relocated and combined the nationwide permits which addressed discharges into areas above the headwaters and discharges into isolated waters into a single new nationwide permit. This new nationwide permit (#26) was formally adopted when the Corps of Engineers reissued five Nationwide permits by publishing regulations in the Federal Register of October 1984. The change in rules and the adoption of the new nationwide permit #26 allowed for a "Grandfather" provision for activities on-going in October 1984 and that "Grandfathering" expired on April 4, 1986. Concurrent with these significant changes in processing procedures, the Corps of Engineers' policies regarding jurisdiction in freshwater wetlands had also been continually changing.

This evolution of the Corps' permit jurisdiction in wetlands reached the ultimate point of its succession on November 8, 1985, when a memo

from the Deputy Director of Civil Works was forwarded to all District Engineers that clarified the Corps of Engineers jurisdiction in isolated wetlands. This memo was forwarded pursuant to a commitment made by Mr. Robert Dawson (then the Assistant Secretary of the Army) to the Senate Committee on Environmental and Public Works, Subcommittee on Environmental Pollution and included as an attachment, an Environmental Protection Agency (EPA) Memorandum on Clean Water Act Jurisdiction over Isolated Wetlands.

This EPA Memorandum was prepared in response to a specific question that was raised during Senate oversight hearings on the Section 404 program. The question arose after EPA's Deputy Assistant Administrator for External Affairs listed seven factors that it believed should be used as indicators of connections to interstate commerce to determine jurisdiction in isolated waters and wetlands. It was noted by one of the Senators on the Committee that three of the indicators which dealt with migratory birds and endangered species failed to include the premise that jurisdiction would be established if the area COULD BE USED by migratory birds and endangered species (as opposed to "IS USED").

The EPA Memorandum specifically addressed that agency's opinion regarding the use of wetland areas by migratory birds or endangered species in asserting jurisdiction over isolated waters. In other words, did the EPA require proof that a particular wetland was actually used by such birds or endangered species prior to recognizing jurisdiction or whether EPA would be satisfied with evidence that such wetlands COULD be so used? The answer was that if the evidence reasonably shows that the waters are used or WOULD be used by migratory birds or endangered species, it is covered by EPA and Corps regulations.

The clarification memo sent to all District Engineers throughout the nation indicated clearly that the EPA's memorandum was to be considered the official Corps of Engineers policy. As a result of this memo, the Charleston District contacted the state ornithologist for information on which species of birds protected under the Migratory Birds Treaty utilized these isolated areas. It was revealed at that time that migratory birds can and do use virtually all, if not all, isolated wetland areas in the State of South Carolina and therefore, all of these areas could reasonably be considered jurisdictional under such a test.

When we talk about regulating freshwater wetlands in the State of South Carolina, one must realize that this state contains approximately 5 million acres of wetlands of which approximately 3 ½ to 4 million acres are considered "Freshwater Wetlands". This means that approximately 20% of the surface area of the State of South Carolina is considered to be "Freshwater Wetlands". Obviously in planning an industrial or residential/commercial development, the extent of "Freshwater Wetlands" should be considered early in the planning process.

The two issues (changes in the NWP program and the extent of jurisdiction) discussed above, acted synergistically to create an impact far beyond that which would have occurred had each occurred unilaterally. The impact has been so significant and widespread that the South Carolina Coastal Council and the U. S. Army Corps of Engineers decided that a booklet explaining the regulatory processes as they relate to "Freshwater Wetlands" would be of assistance to developers. This handbook has been designed to aid in determining if

wetlands are present on a particular tract of land and, if so, determining if a permit and/or certification is required, from which agency(s), and what type of process must be completed before the work can begin. The handbook deals only with "Freshwater Wetlands" and does not discuss the requirement to obtain a permit from the South Carolina Coastal Council for activities located in the "critical area" of the South Carolina Coastal Zone.

The involvement of the permitting, certifying and commenting agencies in regulating "Freshwater Wetlands" is in its infancy and changes are likely to occur. Therefore, it is strongly suggested that developers meet with one or more of the permitting and/or certifying agencies to discuss the planned development prior to investing time and money in any proposal.

AGENCY LISTING

AGENCY NAME	OFFICE	ADDRESS	PHONE
U.S. Army Corps	Regulatory Branch	Post Office Box 919 Charleston, S.C. 29402-0919	803/724-4330
S.C. Coastal Council	Planning & Certification Division	Ashley Corporate Center 4280 Executive Place North Suite 300 Charleston, S.C. 29405	803/744-5838
S.C. Department of Health & Environmental Control	Office of Environmental Quality Control	2600 Bull Street Columbia, S.C. 29201	803/734-5300
S.C. Water Resources Commission	Surface Water Division	1201 Main Street Suite 1100 Columbia, S.C. 29201	803/737-0800
U.S. Fish & Wildlife Service	Fish and Wildlife Enhancement	Post Office Box 12559 Charleston, S.C. 29412	803/724-4707
U.S. Environmental Protection Agency	Wetlands Unit Wetlands & Coastal Program Section Water Quality Management Branch	345 Courtland Street, NE Atlanta, GA. 30365	404/347-2126
U.S. National Marine Fisheries Service	Habitat Conservation Division	Post Office Box 570 Beaufort, N.C. 28516	919/728-5090
S.C. Wildlife and Marine Resources Department	Environmental Affairs Coordinator	Post Office Box 12559 Charleston, S.C. 29412	803/795-6350
S.C. Department of Archives and History	State Historic Preservation Office	Post Office Box 11669 Columbia, S.C. 29211	803/734-8609
S.C. Land Resources Conservation Commission	Division of Mining and Reclamation	2221 Devine Street Suite 222 Columbia, S.C. 29205	803/734-9100

I. PERMIT OVERVIEW

The following is a brief overview of the permits that will be needed for different types of activities in wetlands. This should assist in determining at a glance the different agencies that will be involved in the process.

A. FILLING WETLANDS (FOR ANY PURPOSE). The placement of dredged or fill material in freshwater wetlands requires several permits. The agencies involved and authority(s) for requiring permits are:

1. Corps of Engineers - permit required pursuant to Section 404 of the Clean Water Act (A joint permitting process is administered by the Corps of Engineers to expedite and simplify the administrative processes.)
2. S. C. Budget and Control Board - permit required for activities in state navigable waters pursuant to State Regulation 19-450 (administered by the S. C. Water Resources Commission)
3. S. C. Department of Health and Environmental Control - water quality certification pursuant to Section 401 of the Clean Water Act
4. S. C. Coastal Council - certification of consistency with the Coastal Zone Management Program.

B. DREDGING IN NAVIGABLE WATERS. Dredging in navigable waters requires several permits. Navigable waters is the term used by the Corps of Engineers to refer to areas in which it has traditional permit jurisdiction. That term is defined in Appendix B pages 23 and 24. The agencies involved and authority(s)for requiring permits (for dredging in navigable waters) are:

1. Corps of Engineers - permit required pursuant to Section 10 of the Rivers and Harbors Act of 1899.
2. S. C. Budget and Control Board - permit required for activities in state navigable waters pursuant to State Regulation 19-450 (administered by the S. C. Water Resources Commission).
3. S. C. Department of Health and Environmental Control- water quality certification pursuant to Section 401 of the Clean Water Act.
4. S. C. Coastal Council - certification of consistency with the Coastal Zone Management Program.

C. DREDGING AND DRAINING WETLANDS. A permit may not be required for dredging or draining isolated wetlands; however, Coastal Zone Management Program (CZMP) consistency must be obtained from the South Carolina Coastal Council if any state or Federal permit

D. MINING IN FRESHWATER WETLANDS. The excavation or mining for sand or other minerals in freshwater wetlands requires a permit. The agencies involved and authority(s) for requiring permits are:

1. S. C. Land Resources Conservation Commission - Mining Permit required pursuant to the South Carolina Mining Act (Statutory Authority Sections 48-19-10, 48-19-170 of 1976 S. C. Code of Laws)
2. Corps of Engineers - permit may be required pursuant to Section 404 of the Clean Water Act, if fill, either temporary or permanent, is involved and Section 10 of the Rivers and Harbors Act of 1899 if dredging or filling in navigable waters is involved.
3. S.C. Budget and Control Board - permit required for activities in state navigable waters pursuant to State Regulation 19-450 (adminis-

tered by the S. C. Water Resources Commission).
4. **S. C. Department of Health and Environmental Control** - water quality certification pursuant to Section 401 of the Clean Water Act.
5. **S. C. Coastal Council** - certification of consistency with the Coastal Zone Management Program.

E. **IMPOUNDMENTS IN WETLANDS.** The construction of embankments in freshwater wetlands to create impoundments for whatever purpose (aquaculture, waterfowl management, etc.) is an activity requiring permits from several agencies. The agencies involved and authority(s) for requiring permits are:
1. **Corps of Engineers** - permit may be required pursuant to Section 404 of the Clean Water Act, if fill is involved and Section 10 of the Rivers and Harbors Act of 1899 if dredging or filling in navigable waters of the U.S. is involved.
2. **S. C. Budget and Control Board** - permit required for activities in state navigable waters pursuant to State Regulation 19-450 (administered by the S. C. Water Resources Commission).
3. **S. C. Department of Health and Environmental Control** - water quality certification pursuant to Section 401 of the Clean Water Act.
4. **S. C. Coastal Council** - certification of consistency with the Coastal Zone Management Program.
5. **S. C. Land Resources Commission** - dam structures under Dams and Reservoirs Safety Act (49-11-110, et.seq. 1976 S. C. Code of Laws).

F. **STORM WATER MANAGEMENT IN FRESHWATER WETLANDS.** Storm water runoff entering freshwater wetlands from development sites does not require a permit. However, the passive treatment of storm water from development sites is required and regulated by the S. C. Coastal Council through its certification review of other agency permits. An acceptable storm water management plan is required by the Coastal Council. The use of freshwater wetlands in their natural state is preferred and often required instead of alteration of the wetlands for storm water management purposes.

G. **DOCKS, BULKHEADS, BOAT RAMPS.** The construction of docks and boat ramps to obtain access to waterbodies as well as the construction of bulkheads to protect property from erosion are activities requiring permits.The agencies involved and authority(s) for requiring permits are:
1. **Corps of Engineers** - permit may be required pursant to Section 404 of the Clean Water Act, if fill is involved, and Section 10 of the Rivers and Harbors Act of 1899 if dredging or filling in navigable waters of the U.S. is involved.
2. **S. C. Budget and Control Board** - permit required for activities in state navigable waters pursuant to State Regulation 19-450 (administered by the S. C. Water Resources Commission)
3. **S. C. Department of Health and Environmental Control** - water quality certification pursuant to Section 401 of the Clean Water Act.
4. **S. C. Coastal Council** - certification of consistency with the Coastal Zone Management Program.

II. IDENTIFYING FRESHWATER WETLANDS

A. PURPOSE. The purpose of this section of the Handbook is to provide information for landowners, developers, and others to assist in determining whether or not wetlands exist on a particular tract of land and whether they may need to contact the Corps of Engineers concerning permit requirements. Natural vegetation is the most immediately recognizable factor in evaluating the presence of wetland situations, but consideration must also be given to soil conditions and hydrology. A plant list maybe found at Appendix B (page B-1) but it is not comprehensive and should only be used as a preliminary guide.

It is important to note that the plant life of a given area should be looked at as a COMMUNITY and that a PREVALENCE of the listed species must be present in order to qualify an area as exhibiting wetland vegetation. In other words, just because a few of these species exist in a given area does not make it a wetland.

Wetland plants are referred to as "hydrophytic" (literally, "water loving") species. The following excerpt which defines and describes this type of plant life comes from a paper prepared by Dr. Dana R. Sanders, Sr. of the Corps of Engineers' Waterways Experiment Station (a major Corps research facility) entitled "Multiparameter Approach for the Identification and Delineation of Wetlands". Other portions of this section of the Handbook contain paraphrased excerpts from this publication. By way of explanation, the terms "aerobic" and "anaerobic" used below refer to the presence (aerobic) or absence (anaerobic) of oxygen.

> "Plant species occuring in wetlands have morphological, physiological, and/or reproductive adaptations that allow them to grow, persist and reproduce in areas that are periodically inundated or have saturated soil conditions. Nonwetland plants lack adaptations for occurrence in such areas.
>
> Plant species vary in their tolerance to anaerobic soil conditions. Some species (red maple, for example) have broad tolerance and occur over a broad range of soil moisture conditions. Other species such as buttonbush have a narrow range of tolerance. Some species (e.g., bald cypress, smooth cordgrass) are adapted for occurrence in areas that are nearly permanently inundated, while other species are adapted for occurrence in areas that are inundated or have saturated soils for relatively short periods during the growing season. Nevertheless, species of both types are poorly adapted and lack a competitive advantage for survival in areas having nearly continuous periods of aerobic soil conditions associated with nonwetland soils. Many hydrophytic species do not occur in nonwetland areas.
>
> Hydrophytic species sharing similar tolerances to anaerobic soil conditions often cohabit areas having such conditions. In these cases, it is possible to recognize these species groups as plant communities or species associations. Within a given geographic region, the same plant community type or species association will occur wherever similar environmental conditions exist. Thus it is possible to map wetland areas based on the distribution of hydrophytic communities or species associations."

It is these types of associations that are discussed in the following sections which describe the various wetland types found in South Carolina.

There are many different kinds of wetlands in South Carolina, and almost as many systems to classify them. The most widely used system is the one developed by the National Wetland Inventory of the Department of Interior. However, this system may be too complex for the purposes of this booklet and, as such, a more simple approach is used here. Figure 1 shows the general types of wetlands described herein and their relationship to tidal influence.

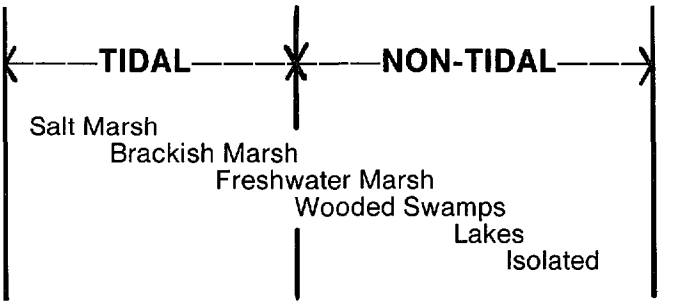


Figure 1.

Estimates for the amount of wetlands contained in South Carolina show that perhaps as much as 5 million acres qualify as wetlands. Some of the figures are given below and are based on a 1975 survey of tidal wetlands along the coast performed by the South Carolina Wildlife and Marine Resources Department (SCW&MRD) (Tiner, 1975), and additional data.

TIDAL WETLANDS:

Salt marsh	334,500 acres
Brackish marsh	35,000 acres
Freshwater marsh	65,000 acres
Wooded swamp	~ 2,000 acres

NON-TIDAL WETLANDS:

Freshwater marsh	~ 25,000 acres
Wooded Swamp	3,000,000 acres
Lakes (10 ac.)	492,000 acres
Isolated wetlands (Carolina Bays, etc.)	1,000,000 acres

Since the purpose of this handbook is to address predominately freshwater systems, no further discussions of tidal wetlands will occur.

B. DEFINITION. The following is the definition of wetlands as it appears in the Corps of Engineers' Regulations at 33 CFR 328.3(b).

> The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

C. FRESHWATER WETLAND CHARACTERISTICS.

1. Wooded Swamps - A distinction can be made between "scrub-shrub" and forested wetlands, where the "scrub-shrub" type is generally characterized by a dominance of woody vegetation less than about 20 feet in height. This may result from stunting caused by environmental conditions or it could simply be a successional stage in the maturation of a particular site (for instance, following recent logging or other disturbance). Such swamp areas adjacent to rivers and streams are dominated by such species as black willow (Salix nigra), alders (Alnus spp.), and buttonbush (Cephalanthus occidentalis).

Forested wetlands comprise the majority of the total wetlands found in the State of South Carolina. They adjoin our major rivers and their tributaries from the coast to the piedmont and even into the foothills of the Blue Ridge mountains in the upper reaches of the State. These floodplain areas become "swamps" because of the influence of overbank flooding from the streams that they line. In the lower coastal plain, these areas can be literally a mile or more wide on either side of the river. As one progresses upstream (both up the tributaries and the main stem of the stream) the adjoining wetlands become narrower and often the hydrological influence shifts from overbank flooding to groundwater discharges, such as seepage and springheads.

While these types of wetlands exhibit an extensive diversity of plants, there are a number of species that are fairly characteristic. To describe these, an effort must be made to explain that the swamp habitat can be divided into a number of different zones, each with its own characteristic vegetation community and based on the frequency and duration of flooding. While much of the research in this field is currently directed at describing five or six distinct zones, for the sake of simplicity, we will only attempt to discuss three - low, middle and high.

In South Carolina, one can observe swamp habitat simply by riding down virtually any major highway in the State, since there are so many major streams with adjacent forested wetlands and the roads have to cross them sometime or another. For a closer look, the Francis Beidler Forest, located in Four Hole Swamp near Harleyville in Dorchester County has a 1½ mile long boardwalk into the swamp which was provided by the Audubon Society and the Nature Conservancy. This site contains perhaps the largest remaining stand of virgin cypress/tupelo swamp in the world, but the zones described here can also be observed.

The lower zone (and thus the most often and longest flooded) is the area that people normally think of when they think of a swamp. The dominant trees in such areas are cypress (Taxodium distichum) and swamp tupelo (Nyssa aquatica), however, Carolina ash (Fraxinus caroliniana) and planer tree (Planera aquatica) survive very well in these areas. Because of the frequent and relatively deep flooding in these zones, very few shrubs or herbaceous (non-woody) plants occur and those that do are usually growing out of stumps and logs.

The next higher zone (or the "middle" zone) usually exhibits denser ground cover and the dominance of tree species gradually changes to

such things as laurel oak (Quercus laurifolia), swamp chestnut oak (Quercus michauxii), water hickory (Carya aquatica), and American elm (Ulmus americana). Shrubs common in this zone include sweetspire (Itea virginica), titi (Cyrilla racemiflora), swamp dogwood (Cornus foemina), and inkberry (Ilex galbra). Also present are ferns such as royal fern (Osmunda regalis) and lizard's tail (Saururus cernuus), false nettle (Boehmeria cylindrica, and sedges (Carex spp. and Cyperus spp.)

The highest zone (also commonly known as a "transitional zone" because of the gradual transition to upland, or non-wetland areas) commonly contain such trees as hackberry (Celtis laevigata), various bay trees (Persea, Gordonia, Magnolia), red maple (Acer rubrum), ironwood (Carpinus caroliniana), and an occasional loblolly pine (Pinus taeda). Ground cover and shrubs may include sweet pepper-bush (Clethera alnifolia), dwarf palmetto (Sabal minor), arrow wood (Viburnum dentatum), swamp azalea (Rhododendron canescens), southern lady fern (Athyrium asplenoides) and wax myrtle (Myrica cerifera).

If some of these species in the higher zone look familar, its because many of them are commonly found on high ground in non-wetland situations. It is this very reason why "drawing the line" between wetlands and uplands can be so difficult at times and why it was stressed at the beginning of this section that the plants present on a site must be looked at as a COMMUNITY. These plants must be viewed in association with the other plants around it and in view of the soil and hydrological conditions in order for a wetland determination to be reached.

2. Lakes or Ponds - Lakes are easily recognizable as wetlands since they are comprised of bodies of usually permanent standing water, often with a fringe of vegetation around the border (sometimes marsh, sometimes swamp). Much of the vegetation is similar to that discussed in the earlier sections on freshwater swamps.

Lakes or ponds may be natural bodies of standing water, or may be created by impounding a stream or river with a dam or embankment or by excavation. Lakes Marion, Murray, Greenwood and Wateree are excellent examples of the impoundment type. The overwhelming majority of lakes in South Carolina are man-made, ranging from small farm ponds to the major reservoirs mentioned above. There are about 17 lakes in South Carolina which exceed 1,000 acres in surface area and at the time of a 1974 survey by the South Carolina Water Resources Commission, there were approximately 1,400 lakes greater than 10 acres in surface area. Many more have obviously been created since that time and there are many thousands in the less than 10 acre category.

3. Isolated Wetlands - Isolated wetlands cover the widest variety of wetland types and may be found in South Carolina from the mountains to the sea. An isolated wetland is simply a wetland area that is not part of a surface tributary system. In other words, there are no streams flowing into or out of them. They are simply landforms unto themselves, surrounded by nonwetland areas, and may vary as widely in size as

they do in type. Old "oxbow lakes" which were once part of the course of a river but have been cut off from the stream and are now surrounded by high ground are one type of isolated wetland. Carolina Bays, which are unique to our part of the world and reach their highest concentrations around the South Carolina - North Carolina border are a significant and interesting form of isolated wetlands (though some may be adjacent to and directly associated with river swamps and are not truly isolated.)

Pocosins, which are intimately associated with Carolina Bays, are broad flat areas which have become peatbogs over the centuries and are another unique coastal plain wetland. The name "pocosin" is an Indian word meaning "swamp on the hill" and is quite descriptive of these areas. Many other types of potholes and sinkholes exist which collect surface runoff or are low enough to intersect the local ground water table and have thus become wetland areas. Along our barrier islands and sea islands, as well as the adjoining mainland area, are topographic features which are essentially the remains of ancient sand dunes left over from the transgressions of the ocean many thousands of years ago which have become weathered and vegetated. Between many of these old dunes are "swales" or "troughs" which collect water and are wet for long enough periods during the year for wetlands ecosystems to become established and to survive.

As is apparent, isolated wetlands take on many shapes, fashions and forms. These too are subject to Corps of Engineers permit authority.

Because of the diversity of these types of wetlands, we will not attempt to list the plants commonly associated with them. Many of those already mentioned, such as those associated with wooded swamps and freshwater swamps commonly occur in isolated wetland areas. However, the plants that are characteristic of Carolina Bays/pocosins are worthy of mention since they are indicative of acid/bog environments. These include pitcher plants (Sarracenia spp.), sphagnum moss (Sphagnum spp.), fetterbush (Lyonia spp.), zenobia (Zenobia pulverulenta), pond pine (Pinus serotina) and various bay trees (Persea, Gordonia, Magnolia).

4. **Soils** - Included in this book at Appendix B, page B-4, is a listing of soil types (or soil "series", as they are more properly known) which have been identified as "hydric soils". This list was prepared using information provided by the U.S. Department of Agriculture - Soil Conservation Service (SCS) and the various Soil Surveys prepared by that agency for the counties of South Carolina. This list has been provided for use in conjunction with the Soil Surveys (see your local SCS office for more information in obtaining the Survey for your area) as a planning tool and should **NOT** be solely to delineate jurisdictional wetlands on the basis of soil mapping. It is intended to aid in assessing the potential of an area for such a determination by providing insight into one of the physical parameters of the area (i.e., vegetation and hydrology must also be considered).

The importance of soils information is highlighted by recognizing that a key provision of the Corps of Engineers' wetland definition is "...a

prevalence of vegetation typically adapted for life in SATURATED SOIL CONDITIONS..." (emphasis added). What then is a "hydric soil" and what are the characteristics that indicate the presence of wetland conditions?

The official Soil Conservation Service definition of a hydric soil is:

> "A hydric soil is a soil that in its undrained condition is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation."

As was mentioned earlier in this book, "anaerobic" refers to conditions where oxygen is absent (as a direct result of extended flooding or saturation) and "hydrophytic" literally means "water loving" and refers to wetland plant species. Note that the definition of hydric soils refers to the vegetation just as the wetland definition refers to soil conditions. The two are inexorably linked.

Soils occuring in wetlands have distinctive characteristics associated with development under these anaerobic conditions. Prolonged inundation or saturation results in chemical and biochemical changes which leads to the development of gray or even black colors and "mottling" or blotches of color, different from the major or "background" color of the soil, which usually indicates a fluctuating water table rising and falling through the segment of soil being observed. The rate of decomposition of overlying organic matter (leaves and twigs, for example) also decreases in areas experiencing prolonged inundation or saturation and this often leads to the development of thick organic surface layers or to dark colors in the surface soil horizons. Some soils always have such characteristics when occuring in their natural, undrained state.

5. Hydrology - This is the tie that binds all wetlands together as wetland areas, but is the most elusive to accurately quantify. However, the presence of water is directly reflected in the hydric soils and the plant communities which occupy wetlands and the hydrology can be largely inferred as a result, even in those instances where no standing water is present at a particular time. The frequency, timing and duration of these hydrological conditions vary widely from one wetland type to another. Some of the indicators of wetland hydrology include:

1. Recorded information (e.g., gaging station data, flood predictions, and historic data).
2. Evidence of water movement through an area (e.g., drainage patterns, absence of leaf litter, scouring around roots, and debris deposited in or along the drainage pattern).
3. Drift lines (debris accumulated at the furtherest reach of the rising water).
4. Sediment deposits on plants and other objects.
5. Encrusted detritus in the litter layer.
6. Watermarks.
7. Visual observation of inundation or soil saturation.

Hydrology may take the form of tidal fluctuations (in coastal situations), freshets and floods along rivers and streams, and rainwater catchment

or groundwater discharge in isolated areas. It is important to note that the significance of inundation or saturation to the plant community is during the growing season (generally regarded as from the last frost of the winter to the first frost the following fall) for any given locality. During the remainder of the year the plants are essentially dormant and the stresses caused by these wet conditions have little or no impact on their survival and reproduction.

D. DELINEATIONS.

1. **How Wetland Delineations are Obtained/Accomplished** - Wetlands have become an important and pervasive issue in the last few years due to a wide variety of factors. In order to address these matters for a particular development, the first question which must be answered is 'Are there any wetlands on the site and, if so, where are they?'. In the past the Corps has made every effort to provide this data to the landowner or agent in a timely fashion. However, the pace of development in the State has now surpassed our resources to provide such services. Manpower and funding shortages have caused processing times to increase, therefore, we must change our way of doing business. This need has been recognized not only by us, but also by the Corps nationwide, as reflected in recent guidance from our headquarters.

In consideration of these factors, Corps delineation services must now be provided through two options. First, the developer or agent may submit a request to be placed on a waiting list and we will work on these delineations as time and manpower allow. It is anticipated that responses to these requests will take much longer than the average of about 40 days we are now experiencing. The second option is that a qualified consultant may be hired by the landowner to perform the field evaluation for review and verification by this office. This is a procedure that many of you are already familiar with since we have been doing this for some time on larger projects. While this was once the norm for projects of several hundred acres, sites as small as 10 acres are now candidates for this category.

The hiring of a consultant will, in most cases, be inappropriate for small, private sites, but areas slated for commercial, residential or industrial development (even if smaller than the 10 acre threshold) should meet this criteria. If time is not an important factor, the waiting list addressed above may be the appropriate measure.

Included at Appendix A, page A-1 is a copy of a 'Request for Wetlands Determination' form for your use. Even if you intend to have the wetlands independently evaluated, this form should be forwarded to us so that we may assign a Corps field representative who will be responsible for coordination with your consultant and verification of the wetland boundaries established. Also available upon request is a list of consultants with whom we have worked in the past and who have indicated that they may be available for this type of work. Please read and take particular note of the information in the introductory remarks of this list. Wetlands delineated by consultants should be mapped and provided to this office for verification of accuracy. The Charleston District regrets any inconvenience this causes, but under current circumstances it is unavoidable. If you have any questions regarding

these matters, please contact the Corps of Engineers, Regulatory Branch at (803) 724-4330.

2. Tools Available to the Landowner That Will Assist in Wetland Delineations - If you as a land owner or developer wish to make a determination as to whether wetlands exist on a particular parcel of land there are some tools available that will assist you in making a preliminary determination. These tools are U. S. Geological Survey Quadrangle maps, soil survey maps, U.S. Fish & Wildlife Service National Wetland Inventory maps, and aerial photography.

a. U. S. Geological Survey Quadrangle Maps (USGS) - USGS quadrangle maps are readily available sources of information. These maps can be obtained from a number of suppliers throughout the State. These maps contain a wealth of information that may assist developers in preliminary project planning including an assessment as to whether wetlands exist on the property in question. Wetlands are identified on these maps by the use of marsh symbols. These maps are not ideally suited to this use due to their scale (1:24,000) and the fact that they were not created for this purpose. They are, however, very useful, easy to obtain maps that can be used for many purposes including very preliminary wetland evaluation for large sites.

b. Soil Survey Maps - The U.S. Department of Agriculture, Soil Conservation Service has published soil survey booklets for virtually each county in the state. These booklets contain copies of aerial photographs with soils information annotated on the photograph. As stated above, a list of "hydric soils" is included in Appendix B, page B-4. These Soil Survey Booklets and the information contained therein are another tool available to developers that will assist in determining if wetlands exist on a particular tract of land. These booklets are very good as an early planning tool but only identify one parameter in the wetland identification process. These booklets do not indicate if or what type of vegetation is present. The information gained from the soils booklet, in conjunction with an on-site inspection, will assist in determining if wetlands are present, and will aid in the planning of the project so that wetlands can be avoided or encroachments minimized.

c. National Wetland Inventory Maps - The U.S. Fish & Wildlife Service has, for the past several years, been in the process of mapping wetlands on a nationwide basis. Through the joint efforts of the South Carolina Coastal Council, the Corps of Engineers and the U.S. Fish & Wildlife Service, a concerted effort has been placed on this type of mapping in the coastal zone of South Carolina. The majority of the work has been completed and these final wetland inventory maps should be available in each county of the coastal zone shortly. Draft maps are currently available and may be ordered by U. S. Geological Survey Quadrangle sheet designation by calling 1-800-USA-MAPS.

These "Wetland Inventory Maps" are basically U. S. Geogological Survey Quadrangle maps on which the U.S. Fish & Wildlife Service has delineated their categories of wetlands in accordance with their

published procedures. A sample of a portion of one of the maps (North Charleston, S.C.) is included in Appendix B, page B-15. These maps are valuable as an early planning tool for conceptually developing a plan that can either avoid wetlands, or at a minimum, the project encroachments into these valuable natural resource areas.

III. THE MAJOR PERMITS AND AUTHORITIES

This section identifies the Federal and State agencies that may be involved in the permitting of a project located in freshwater wetlands. Each agency has provided information relative to their authorities in regulating freshwater wetlands.

A. U. S. ARMY CORPS OF ENGINEERS. The U. S. Army Corps of Engineers has been involved in regulating activities in the nation's waters since 1899. The Corps' authority was then and continues to be Section 10 of the Rivers and Harbors Act of 1899. The only factor considered in the review of permit requests was originally navigation. In the late 1960's, as a result of changing public attitudes and new public laws, the Corps expanded its review of projects to include various environmental factors. The new and expanded review is commonly referred to as the "public interest review". The passage of the Federal Water Pollution Control Act Amendments of 1972 (currently referred to as the Clean Water Act) was the beginning of the Corps' involvement in wetlands. This section of the law contained language that authorized the Secretary of the Army, acting through the Chief of Engineers, to subject deposits of dredged or fill material to a new permit requirement. Between 1972 and 1975, the Corps' implementation of this new permit authority was limited to the traditional "navigable waters of the U.S." However, in 1975, as a result of Court action, the Corps published preliminary and interim final regulations to impose a permit requirement on discharges of dredged or fill material in wetlands that bordered the traditional "navigable waters of the U.S." and implemented a phased program to eventually include almost all waters of the U.S. In order to reduce the impacts on the general public, this expansion of the Corps regulatory program was implemented over a 2 year period.

Two years later, in 1977, the Corps issued another regulation which took into account the 2000 comments received in response to the 1975 regulations, the comments made at the 4 nationwide public hearings on the 404 program and the 243 information meetings conducted by the Corps. These new regulations were designed to simplify what was becoming an increasingly complex program. One extremely significant revision was the decision to consider all waterbodies and their adjacent wetlands above the headwaters to be in Corps jurisdiction. However, the impact of this decision was not apparent at that time because these 1977 regulations also included nationwide permits that authorized deposits of dredged or fill material in these type areas. These new nationwide permits also authorized discharges of dredged or fill material into natural lakes, including their adjacent wetlands, that were less than 10 acres in size and isolated wetlands that were not part of a surface tributary system.

In September 1980, the Corps published proposed changes to the permit regulations that consolidated the first four Nationwide Permits (NWP), initially proposed in 1977, into two NWP's and added some additional NWP's. One major proposed revision was the addition of lakes greater than 10 acres in size to the NWP addressed above. These proposed changes were incorporated into final regulations issued on July 22, 1982. As a result of these changes, 16 environmental organizations filed a suit against the Army and the U.S. Environmental Protection Agency.

On May 12, 1983, the Corps proposed more amendments in an attempt to resolve some of the concerns expressed over the changes in the July 1982 regulations. These proposed amendments included the reimposition of a permit requirement for lakes 10 acres or more in size. The proposed amendments of May 1983, also invited Coastal Zone and Water Quality Agencies to reevaluate their positions on all NWPs.

In March of 1984, the Corps published another set of rules as part of a settlement agreement for the suit by the environmental organizations referred to above. Among other things, these regulations relocated and combined the NWPs which addressed discharges into areas above the headwaters and discharges into isolated, interstate waters. This new NWP (NUMBER 26) was formally adopted on October 5, 1984, when the Corps of Engineers reissued five NWP'S by publishing a notice in the Federal Register. A further discussion of NWP #26 is found at Section V.,B. of this handbook.

Since that time the scope of the areas regulated by the Corps has been constantly revised and expanded to include activities in isolated areas, as well as areas located above the headwaters. (The term "headwaters" is defined as the point on a non-tidal stream above which the average annual flow is less than five cubic feet per second.) There are no waters or wetlands within the State of South Carolina that do not fall under the authorities of Clean Water Act and therefore, the deposits of dredged or fill material into these areas require a Department of the Army authorization.

The paragraphs that follow were extracted from Corps of Engineers Regulations and describe the Corps' statutory authorities and how these authorities relate to freshwater areas.

> Section 10 of the Rivers and Harbors Act approved March 3, 1899, (33 U.S.C.403) (hereinafter referred to as Section 10), prohibits the unauthorized obstructions or alteration of any navigable water of the United States. ("Navigable Waters of the United States" is defined below). The construction of any structure in or over any navigable water of the United States, the excavating from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The authority for authorizing work under this law has been delegated to District Engineers. The instrument of authorization is designated a permit.

Since this handbook deals specifically with freshwater areas, Section 10 of the Rivers and Harbors Act of 1899 will usually not be applicable due to the fact that freshwater areas are generally not "navigable waters of the United States". Such areas are normally subject to Section 404 Of the Clean Water Act.

> Section 404 of the Clean Water Act (33 U.S.C. 1344) (hereinafter referred to as Section 404) authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits, after notice and opportunity for public hearing for the discharge of dredged or fill material into the waters of the United States at specified disposal sites. (See 33 CFR Part 323.) The selection and use of disposal sites will be in accordance with guidelines developed by the Administrator of the Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army and published in 40 CFR Part 230. If these guidelines prohibit the selection or use of a disposal site, the Chief of Engineers shall consider the economic impact on navigation and anchorage of such a prohibition in reaching his decision. Furthermore, the Administrator of the Environmental Protection Agency can deny, prohibit, restrict or withdraw the use of any defined area as a disposal site whenever he determines, after notice and opportunity for public hearing and after consultation with the Secretary of the Army, that the discharge of such materials into such areas will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas.

Since the laws cited above make reference to "waters of the United States" and "navigable waters of the United States" these two terms are defined below.

The term "waters of the United States" means all waters, including "navigable waters of the United States", all rivers and streams and their tributaries, all lakes that are larger than 10 acres, and all wetlands adjacent to these waterbodies as well as those wetlands that are isolated from or have no connection to a surface tributary system.

The term "navigable waters of the United States" means those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce.

Generally, any deposit of dredged or fill material in wetlands will require a permit from the Corps of Engineers because of Section 404 of the Clean Water Act.

There are several types of permits (i.e., individual permits, general permits, or nationwide permits) that apply to freshwater areas. The type permit applied for will depend on a lot of different factors. General permits have been issued for numerous activities in the South Carolina. In order to qualify for authorization under one of these General permits, the project must be located in an area that the Corps has issued a General permit (i.e., Lake Murray, Lake Marion, Lake

Moultrie, etc.), and the work must be within the scope specified by the conditions of that General Permit. The Corps of Engineers also has twenty-six nationwide permits that could apply to the proposed work. These permits have already been subjected to a public interest review and issued. Activities authorized by these permits must meet certain conditions. When applying to the Corps for a permit, a decision will be made whether or not the proposed work is authorized by an existing nationwide permit. A complete discussion of nationwide permit #26, the nationwide permit most frequently used by developers, can be found at Section V., Page 37. The last type of permit is an individual permit. This type of permit requires a full public interest review, which includes issuance of a public notice and a receipt of comments. The decision as to which type of permit applies will be made on an individual basis. When a permit is processed through the individual permit process, the decision whether to issue a permit will be based on an evaluation of the probable impact of the project, including cumulative impacts of the proposed activity, and will include the application of guidelines promulgated by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army under authority of Section 404(b)(1) of the Clean Water Act.

These guidelines are entitled, "Guidelines for Specification of Disposal Sites for Dredged or Fill Material" (commonly referred to as the 404(b)(1) Guidelines). To evaluate which portion of these guidelines apply to the specific project, this office will first determine whether the project is "water dependent". The term "water dependent" means that your project must be located in, or in close proximity, to the aquatic resource to fulfill its basic purpose. If your project is determined to be "non-water dependent", the applicable portion of the Guidelines states:

> Where the activity associated with a discharge which is proposed for a special aquatic site (as defined in Subpart E) does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (i.e., is not "water dependent"), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge WHICH DO NOT INVOLVE A DISCHARGE INTO A SPECIAL AQUATIC SITE ARE PRESUMED TO HAVE LESS ADVERSE IMPACTS ON THE AQUATIC ECOSYSTEM, unless clearly demonstrated otherwise (emphasis added).

By way of definition, be advised that "special aquatic sites," as used above, include wetlands.

If it is determined that your project is a "water dependent" activity, the following excerpts from the Guidelines will apply:

(a) Except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not

have other significant adverse environmental consequences.

(1) For the purpose of this requirement, practicable alternatives include, but are not limited to:

(i) Activities which do not involve a discharge of dredged or fill material into the waters of the United States or ocean waters;

(ii) Discharges of dredged or fill material at other locations in waters of the United States or ocean waters;

(2) An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded of managed in order to fulfill the basic purpose of the proposed activity may be considered.

This office must employ the presumptions mentioned in 404(b)(1) Guidelines as emphasized above. For "non-water dependent" activities, you will be required to clearly demonstrate, in writing, that there are no "practicable alternatives" which would fulfill the basic purpose of the proposed work.

B. SOUTH CAROLINA WATER RESOURCES COMMISSION and the SOUTH CAROLINA BUDGET AND CONTROL BOARD.

1. Purpose

To provide legal authority to perform approved construction and alteration activities in South Carolina navigable waters and to protect the public interest in those navigable waters of the State.

2. Permit Overview

a. Unless expressly exempted, a permit issued by the State Budget and Control Board is required for any dredging, filling, construction or alteration activity in, on, or over any navigable waterway of the State, or for any activity significantly affecting the flow of any navigable waterway.

For purposes of administering this program, the Water Resources Commission on behalf of the Budget and Control Board, serves as the coordinating agency, responsible for obtaining and evaluating the views of all relevant agencies and persons, and taking such administrative actions as are appropriate to advise agencies and the public. The Commission also shall recommend to the Board whether the permit should be granted or denied or made subject to any particular conditions.

b. Specific activities requiring this permit include, but are not limited to, construction of docks, piers, boat ramps, bulkheads, moorings, bridges, transmission lines, water intake structures and wastewater discharge structures, and the placement of fill and excavation of materials.

3. Identifying Freshwater Wetlands (Navigable Waters of South Carolina)

a. Navigable waters means those waters which are now navigable, or have been navigable at any time, or are capable of being rendered navigable by the removal of accidental obstructions, by rafts of lumber or timber or by small pleasure or sport fishing boats. Navigability is determined by the Water Resources Commission in accordance with the definition of navigable waters contained in Section 49-1-10 and Regulation 19-450, Code of Laws of South Carolina, 1976, as amended.

b. Delineation of South Carolina navigable waters is made by the staff of the Water Resources Commission by visual determinations in the field based on the State navigability criteria. Major jurisdictional waters have been determined and are listed on a map entitled "Navigable Waters of South Carolina" which is available to the public and may be obtained from the Commission upon request. Some waters have not been thoroughly inspected and are of uncertain status.These waters are investigated individually by the Commission as the need arises. The Commission staff is available upon request to investigate streams in this category.

4. The Major Permits and Authority - Budget and Control Board Permit for Construction in South Carolina Navigable Waters.
Statutory authority for this program is found in Sections 1-11-70, 1-11-75, and 49-1-10, Code of Laws of South Carolina, 1976, as amended. Regulations promulgated by the Budget and Control Board to implement this program are codified at Regulation 19-450.

5. Agencies That Review and Comment on Budget and Control Board Permit Applications.
a. Regulations governing the processing of Budget and Control Board permit applications provide for a collective review/evaluation by several State agencies which provides the Water Resources Commission with a total assessment of the impact of any proposed work affecting navigable waters. State agencies that are a part of the application review process include:

(1) State Attorney General's Office
(2) Budget and Control Board, Division of General Services
(3) Institute of Archaeology and Anthropology
(4) Department of Archives and History, State Historic Preservation Office
(5) Wildlife and Marine Resources Department
(6) Department of Health and Environmental Control
(7) State Ports Authority
(8) Department of Parks, Recreation and Tourism
(9) State Forestry Commission
(10) Department of Highways and Public Transportation
(11) Coastal Council
(12) Land Resources Conservation Commission
(13) Public Service Authority

In addition, the Commission also considers comments from various Federal agencies, organizations and the public at large.

b. Within the forty-five (45) days of notification of a permit application, or any extension thereof, an agency objecting to or intending to object

to a projected activity must notify the Water Resources Commission and the applicant of the specific objection, the reasons for the objection and the supporting grounds for the objection. Any agency decision to approve a project subject to conditions is treated as an objection, unless the applicant agrees to conditions. When the permit application raises complex issues or more than one agency objects, the Commission coordinates the conciliation process. If only one agency objects, the Commission informs the applicant that he is responsible for meeting with the agency and considering how the objection might be reconciled. The applicant and the objecting agency are primarily responsible for the conciliation process, but the Commission may support and assist their efforts to conciliate and resolve their differences.

In the reconciliation process, the agency and the applicant must consider how the objections might be reconciled by:

(1) avoiding the adverse impact by not taking a certain action or parts thereof;
(2) minimizing the adverse impact by limiting the degree or magnitude of the action or its implementation;
(3) rectifying the objection by repairing, rehabilitating or restoring the affected area; and
(4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the permitted activity. The applicant must provide any additional information reasonably necessary to resolve the objections.

The Water Resources Commission will not take action on a permit application upon which an objection has been made until it has received notice that the objection has been resolved, or that in the opinion of either the applicant or agency that all efforts to resolve the objection have failed and that further negotiations will be of no benefit. Within fifteen days after notice that reconciliation efforts have failed, the applicant and each agency with an unreconcilable objection must submit to the Commission a short and plain statement of the matter in dispute, the position of the agency, the position of the applicant, supported by such facts and information as are relevant. The parties should identify and clarify those issues that prevented reconciliation. If possible, the parties should prepare a joint statement so as to expedite the permitting process. The Commission will review all comments/ objections and supporting information and make its recommendation to the Budget and Control Board.

6. The Permitting Process

a. An applicant who seeks a permit from the Budget and Control Board is responsible for establishing that the proposed activity is consistent with permitting regulations, and for providing to the commenting agencies, the Commission and the Board the information that may be required to make that determination with reasonable certainty. Failure to respond or provide requested information may result in the denial of the permit.

Except for joint applications filed with Federal agencies applications for a State Budget and Control Board permit shall be made to the Water Resources Commission. Included in Appendix A, page A-2, is the state

application form. Information required for permit application includes the following:

(1) the name and address of the applicant;
(2) the location of the proposed activity, including the navigable waterway where the construction or activity is contemplated and an appropriate map of the area;
(3) a brief description of the proposed activity, its purpose and intended use, including a drawing of the type of structures and method of construction including size specifications;
(4) a plan and elevation drawing showing the general and specific site locations and character of all proposed activities including the size relationship of the proposed structure to the size of the impacted waterway and depth of water in the area and the distance of encroachment of the activity into the water. (A hand drawn sketch showing the size and shape of the structure and a location map will be considered sufficient detail for docks, piers, boardwalks or bulkheads without fill and extending no more that fifty (50) feet from the shoreline). Sample drawings are included and can be found at Appendix A, page A-6.
(5) evidence of ownership or the consent of the owners of the adjacent highland on which any part of the projected activity will be located. An affidavit of ownership form is included at Appendix A, page A-7.
(6) certification that the applicant has or will publish a notice describing the application in a newspaper of general circulation in the county where the encroachment is sought at least once in each of two consecutive weeks. A newspaper public notice form is included at Appendix A, page A-8.
(7) when considered appropriate by the Commission or the Board, or their respective staffs, additional information may be required;
(8) an application fee of five hundred dollars for commercial activities and fifty dollars for non-commercial activities is required.

The Commission must promptly issue a public notice to relevant State agencies and make such other notice as it deems appropriate no later than fifteen (15) days after receipt of all information necessary to process the application.

7. Wetland Master Planning (Major Projects in South Carolina Navigable Waters)

Applicants contemplating major projects are encouraged to contact the Water Resources Commission prior to submitting a formal application for a permit. The Commission will advise the applicant of the procedures, requirements, and areas of regulatory concern, and in appropriate cases may convene an interagency meeting to assist and guide the applicant in the preparation of the permit application.

8. General Guidance

a. As the presumed owner of the beds of most South Carolina navigable waters, it is generally the policy of the State not to allow any filling of lands below the mean high water elevation in tidal waters or the ordinary high water elevation in nontidal waters as this represents a confiscation of State-claimed lands.

b. In the interest of protecting navigational safety, bridges spanning South Carolina navigable waters must provide adequate clearances for boating. These clearances are set by the South Carolina Water Resources Commission. A minimum of 6′ vertical clearance and 10′ horizontal clearance are required. However, greater clearences may be required under some circumstances.

c. In the interest of protecting navigational safety, structures in navigable waters must be constructed within certain limits (generally no more than one third the distance across the waterway).

d. In the interest of protecting the rights of adjacent riparian landowners, it is generally the policy of the South Carolina Water Resources Commission not to allow encroachment in front of adjacent lands by a permitted activity unless the permit applicant has obtained written permission from the affected party.

e. To further consider major project impacts it is highly recommended that a preapplication, interagency conference be held for such proposed activities. Prospective applicants can be advised and guided by such meeting to assist in preproject planning that will meet the needs of the applicant and also protect the resource involved. This planning approach may be carried and continued through the permit review process. Project plans may be modified over the course of time to avoid or minimize adverse resource impacts. In certain specific circumstances a proposal by an applicant to replace or compensate for unavoidable detriments to South Carolina navigable waters may be considered by the South Carolina Water Resources Commission according to procedures established in the permit regulations.

9. Agency Contacts

Anyone planning to perform construction or alteration work in navigable waters of South Carolina or waterbodies of uncertain navigability status should contact the South Carolina Water Resources Commission prior to the initiation of any work. The South Carolina Water Resources Commission staff is available to answer questions on the permitting program, make jurisdictional determinationand provide applications for required permits. Individuals requesting additional information should contact the Permit Administrator, South Carolina Water Resources Commission, 1201 Main Street, suite 1100, Columbia, South Carolina 29201, phone A/C 803-737-0800.

C. SOUTH CAROLINA COASTAL COUNCIL.

1. Coastal Zone Management Program Consistency Certification

South Carolina's Coastal Zone Management Act of 1977 (Act 123) defines the state's coastal zone as "all coastal waters and submerged lands seaward to the State's jurisdictional limits and all lands and waters in the counties of the State which contain any one or more of the critical areas." The critical areas, all of which are salt water wetlands, fall under the S.C. Coastal Council's direct permitting authority. Freshwater wetlands, however, are given protection through the Council's regulatory authority known as certification. Through its certification process the Coastal Council reviews all activities requiring permits by other state agencies, as well as federal agencies, to

determine if the project is consistent with the Coastal Zone Management Program. In order to receive certification approval, an activity must be determined to be consistent with relevant policies contained in the S.C. Coastal Management Program, including the S. C. Coastal Council Storm Water Management Guidelines. These policies and guidelines are aimed at protecting freshwater wetland areas as well as the quality of our surface waters. Without Coastal Council certification, a permit for the particular activity in question cannot be issued by the permitting agency.

In summary the S. C. Coastal Council exerts an indirect regulatory authority over freshwater wetlands. A Coastal Council permit is not required for activities in freshwater wetlands; however, Coastal Council certification is mandatory whenever the permit of another state agency or a federal agency is required for a particular activity. The activity must be consistent with the Coastal Zone Management Plan.

2. Procedure

The certification process works as follows. When an individual wants to pursue an activity (e.g., construction of a dock, boat ramp, bulkhead; dredging in a wetland; mining in a wetland; placing fill in a wetland for commercial or housing development; impounding a wetland; construction of water supply lines or wastewater lines , etc.) which falls under the permitting authority of a state or federal agency, he must apply to the particular agency or agencies for a permit.The state or federal agency notifies the S. C. Coastal Council through a standard public notice or other type of notification (depending on the activity involved), and a review of the proposed activity is begun by Council staff.

After its review, which can involve review of site plans and/or site visits, the Council makes a decision on the project and notifies the permitting agency or agencies as well as the applicant of its determination. This determination will always be one of the following:

a. the project is consistent with the Coastal Zone Management Program,

b. the project is inconsistent with the Coastal Zone Management Program,

c. the project is inconsistent but can be made consistent by making certain identified modifications to the original plans.

In the instance of a large project/development where a problem (i.e., conflict with the S. C. Coastal Management Program policies) with certification is obvious at the beginning of its review, the staff will try to contact the applicant and make him aware of the problem(s) in order that modifications in plans may be discussed. Developers of large projects (e.g., commercial and/or housing developments) are encouraged to seek Coastal Council input early-on before application is made.

3. Basic Freshwater Wetland Policy

Policies for projects impacting freshwater wetlands in the coastal zone are found in the South Carolina Coastal Zone Management Program.

Specific wetland policies exist for residential, commercial, industrial, and other developmental projects; however, the underlying policy can be summarized as follows:

Project proposals which would require fill or other significant permanent alteration of a productive freshwater wetland will not be approved unless: no feasible alternative exists or an overriding public interest can be demonstrated, and any substantial environmental impacts can be minimized.

This policy applies to all projects requiring a direct South Carolina Coastal Council permit and all projects within the eight-county coastal zone requiring Coastal Council certification of any other state or federal permit.

The most basic advice to developers of land containing freshwater wetlands is to avoid them. Encroachment (filling, dredging, ditching, impounding) into wetlands will only be allowed in limited circumstances as defined under the Coastal Zone Management Program. Exceptions are discussed in the following sections on storm water management and wetland master planning.

4. Developing Storm Water Management Systems in Freshwater Wetlands

Many projects within the coastal zone will be located within or adjacent to freshwater wetlands. These wetlands are natural filters and can often be utilized as receiving areas for storm water runoff. Therefore, these wetland systems, when combined with other storm water best management practices, can frequently be incorporated into the overall drainage plan. The Council does not support the wholesale conversion of natural wetlands into lagoon or lake systems, but will approve the use of these areas in their natural state or with necessary alterations as part of the storm water management system.

When using freshwater wetlands in the storm water management system, a well-planned effort is required to avoid any potential damage to the natural resource. The system should include a variety of individual best management practices that work together to achieve the desired results. For example, a pre-treatment lake located in high ground adjacent to a wetland can reduce sediment loads, remove oils and greases and attenuate storm water volumes. Also grassed swales could be used to collect and convey storm water to a distribution system (spreader swale, overflow berm, riprap discharge structure, etc.) to ensure sheetflow of storm water through the wetland. This provides for greater contact of the storm water with the vegetation of the wetland and ensures a longer residence time within the wetland. All projects using wetlands in their storm water design must incorporate an extensive sediment and erosion control plan during construction. The entire wetland area needs to be protected against any potential sediment intrusion. In addition, all projects of this type should include a mechanism to minimize the amounts of oils and greases entering the wetlands.

The following guidelines will be used in evaluating such systems:

a. When freshwater wetlands are involved in a project site, the

following order of design priorities will be used for storm water systems:

(1) Avoid the wetlands, use highground alternatives (i.e., ponds, swales, etc).
(2) Use wetlands in their natural state.
  (a) For low density residential, sheetflow storm water over grassed area into wetlands using other best management practices as appropriate.
  (b) For all other development, the general storm water management guidelines must be met prior to release into wetlands.
  (c) Manage water levels to maintain the hydrology of the natural wetland.
(3) Excavate storage requirements out of immediately adjacent highground and overflow into the wetland area for additional treatment.
(4) In special cases where the above alternatives are impractical, the Council staff will coordinate with the applicant to identify alternatives.

b. Where natural wetland values are lost due to digging adjacent to or in freshwater wetlands, a combination of the following design criteria will apply to help replace some of the lost values:

(1) Construct submerged 10:1 shelves, 10 - 15 feet wide, around a portion or portions of the storm water pond for emergent vegetation (slope and width can vary to meet the particular situation). Consult with Council staff biologist for depth of shelf.
(2) Leave islands or peninsulas of natural wetland vegetation.
(3) Leave 25 - 50 feet wide upland buffer of natural vegetation around a portion or portions of the storm water pond for a transitional zone.
(4) Design the water level management system to maintain wetland values.
(5) Consider the need for revegetation of created or disturbed wetlands.

5. Wetland Master Planning Guidelines

The Coastal Council, in conjunction with other state and federal agencies involved in wetland review, encourages a comprehensive approach to wetland management. To promote such an approach, the Council has utilized a "wetland master planning" concept. Simply stated, the guidelines are as follows:

If a pre-development wetland master plan is prepared for a project, identifying all wetlands, drainage patterns and conceptual development, isolated freshwater wetlands of one (1) acre or less in size may be incorporated into the project development as necessary provided:

1. the wetlands contain no endangered species or critical habitat, and
2. the wetland losses are adequately mitigated.

The wetland master plan must be certified by the Coastal

Council with input from other reviewing agencies as necessary.

6. Agency Contact

For information regarding Coastal Council certification of projects containing freshwater wetlands contact:

Planning and Certification Division
South Carolina Coastal Council
4280 Executive Place North, Suite 300
Charleston, S. C. 29405
Telephone: A/C 803-744-5838

D. SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL.

1. Procedures

a. Application Process

The 401 Water Quality Certification procedure formally begins after the Corps of Engineers reviews each Corps application, determines that Water Quality Certification, pursuant to Section 401 of the Clean Water Act, is required from the Department of Health and Environmental Control (DHEC), and issues a joint public notice advertising the application. The public notice states that it constitutes a request on behalf of the applicant for 401 Certification from DHEC. Formal review of the application begins upon receipt by DHEC of the Corps public notice.

b. Review and Public Notice Process

Written comments submitted during the designated comment period in each joint public notice are reviewed and considered by DHEC staff. The DHEC staff may request additional information from the applicant any time during the review process but preferably immediately upon receipt and review of the public notice. After the public comment period and review of all available information, DHEC staff prepares a staff assessment considering all application materials, supporting documentation, and other comments. DHEC staff will generally complete their assessment within 15 days after the public notice comment period ends. The Department then issues a public notice of its own which identifies the proposed project, summaries the information in the application package, gives the location where the assessment and related files may be reviewed, announces the Department is prepared to make a certification decision, and issues notice of time and place for a Section 401 public hearing. The hearing is held on every application for certification.

c. Section 401 Public Hearing

The public hearing are generally consolidated hearings where several applications are considered. The hearings are usually conducted by a Department staff member who is a designee of the Board. The public hearings are conducted after proper notice and at the time and place directed by the hearing officer. The proceedings are recorded and transcribed. The record of the hearing remains open for 15 calendar days to receive rebuttal or supplemental information from the participants. The final record includes a verbatim hearing transcript with all exhibits.

d. Proposed Record of Decision and Final Agency Decision
The hearing officer prepares a proposed Record of Decision within 30 days of the hearing based on the applicants package, the staff assessment, the record of the hearing, his analysis of the comments offered at the hearing, and a recommends that the certification be issued or denied. The hearing officer transmits the Record of Decision to the Board. If the Department receives no appeal of the Record of Decision from participants at the public hearing within 15 days of its issuance, the staff recommendation becomes the final agency decision. If an appeal is taken, the Board shall render the final agency decision based on the Record of Decision and arguments from participants in the public hearing; however, no new material may be presented. The Board may affirm or reverse the proposed decision, or may remand for further evidentiary hearing. The Department shall complete all assessments and hearings so that no more than 364 calendar days elapse from receipt of the joint public notice and the final agency decision.

DHEC has one year from the date of receipt of the Corps joint public notice to take final action to certify, certify with conditions, or deny 401 certification unless the process is suspended for lack of information or the applicant request suspension. DHEC's certification rights may be considered waived if the application has not been acted upon within one year and the Corps so notifies DHEC in writing. For most projects, DHEC issues final certification within 120 days of receipt of the application. In uncommon situations, the certification application is initiated through separate DHEC public notice procedures in lieu of the joint public notice prodedures with the Corps.

2. Regulations
State regulations 61-68 and 61-69, Water Classifications and Standards and Classified Waters, serve as a basis for decision making for 401 Water Quality Certification. These regulations: 1) establish appropriate classified water uses to be achieved and protected, 2) establish general rules and specific water quality standards to protect classified and existing water uses, and 3) establish policies to maintain and enhance water quality.These regulations should be consulted for specifics on: 1) classified uses, 2) numerical water quality standards and 3) antidegradation rules. These regulations are DHEC's primary guidelines for making determinations on 401 Certifications.

3. Issues
Each application is evaluated on a case-by-case basis due to the many variables involved. DHEC determines whether there is reasonable assurance that water quality regulations and standards will not be violated and that existing water uses will be maintained.

Listed below are some of the major issues DHEC staff confronts:

a. Marinas located in saltwater: New commercial marinas or expansion of existing marinas in open shellfish harvesting areas are not acceptable due to the closed safety zone for shellfish harvesting required around marinas. Generally, marinas in class SA waters are

undesirable if shellfish resources exist in such waters. Also, it is crucial that marinas are located in areas which provide adequate flushing. It is the burden of the applicant to provide sufficient evidence to assure DHEC that all marinas will be adequately flushed and that numerical water quality standards will not be violated.

b. Dead-end canals: Due to the poor circulation and mixing in dead-end canals, water quality standards are often violated in such systems; therefore, lengthy dead-end canals are discouraged and applications for them are often denied. DHEC generally looks unfavorably on applications for canals over a 50-foot length unless technical evidence is provided to assure adequate flushing and quality.

c. Fill material in wetlands: Wetlands function to improve water quality by trapping sediments, nutrients, and pollutants suspended in the water flowing over them. Wetlands also provide habitat for aquatic fauna and flora and other wildlife. Placement of fill material in wetlands can impact these functions and destroy habitat. Although the Department has no specific regulatory policies on wetland fill as it affects habitat alteration, the Department does consider the specific impacts of the project on water quality, including water flow restrictions, and designated and existing uses as well as the cumulative impacts of fill projects on water quality and designated and existing uses. During the review process the Department will evaluate the amount of fill in wetlands, and the public need or benefit of the proposed project.

d. Impoundments in tidal areas: Due to documented poor water quality conditions in impoundments, new impoundments and reimpoundment of previously diked areas now functioning as natural systems are not certified if water quality standards will not be maintained. DHEC generally approves maintenance and repair of existing impoundments.

e. Filling freshwater wetlands to create ponds or lakes: Such activities are sometimes certified if designed as flow through systems and downstream uses and water quality will not be degraded. Also, there must be an indication that upstream discharges of nutrients will not cause eutrophication or nuisance conditions in the pond or lake. Wetland impacts will also be considered in the Department's review.

f. Dredging and excavation projects: Several factors are considered when reviewing hydraulic dredging projects and excavation using mechanical equipment. These include the quality of sediments to be removed, the proposed spoil disposal area location and design, return water flow quality and discharge location, and the resulting physical characteristics of the area dredged or excavated. Maintenance of existing canals, basins, and waterways are approved provided they meet original design specifications and Department conditions. New projects are closely reviewed to determine water quality impacts from dredging and water quality in the waterbody or channel created by the work. It is the responsibility

of the applicant to demonstrate that water quality standards will not be violated by the work.

E. SOUTH CAROLINA LAND RESOURCES CONSERVATION COMMISSION

1. Mining and Reclaimation Permits

The South Carolina Mining Act was passed by the General Assembly in 1973 with an effective date of July 1, 1974, and designated the South Carolina Land Resources Conservation Commission as the permitting agency for mining operations. The Division of Mining and Reclamation is responsible for administering and implementing the Mining Act.

The Act provides "that the usefulness, productivity, and scenic values of all lands and waters involved in mining within the state will receive the greatest practical degree of protection and restoration," and "no mining shall be carried on in the state unless plans for such mining include reasonable provisions for protection of the surrounding environment and for reclamation of the area of land affected by mining."

Mining, as defined by the Act, is "The breaking of the soil surface in order to extract or remove ores or mineral solids for sale, processing or consumption in the regular operation of a business."This would not include excavation or grading when conducted solely in aid of on-site farming or of on-site construction. This would include commercial dredging operations in rivers and streams of the state, but would not include operations for the harvesting of oysters or shells from coastal bottoms. This, however, may include lagoons, lakes, and ponds for residential development or aquaculture when the material excavated is being sold.

The Act requires that a permit be obtained for each mine site to insure that pollution control practices and reclamation activities are planned prior to mining and executed on a pre-determined schedule. In order to obtain a mining permit, a mine operator must complete an application for a mining permit, a reclamation plan, a land entry agreement and provide a detailed map of the proposed mining plan. The forms necessary for completing an application are supplied by the Commission as outlined in the Mining Act, Rules and Regulations. Following receipt of the application, a notice of intent to mine is advertised once a week for two weeks in a local and/or areawide newspaper with a circulation in the area of the proposed mine. A two-week public comment period follows the last date of advertisement in which the public can petition the Department to hold a public hearing. If the petition is signed by ten or more individuals or an organization representing ten or more individuals, then a public hearing is held. In addition, copies of all mining applications are sent to the S. C. Department of Health & Environmental Control (DHEC) to determine requirements for National Pollutant Discharge Elimination System (NPDES) permits. If the proposed mine affects any navigable waters or is located in one of the coastal counties, copies are sent to the S. C. Water Resources Commission or the S. C. Coastal Council, respectively. Any mine site in the eight coastal counties requires Coastal Council certification. The U. S. Army Corps of Engineers is

also consulted when regulated activities are involved in wetlands. If any significant fish and wildlife resources may be affected, then a copy is sent to the S. C. Wildlife & Marine Resources Department. The Division has a technical staff composed of a director, geologist, civil engineer, environmental biologist, agronomist, and a hydrologist. In addition to implementing the Mining Act, staff members are available to provide technical assistance to all mining operators concerning the installation of best management practices during mining and in land reclamation. Once advertising is complete, an environmental appraisal of the site is conducted by Commission staff to determine pre-mining conditions and to identify potential environmental impacts. Any potential problems identified during the appraisal are discussed with the mine operator and appropriate state agency officials, and the application is modified to reflect any mitigation measures. After the application package has been reviewed, advertising completed and the environmental appraisal performed, the application is either approved, disapproved with stated modifications or disapproved. The Act states that the Department shall deny a permit to mine upon finding:

a. "That any requirement of the Act or any rule or regulation promulgated under the Act will be violated by the proposed operation;"

b. "That the operation will have unduly adverse effects on wildlife or freshwater, estuarine or marine fisheries;"

c. "That the operation will violate standards of air quality, surface water quality, or groundwater quality which have been promulgated by DHEC;"

d. "That the operation will constitute a substantial physical hazard to a neighboring dwelling house, school, church, hospital, commercial or industrial building, public road or other property;"

e. "That the operation will have a significant adverse effect on the purposes of a publicly owned park, forest or recreation area;"

f. "That previous experience with similar operations indicates a substantial possibility that the operation will result in substantial deposits of sediment in stream beds or lakes, landslides, or acid water pollution:" or

g. "That the operator has not corrected all violations which he may have committed under any prior permit and which resulted in (1) revocation of his permit, (2) forfeiture of part or all of his bond or other security, (3) conviction of a misdemeanor under Section 19, or (4) any other court order issued under Section 19."

In the absence of any of these findings, a permit shall be granted.

2. Bonding and Inspection

Following approval by the Division of Mining and Reclamation, the applicant is notified of the date of approval, the amount of reclamation bond, the date by which the bond must be posted, and the terms and conditions of the permit. The reclamation performance bond is set by

the S. C. Mining Act commensurate with the acreage of disturbance. Assignments of bond are as follows:

a. 0-5 acres - $2,500
b. 5-10 acres - $5,000
c. 10-25 acres -$12,500
d. 25 acres or more - determined on an individual basis by the staff

Once the reclamation bond is received, a permit to mine is issued to the applicant and a copy of the approved reclamation plan is sent to the local Soil and Water Conservation District.

Mining operations are generally inspected by the Commission two to three times a year to insure compliance with the Mining Act, Rules and Regulations and the approved application and reclamation plan. These inspections continue throughout the life of the mine and until the site has been completely reclaimed in accordance with the rules and regulations. General reclamation requirements are that a 3:1 slope be achieved and a permanent vegetative cover be established.

Economic growth in South Carolina has increased the need for various mineral commodities many of which are likely to occur in the lower coastal plains region of the state in wetland areas. These resources which generally occur in wetlands include peat, coquina, sand, limestone, marl and gravel. The philosophy of the Department is to avoid impacts to wetlands by encouraging the mining operators to avoid wetland areas. Mining operations occurring adjacent to wetlands usually require, as a term and condition, a 50-foot setback. Discharges into wetlands usually require a sediment and erosion control plan to be submitted. When no reasonable alternatives exist, mining permits which occur in wetlands may require mitigation including wetland restoration and/or enhancement.

IV. POLICIES AND PHILOSOPHIES OF FEDERAL AND STATE REVIEW AGENCIES

The agencies identified in this section have a major role in the review of applications for permits and/or certifications that encroach into or impact upon freshwater wetlands. The agencies are identified as experts in their respective fields and great weight is placed on their comments as to the impacts that a proposal has on aquatic resources. Each agency has summarized its policies, philosophies and role in the permitting and/or certifying process.

A. S.C. WILDLIFE AND MARINE RESOURCES DEPARTMENT.

The S. C. Wildlife and Marine Resources Department (SCWMRD) is charged with broad responsibilities for protecting the public interest in respect to conservation and management of wildlife, freshwater fisheries, and marine resources; and advising on the maintenance and improvement of environmental quality as it affects these natural resources. Proposed projects are evaluated by the Department's Wildlife and Freshwater Fisheries Division, Marine Resources Division, and Law Enforcement and Boating Division. The comments of each

division to the Executive Office where the Department's final recommendation for approval or denial of the permits are prepared.

Recognizing that wetlands are of vital importance to the State and that these areas are, in some instances State owned property held in trust for the people of the State, and that there is a strong and growing pressure for the development of these areas, the SCWMRD has established broad guidelines for permit applications in an effort to reduce the irreversible loss of productive wetland areas, while meeting long-range State development needs.

Generally, the SCWMRD feels that any development adversely affecting wetlands should meet a recognized public need. Beyond this, those activities that can function only through use of waterfront property or access to it, such as marinas, have highest priority for limited wetland development. Of lower priority are those activities that could function inland, but for which a shoreline or wetland location would significantly enhance the activity on an economic or aesthetic basis. Even in these cases, alterations of wetland areas should be strictly limited.

The SCWMRD discourages development activities which would result in the elimination or degradation of wetlands providing ecological and water resources functions. The filling of wetlands for the purpose of creating developable residential and commercial property results in the permanent loss of wetlands and is strongly discouraged. Dredging and filling activities which result in the creation of stagnant water and decreased water quality in existing flow-through systems are usually recommended for denial. The SCWMRD is opposed to the dredging of canals and ditches through freshwater wetlands to create waterfront property or to drain site wetlands in preparation for development.

Existing site wetlands should be taken into consideration early on in the developmental planning stages. These areas should be incorporated in an unaltered state as part of an overall drainage system. The conversation of natural wetlands into lagoons and lake systems results in the elimination of a number of important wetlands functions and is not looked on favorably.

The SCWMRD considers mitigation only as a last resort after all other alternatives are completely exhausted and wetland impacts are minimized to the greatest extent possible. Mitigation in the form of forested wetland creation is a new science and should be approached with caution. The department does not consider the preservation of existing wetlands as adequate mitigation for the destruction of other wetlands.

B. U.S. FISH AND WILDLIFE SERVICE.

Fish and wildlife and their habitats are public resources with clear commercial, recreational, social, and ecological value to the Nation. As the Federal agency charged with the stewardship of the Nation's fish and wildlife resources, the Fish and Wildlife Service's mission is to provide the leadership to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of all people.

It is with this mission in mind that the U.S. Fish & Wildlife Service (FWS) provides input to the regulatory process governing freshwater wetlands. The FWS reviews, investigates and cooperates fully in providing ecological advice in the form of comments and recommendations on proposals for Federal or Federally permitted or assisted activities and developments in or affecting the Nation's waters or wetlands. The FWS operates primarily under the authority of the Fish and Wildlife Coordination Act which requires equal consideration of fish and wildlife resources with other project features.

The FWS also fulfills its mandates under Section 7 of the Endangered Species Act by reviewing permit applications to ensure that the continued existence of an endangered or threatened species is not further jeopardized and/or that critical habitat for such species is not destroyed or adversely modified.

Freshwater wetlands serve vital fish and wildlife habitat and support functions, as well as provide many other natural values. For this reason, the FWS actively discourages activities and developments in or affecting these wetlands which would, individually or cumulatively with other such activities or developments, unnecessarily destroy, damage or degrade fish, wildlife and naturally functioning wetland and associated aquatic ecosystems.

Review criteria for recommendations include:

1. the water-dependency of the project - does the project require siting in wetlands to achieve its basic purpose?
2. is this the least ecologically damaging alternative?
3. the non-water dependency of the project - particularly where biologically productive wetlands are involved and alternative upland sites are available, the FWS usually recommends denial of a permit. In general, residential or commercial development which would require filling or other permanent alteration of freshwater wetlands will not receive a favorable review.

Freshwater wetlands should be incorporated into overall development plans in their natural, undisturbed state as green space ideally separated from adjacent development by a buffer zone. Under most circumstances, they may be incorporated into stormwater management plans to service retention/detention functions in their natural state. Review of total tract development master plans at an early planning stage (pre-permit application) can be most helpful in avoiding direct land use conflicts at the permit stage.

The FWS has a published mitigation policy which addresses wetland encroachment. As described in the policy, mitigation is a step-by-step process beginning with avoidance and minimization as primary goals. At the end of the process, tools such as wetland restoration and compensation are available for impacts judged to be in the public interest and truly unavoidable. Minor road crossings to access otherwise unaccessible, developable highland may fit into this category.

Water access projects are generally considered water dependent.

The FWS encourages community facilities located in the adjacent navigable waterbody and accessed by piering over vegetated wetlands. In contrast, the FWS will generally oppose issuance of a permit to dredge canals through freshwater wetlands to create waterfront property or bring navigable waters to highland.

C. ENVIRONMENTAL PROTECTION AGENCY.

1. **The Environmental Protection Agency's has the responsibility to:**

a. develop guidelines with the Corps for regulation of dredge and fill operations in wetlands;
b. review permit applications and provide comments to the permitting authority;
c. make jurisdictional calls when necessary;
d. approve and oversee State 404 programs;
e. enforce violations under Section 309;
f. prohibit any defined area's specification as a discharge site, or restrict its use, by following procedures given in Section 404(c) whenever certain unacceptable adverse environmental effects would be caused by discharges.

In addition, EPA supplies technical assistance to the Corps, other Federal or State agencies, or local governments concerning issues of water quality, fish and wildlife resources, and aquatic ecosystem structure and functions.

2. Development of 404(b) Guidelines

Section 404(b) of the Clean Water Act states that each disposal site should be specified for each permit by the Secretary of the Army through applications of Guidelines developed by the Administrator of EPA in conjunction with the Secretary of the Army. EPA first published interim final guidelines on September 5, 1975, for the purpose of providing guidance to be applied in evaluating proposed discharges of dredged or fill material into navigable waters. The Guidelines were revised and published on December 24, 1980, and now appear at 40 CFR 230.

3. Application of 404(b) Guidelines

The 404(b) Guidelines apply to all individual permit decisions made after March 23, 1981. Federal construction projects which meet 404(r) criteria and Corps civil works also fall under Guidelines jurisdiction. Fundamental to the guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem unless it can be demonstrated that the discharge will not have an unacceptable adverse impact, either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem. The guiding principle of the application of the Guidelines is that degradation or destruction of aquatic sites may represent an irreversible loss of valuable aquatic resources.

General step-by-step procedures to be followed in applying Guidelines are given in 230.5(a-1). The permitting authority must address all relevant provisions of the Guidelines before reaching a Finding of Compliance in an individual case.

The following is a summary of the basic Guideline precepts:

a. No discharge shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem.

b. Where the activity associated with a discharge does not require access or proximity to a special aquatic site to fulfill its basic function (i.e., is not water dependent), practicable alternatives are presumed to be available, unless clearly demonstrated otherwise.

c. No discharge of dredged or fill material shall be permitted if it:

(1) causes or contributes to violations of any applicable State water quality standard;

(2) violates any toxic effluent standard;

(3) jeopardizes the continued existence of an endangered or threatened species;

(4) violates requirements to protect a marine sanctuary; or

(5) causes or contributes to significant degradation of waters of the United States. Significant degradations include adverse effects on life stages of aquatic life and other water dependent wildlife, ecosystem diversity, productivity and stability, recreational, aesthetic and economic values.

d. No discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken to minimize potential adverse impacts on the aquatic ecosystem.

The Guidelines are the bases for specification for disposal sites, and must be used by both permitting and review agencies. The Corps' Regulations state that compliance with the Guidelines is mandatory for all permit actions.

4. Enforcement

EPA provides written comments when appropriate to the Corps on Cease and Desist Orders and/or after-the-fact permit applications. EPA technical personnel are available to assist the Corps in evaluating effects of violations on water quality, fish and wildlife habitat, and ecosystem dynamics. Regional Office personnel routinely gather field data and testify at federal trials as expert witnesses for the Government.

EPA enforcement options for Section 404 are given in Section 309 of the Clean Water Act (CWA). Section 309(g) of the act provides the EPA with administrative penalty authority, where up to $125,000 of civil penalties can be sought for unauthorized filling of wetlands. If a state with an approved permit program is not actively pursuing enforcement action, EPA may issue an order requiring compliance or bring civil action (federally assumed enforcement). EPA may issue an Administrative Order under Section 309 for any unpermitted discharge of pollutants into waters of the United States which is a violation of Section 301 of the CWA.

5. Use of 404(c) Veto Authority

The Corps may issue a permit, even if EPA comments adversely, after consultation takes place. Under either a Federal or State program, the Administrator may prohibit the specification of a discharge site, or restrict its use, by following procedures given in Section 404(c) of the

CWA. Such action may be initiated if the administrator determines that the discharge would have an unacceptable adverse effect on fish and shellfish areas, municipal water supplies, and for wildlife or recreation areas. He may do so in advance of a planned discharge or while a permit application is being evaluated, or even after the issuance of a permit.

If the Administrator uses 404(c), he may block the issuance of a permit by the Corps or a State program. His action may be overridden under Section 404(b)(2), which allows the Corps to make some permit decisions based on the economic impact of the state on navigation and anchorage.

D. NATIONAL MARINE FISHERIES SERVICE.

The Habitat Conservation Division of the National Marine Fisheries Service (NMFS) is a review agency mandated by Federal law to advise the U. S. Army Corps of Engineers regarding the potential adverse impacts to fishery resources of projects requiring Federal permits.

The NMFS is responsible for the conservation and management of living marine resources including anadromous fish and the endangered shortnose sturgeon. Anadromous fish swim upstream in our coastal rivers to spawn in freshwater. Juvenile fish then return to the lower reaches of the river or ocean to complete their life cycle. Freshwater marsh and wooded swamps found adjacent to rivers and streams provide food, spawning and nursery habitat, and water quality maintenance functions that are vital for the continued production of these fishery resources. Therefore, the NMFS is concerned with any project that would alter such wetlands.

When the service receives a public notice, the NMFS determines whether or not resources for which it is responsible are involved and if necessary inspect the project and submit appropriate written comments. These include a brief description of the resources affected, the project's impact on these resources, and a recommendation regarding permit issuance such as modifications that would minimize or eliminate resources losses and they make the work acceptable to the NMFS. If the project involves fishery resource losses for work that is not water dependent and the project cannot be modified to eliminate these losses, the NMFS recommends that the permit not be issued.

Pre-application meetings with the applicants are often held to identify our concerns and are coordinated with review and permitting agencies early in the project planning process. This will hopefully expedite the permit review and avoid conflicts later in the permitting process. For further information contact Habitat Conservation Division, National Marine Fisheries Service, Beaufort, North Carolina 28516. Telephone numbers are: A/C 919-728-5090.

E. S.C. ATTORNEY GENERAL.

The role of the State Attorney General in reviewing projects that impact freshwater wetlands has traditionally been limited to review to determine (a) whether navigable waters will be obstructed, and (b)

whether wetlands owned by the State in public trust will be adversely affected or effectively converted to private use.

In those freshwater wetland areas above the tide, it is somewhat unlikely that the State owns the wetland bottoms. Accordingly, for those areas, the Office of the State Attorney General would only be concerned with the blockage of navigation. For the areas which are freshwater but still tidal, the State Attorney General's Office would examine in light of both factors listed above.

F. S.C. DEPARTMENT OF ARCHIVES AND HISTORY and the STATE HISTORIC PRESERVATION OFFICER.

One of the responsibilities of the State Historic Preservation Office (SHPO) is the review of Federally funded, licensed and approved projects. The mandating legislation is Section 106 of the National Historic Preservation Act of 1966, as amended, and the regulations codified at 36 CFR Part 800. Section 106 requires that the Federal agency consult the SHPO and determine if significant historic structures or archaeological sites (cultural resources) will be affected by a Federally funded, licensed or approved project.

The SHPO also reviews and comments on Water Resources public notices and Coastal Council Public Notices and certifications.These comments are made to ensure that significant cultural resources are considered in the project's planning process.

Cultural resources are frequently found near freshwater wetlands; therefore, any action that adversely affects freshwater wetlands also has a high probability of adversely affecting these sites.

A more detailed discussion of the review and compliance responsibilities of the SHPO office is included at Appendix B, page B-16.

Additionally in those instances where an archeological reconnaissance of a project area is required, guidelines have been developed to assist developers in the preparation of reports and identification of the scope of necessary investigations. These guidelines are included at Appendix B, page B-19.

V. THE PERMITTING PROCESS

This section addresses the various processes involved in obtaining approval for work that impacts freshwater wetlands. The processes vary and are determined by the location of the work.The processes discussed in this section are as follows:

- The individual process.
- The nationwide permit #26 process for projects located in the coastal zone.
- The nationwide permit #26 process for projects located inland of the coastal zone.

A. INDIVIDUAL PERMIT PROCESS.

An individual permit process is required for activities that are located in "navigable waters of the United States" and "waters of the United States". The definitions of these terms can be found in Appendix B., page 23-26.

If a project being planned involves the discharge of dredged or fill material in wetlands below the headwater (headwater is defined as that point on a non-tidal stream above which the average annual flow is less than 5 cubic feet per second) or the construction includes the discharge of dredged or fill material into the areas mentioned above, an individual permit will be required from the Corps of Engineers (COE) and possibly the South Carolina Water Resources Commission. The process involved and the information needed to begin this process is outlined in a booklet entitled "U.S. ARMY CORPS OF ENGINEERS, REGULATORY PROGRAM, APPLICANT INFORMATION". This booklet is available free of charge by contacting the COE.

Since, in most instances, a permit and/or certification will also be required from one or more State agencies, agreements have been implemented between the Corps and the South Carolina Coastal Council (SCCC), the South Carolina Water Resources Commission (SCWRC), and the South Carolina Department of Health and Environmental Control (DHEC). These agreements allow for the joint processing of individual permit applications and an application need only be submitted to the Corps of Engineers (COE). This eliminates duplication of paperwork and effort in the preparation of the necessary information that is required to begin this process. Projects that are located in the critical area of the Coastal Zone are processed jointly with the South Carolina Coastal Council. Projects that are located inland of the critical area, but still in the Coastal Zone, are processed jointly with the South Carolina Water Resources Commission for the required State permit and also jointly with the South Carolina Coastal Council since certification of project compliance with the Coastal Zone Management Plan is a prerequisite to favorable action on both the State and Federal permits. If the project construction involves the discharge of dredged or fill material or if its use may result in a discharge of any pollutant into waters of the United States, a water quality certificate is required and the application will be processed jointly with the DHEC. In addition, projects that are located in the coastal zone but not in the critical area (generally the area between U. S. Highway 17 and the inland limits of the eight coastal counties) would also require certification of consistency with the coastal zone management plan from the SCCC. If the project is located in the certification area of the coastal zone an applicant must submit a "statement of consistency" along with the application for an individual permit. A form is included at Appendix A, page A-10, that can be used for this purpose.

Prior to submittal of an application for an individual permit it may be advisable to present your project to the permitting and/or certifying agencies. This pre-application meeting can provide information that will make the project more environmentally acceptable and other options that would eliminate the concerns of the environmental review

agencies. Pre-application meetings can involve as many or as few agencies as an applicant desires and can be held on-site or in one of the permitting or certifying agency's offices. To arrange for a pre-application meeting, contact one of the agencies identified in this handbook.

The process starts with the submittal of an application form (ENG FORM 4345) and drawings that must clearly depict the work proposed. The COE permit booklet contains an application form and sample drawings. An application form is included in Appendix A, page A-11, of this handbook. One of the most important parts of a submittal is a complete written description of the project, the work to be performed and a concise and accurate statement defining the project's primary purpose. Also, the drawings depicting the project must be clear, accurate, and contain all necessary information. The informational requirements for application drawings are defined in Appendix A, page A-28. Sample drawings are also included in Appendix A, page A-15 and A-21. The drawings accompanying an application must be on 8½" X 11" paper. A sample drawing sheet is included at Appendix A, page A-27, for use in completing the required drawings. In addition to the drawings submitted with your application, large scale total development plans with the wetland boundary annotated thereon may also be provided if necessary to adequately review the project.

When an application is received by the COE it is immediately assigned to a Project Manager and is given a number for identification purposes. The Project Manager will be responsible for all actions associated with its processing and will ultimately recommend the final action to the District Engineer or his designee. Any questions on the application, the process, or the status should be directed to that individual.

The Project Manager will, upon receipt of an application, check to see if all necessary information has been provided. If additional information is required the applicant will be advised of the specific informational needs within 15 days of receipt of the application. If the application is complete or once the required information is received, a public notice will be prepared and this notice will be mailed to a number of local, state, and Federal agencies, adjacent property owners, and other interested persons or groups. The public notice will normally specify a 30 day period during which comments may be provided to the permitting and/or certifying agencies identified therein.

Once the comment period has ended an assessment of all comments received will be made by the Project Manager. If substantive objections are received the applicant will be provided copies of these objections. The applicant may attempt to resolve the concerns of the objecting parties or submit a rebuttal; however, this is not required.

Once all the required State permits and/or certifications are issued the Project Manager will begin the decision making process on the Federal permit. Please note that if any of the required State permits or certifications are denied the COE cannot issue the Federal permit. The decision making process involves an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest and includes application of the guidelines (Section

404(b)(1) of the Clean Water Act) promulgated by the Administrator, Environmental Protection Agency, if appropriate. The benefits which reasonably may be expected to accrue from a proposal are balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal are considered including their cumulative effects. The factors considered by the COE include conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people.

As mentioned above, every application involving the discharge of dredged or fill material into freshwater wetlands must be considered in light of the "404(b)(1) guidelines". The process involves an assessment of project impacts on the aquatic ecosystem to determine if it is or is not in compliance with the guidelines.

These guidelines, under which projects are reviewed for Federal purposes, are clearly prejudiced against discharges of dredged or fill material into wetlands for non-water dependent activities.

The guidelines compel the Corps of Engineers to place the burden of proof on applicants to conclusively demonstrate that their projects will not cause an unacceptable adverse effect to our nation's aquatic resources and that less damaging alternatives are not available when a project is "non-water dependent". Even if a project is "water dependent", the guidelines are designed to hold encroachments into wetland areas to a minimum. A copy of the 404(b)(1) guidelines, which are published in 40 CFR 230, is available by contacting the EPA or the COE.

In addition to the 404(b)(1) evaluation, an environmental assessment (EA) is prepared to determine if an environmental impact statement (EIS) is required. This is a requirement of the National Environmental Policy Act (NEPA).

Once the project has been found in compliance with the 404(b)(1) guidelines and the EA has concluded with a finding of no significant impact (FONSI) a "Statement of Findings" (SOF) is prepared. This SOF is the decision maker's written evaluation of all comments and concerns expressed, how these comments were considered in the decision and why they were either rejected or accepted.

NOTE: A FLOW CHART FOR THIS PROCESS IS CONTAINED IN SECTION VI

B. NATIONWIDE PERMIT #26 PROCESS.

Nationwide permit #26 [33 CFR 330.5(a)(26)] authorizes discharges of dredged or fill material into non-tidal rivers, streams, and their lakes and impoundments, including their adjacent wetlands that are located above the "headwaters" of that waterbody or in isolated wetland areas provided the discharge does not cause the loss or substantial adverse

modification of more than 10 acres of wetlands. For discharges which cause the loss or substantial adverse modification of between 1 and 10 acres of such waters, including wetlands, notification to the District Engineer of the Charleston District is required in accordance with 33 CFR 330.7.

Since the State of South Carolina is divided into 2 areas for permitting purposes, the process involved in obtaining authorization under nationwide permit #26 depends on which geographic area the project will be located (coastal zone or inland). A discussion of the process in each of these areas is as follows:

1. The Process for Projects Located in the Coastal Zone

The South Carolina Coastal Council saw a need and requirement under the Coastal Zone Management Act to individually review projects to assess their impacts on natural resources in the coastal zone; therefore, the process is different in this area. As a result of the concerns for coastal resources and the need to allow the orderly development of the coastal areas, the process described in the paragraphs that follow was instituted for projects located in the coastal zone. Before the process can commence the information described below must be submitted.

(a) a predischarge notification to the Corps of Engineers. A copy of this predischarge notification entitled "Application Form - Corps of Engineers - Charleston District 404 Permit Application: Less Than 10 Acres" is provided in Appendix A, page A-32 for your use. Also included in Appendix A, page A-33, is a "SAMPLE" application that has been completed which may be of assistance in completing this form.

(b) a brief narrative description of the project to include a discussion of the work required, the wetlands impacted, the project location and the purpose of the work. A "SAMPLE" is included at Appendix A, page A-34 which may be of assistance in providing this information.

(c) project plans to include the following:

(1) A good location map for the proposed activity. U.S. Geological Quadrangle maps are required as a source. The location map should show roads leading to the site and should also provide the name or number of these roads.

(2) a plan view of the proposed project which depicts the overall development with the jurisdictional wetlands annotated thereon. The areas of the proposed fill, the ordinary high water line, where applicable, the dimensions of the proposed fill, and a north arrow must be shown. The drawing should be to some identified scale.

(3) a cross sectional view through the proposed fill area which depicts the existing ground contour and the proposed finished grade. The normal high water line, where applicable, should also be shown.

(4) all project drawings should be submitted on 8 ½" X 11" paper to facilitate their duplication. A set of 8½ X 11 sample drawings are included and can be found in Appendix A, page A-37.

(d) A written statement indicating that, to the best of your knowledge, the proposed project will be consistent with the South Carolina Coastal Zone Management Program. A form is included in Appendix A, page A-10 for your convenience.

(e) Proof of publication in a local newspaper. A sample publication is included in Appendix A, page A-8.

(f) For projects other than a single family residence, consult with the South Carolina Coastal Council to determine if a storm water management plan will have to be submitted.

When the above information is received by the Corps of Engineers it will be reviewed to determine if the proposed work qualifies for processing under nationwide permit #26. If a determination is made that the proposed work appears to meet the criteria for authorization under nationwide permit #26, copies of the project information will be forwarded to the South Carolina Coastal Council with a request that a determination be made as to whether the project is consistent with the Coastal Zone Management Program of South Carolina.

Copies of the project predischarge notification will also be forwarded to the South Carolina Department of Health and Environmental Control, the South Carolina Wildlife and Marine Resources Department, the U.S. Fish & Wildlife Service, the U.S. Environmental Protection Agency and the South Carolina Department of Archives and History for their review and comment. These agencies are requested to provide their views to the South Carolina Coastal Council for consideration in its decision on the project compliance with the policies of the Coastal Zone Management Program.

Upon receipt of a letter from the South Carolina Coastal Council certifying that the project is consistent with the South Carolina Coastal Zone Management Program, the Corps of Engineers will then determine if the project is or should be authorized by the Nationwide permit.

If the proposed work impacts less than one acre of wetlands, the applicant will be notified that the work is authorized by the nationwide permit and that work may proceed.

Those projects receiving certification from the South Carolina Coastal Council that impact more than 1 acre but less than 10 acres of wetlands, must undergo an additional review. The proposed work, once certified by the South Carolina Coastal Council, will be coordinated with the U.S. Fish and Wildlife Service. Concurrent with this review, the Division Engineer for the South Atlantic Division, will be provided a copy of the predischarge notification for review. The U.S. Fish & Wildlife Service will be given 10 days, from the day that the Corps receives the letter of consistency from the South Carolina Coastal Council, to review the proposed project and submit their comments on the project's impacts. If the U.S. Fish & Wildlife Service believes the impacts are significant, it may recommend the project be subjected to the individual permit process, as discussed in Section V., A. and not be authorized under the nationwide permit. Upon receipt of the views of the U.S. Fish & Wildlife Service, or at the end of the 10 day period, the

District Engineer or his designee will forward to the Division Engineer his recommendation as to whether the proposed activity complies with the terms and conditions of the nationwide permit. The Division Engineer will then review the recommendation of the District Engineer and any comments from the U. S. Fish & Wildlife Service and make a determination as to whether the activity complies with the terms and conditions of the nationwide permit. The Division Engineer will notify the District Engineer of his decision who will then notify the applicant as to whether or not an individual permit is required. When the Division Engineer has decided that the proposed work complies with the terms and conditions of the nationwide permit, the permittee may commence work at the time of notification. In the event the Division Engineer's decision is to require an individual permit no work can commence until the individual process has been completed. IF THE APPLICANT DOES NOT RECEIVE A RESPONSE FROM THE CORPS OF ENGINEERS WITHIN 20 DAYS OF THE DISTRICT ENGINEER'S RECEIPT OF THE LETTER OF CONSISTENCY FROM THE SOUTH CAROLINA COASTAL COUNCIL, THE PROJECT IS AUTOMATICALLY AUTHORIZED AND WORK MAY PROCEED.

In all cases where it has been determined that a project meets the criteria of the nationwide permit, the project must also meet the conditions cited in the extract found in Appendix A, page A-40 entitled "Conditions and Best Management Practices for Activities Authorized Under Corps of Engineers Nationwide Permits".

When the District Engineer receives notification from the South Carolina Coastal Council that a particular project has been determined to be inconsistent with the policies of the South Carolina Coastal Zone Management Program, the Corps of Engineers will immediately notify the applicant of this determination. The applicant should then contact the South Carolina Coastal Council to determine how, if possible, the proposed activity can be brought into consistency with the South Carolina Coastal Zone Management Program.

NOTE: A FLOW CHART FOR THIS PROCESS IS CONTAINED IN SECTION VI

2. The Process for Projects Located Inland or Outside of Coastal Zone

The following paragraphs define the information needed to commence this process and a description of the administrative procedure required before a project can be authorized under Permit #26.

a. Information Required

(1) A "Predischarge Notification" (PDN) must be submitted to the Corps of Engineers. A copy of this PDN entitled "Corps of Engineers - Charleston District Nationwide Permit #26 Notification Form" is provided in Appendix A, page A-30 for your use. Also included in Appendix A, page A-31 is a "SAMPLE" application that has been completed which may be of assistance in completing this form.

(2) A location map must be provided which identifies the project location and is detailed sufficiently to allow a third party to drive to the site.

b. The Process

When the above information is received by the Corps of Engineers, it will be reviewed to determine if the proposed work potentially qualifies for authorization under nationwide permit #26. If a determination is made that the proposed work meets the criteria for authorization under nationwide permit #26 and the wetlands impacted are one acre or less in size, the applicant will be notified that the work is authorized. and that he/she may proceed with the work. Those projects that impact more than 1 acre but less than 10 acres of wetlands, must undergo an additional review. The proposed project will be coordinated with the U. S. Fish & Wildlife. Concurrent with this review, the Division Engineer for the South Atlantic Division will be provided a copy of the Pre-Discharge Notice (PDN) for review. The U. S. Fish & Wildlife Service will be given 10 days, from the day that the Corps receives the PDN, to review the proposed project and submit their comments on the projects impacts to the District Engineer. If the U. S. Fish & Wildlife Service believes the impacts are significant it may recommend the project be subjected to the individual permit process (as discussed in Section V., A.) and that the project not be authorized under the nationwide permit. Upon receipt of the views of the U.S. Fish & Wildlife Service or at the end of the 10 day period, the District Engineer, or his designee, will forward to the Division Engineer his recommendation as to whether the proposed activity complies with the terms and conditions of the nationwide permit. The Division Engineer will then review the recommendation of the District Engineer and any comments from the U. S. Fish & Wildlife Service and make a determination as to whether the activity complies with the terms and conditions of the nationwide permit. The Division Engineer will notify the District Engineer of his action who will then notify the applicant as to whether or not an individual Permit is required. When the Division Engineer has decided that the proposed work complies with the terms and conditions of the nationwide permit, the permittee may commence work at the time of notification. In the event the Division Engineer's decision is to require a individual permit no work can commence until the individual process has been completed. IF THE APPLICANT DOES NOT RECEIVE A RESPONSE FROM THE CORPS OF ENGINEERS WITHIN 20 DAYS OF THE DISTRICT ENGINEER'S RECEIPT OF THE PDN, THE PROJECT IS AUTOMATICALLY AUTHORIZED AND WORK MAY PROCEED.

In all cases where it has been determined that a project meets the criteria of the nationwide permit, the project must also meet the conditions cited in the extract found in Appendix A, page A-40 entitled "Conditions and Best Management Practices for Activities Authorized Under Corps of Engineers Nationwide Permits".

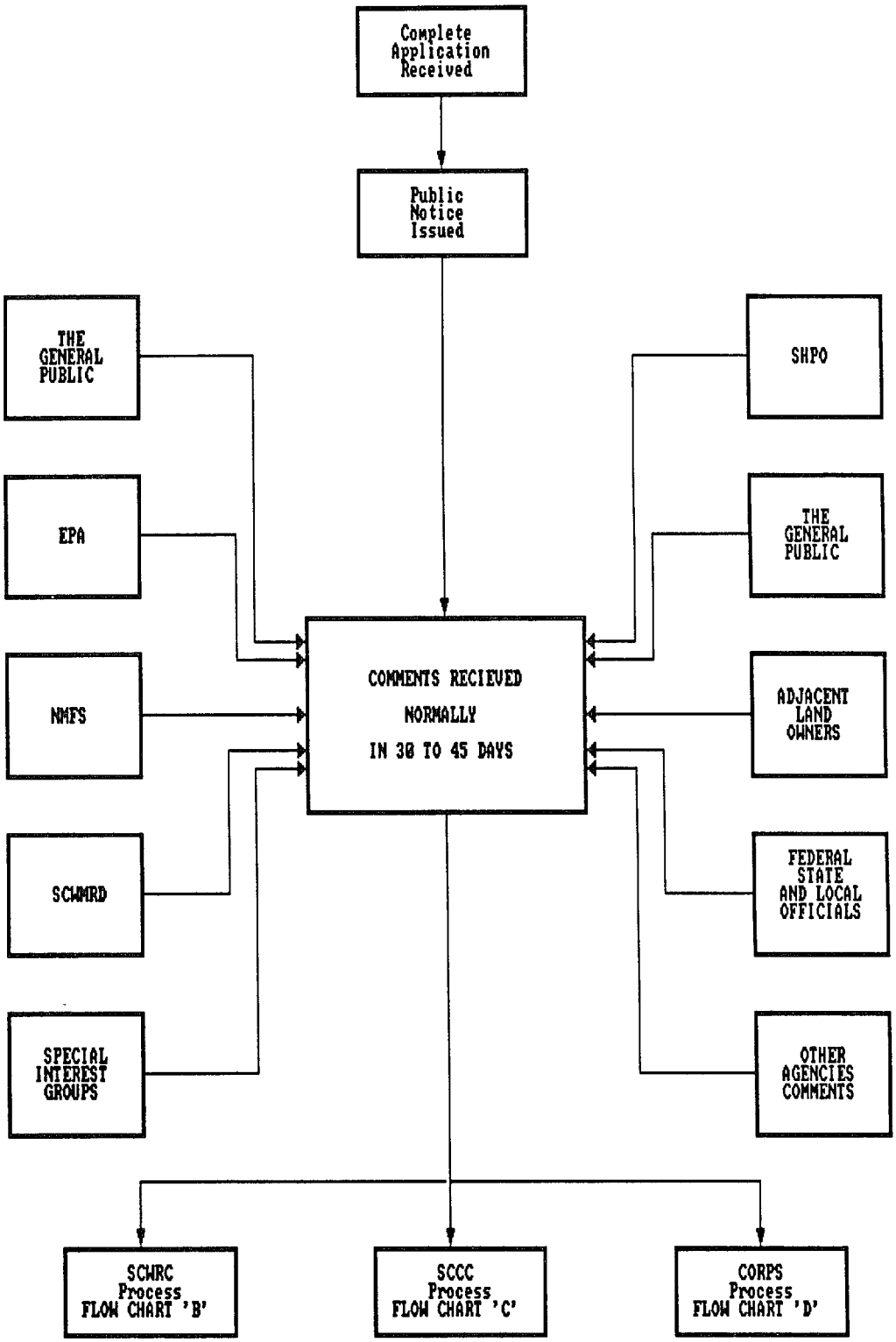
NOTE: A FLOW CHART FOR THIS PROCESS CAN BE FOUND IN SECTION VI.

VI. FLOW CHARTS

This section contains flow charts that trace the procedures involved in the permit process. Flow Chart 'A' shows an overview of the interagency process. This then leads to the individual process of the South Carolina Water Resources Commission (Chart 'B'), the South Carolina Coastal Council (Chart 'C'), and the Corps of Engineers individual permit process (Chart 'D'). Also included are flow charts depicting the nationwide permit #26 process in the coastal zone (Chart 'E') and inland of the coastal zone (Chart 'F').

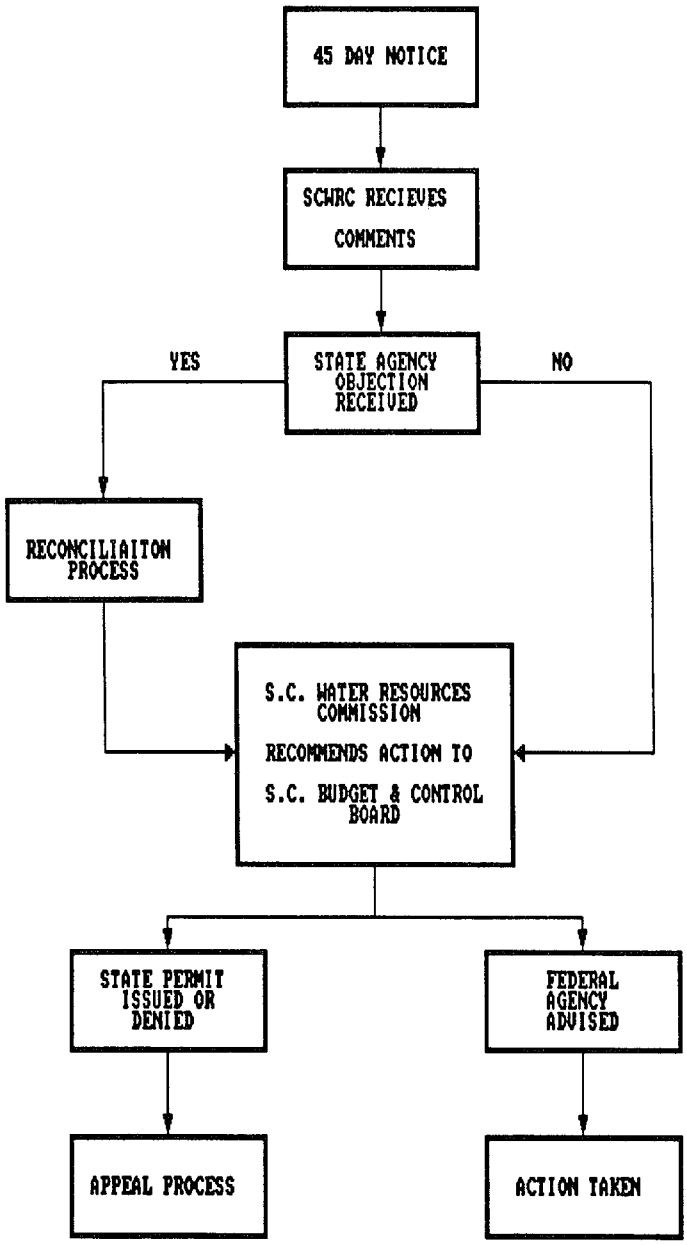
FLOW CHART 'A'

INDIVIDUAL PERMIT PROCESS FOR FRESHWATER WETLANDS



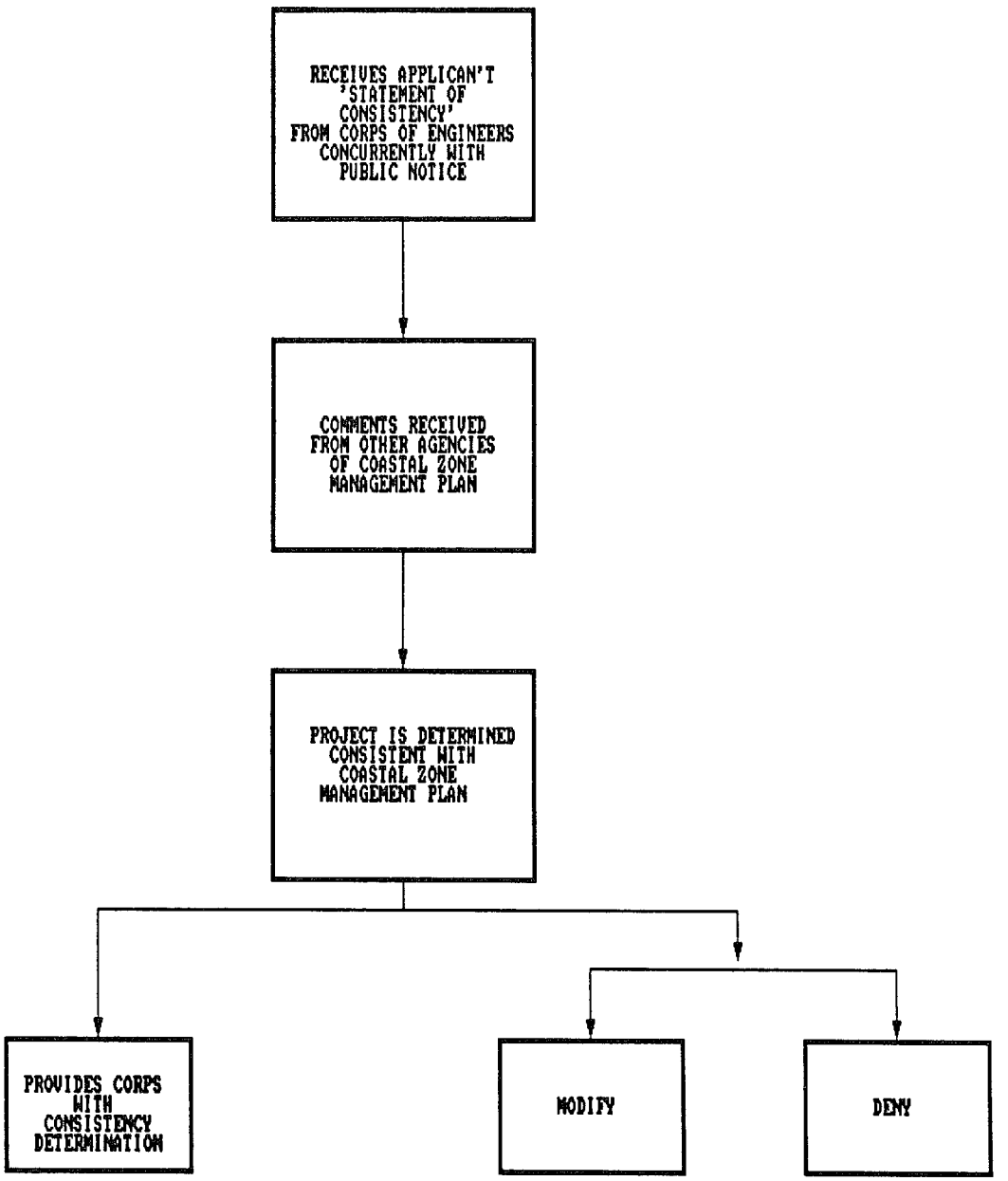
FLOW CHART 'B'

S. C. WATER RESOURCES COMMISSION PROCESS FOR STATE NAVIGABLE WATERS



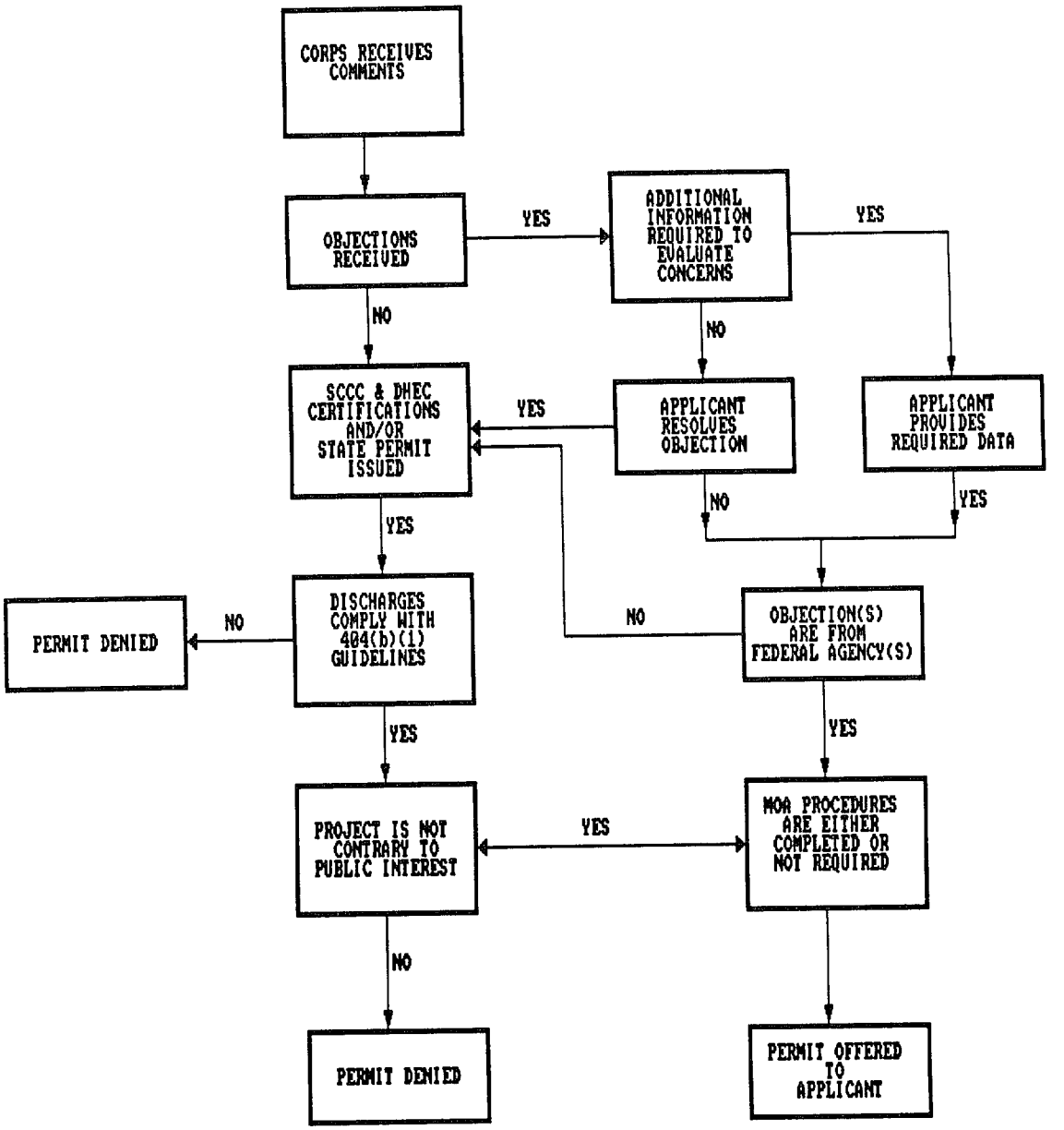
FLOW CHART 'C'

S. C. COASTAL COUNCIL CERTIFICATION PROCESS FOR FRESHWATER WETLANDS



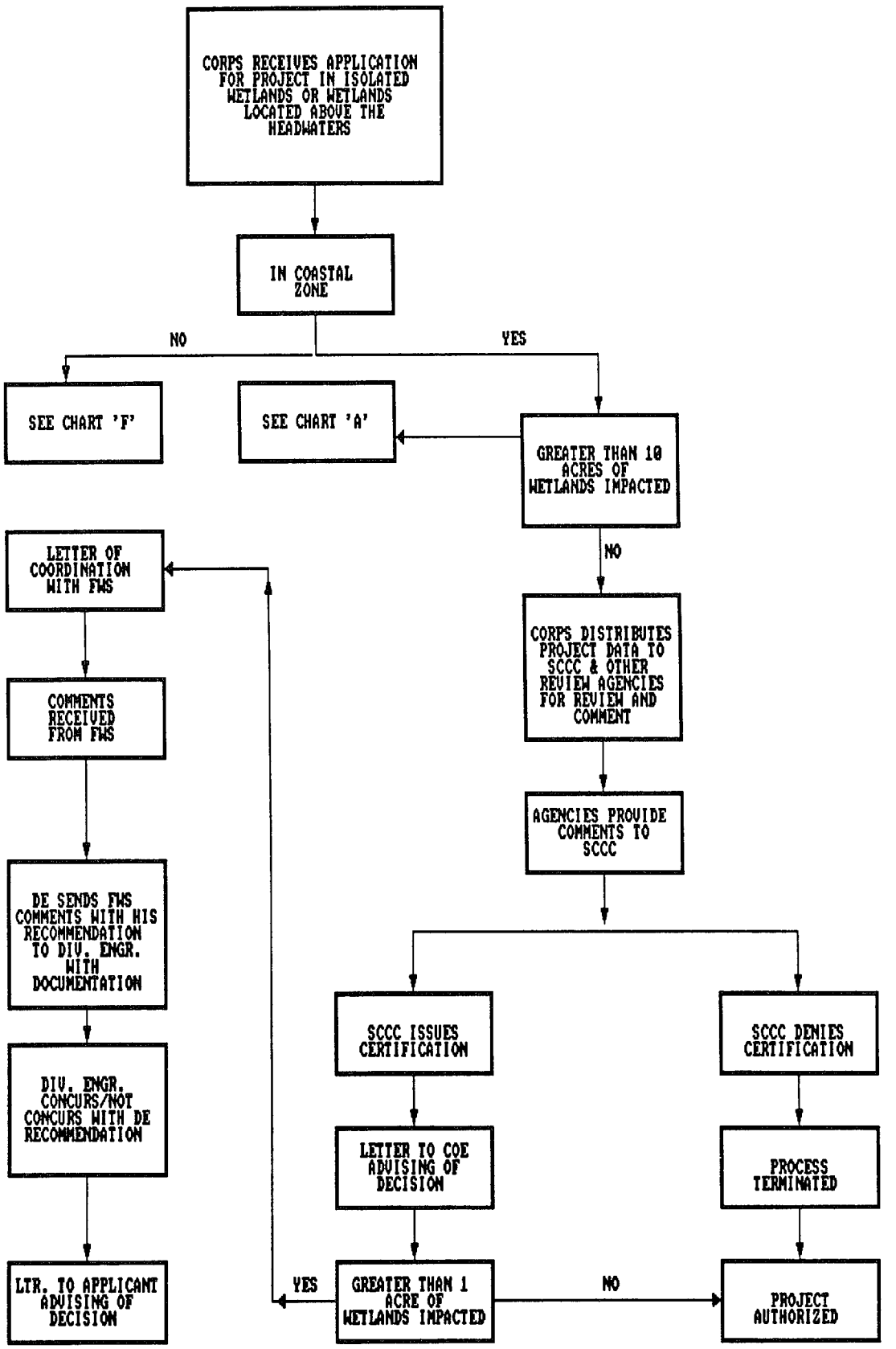
FLOW CHART 'D'

CORPS OF ENGINEER'S INDIVIDUAL PERMIT PROCESS



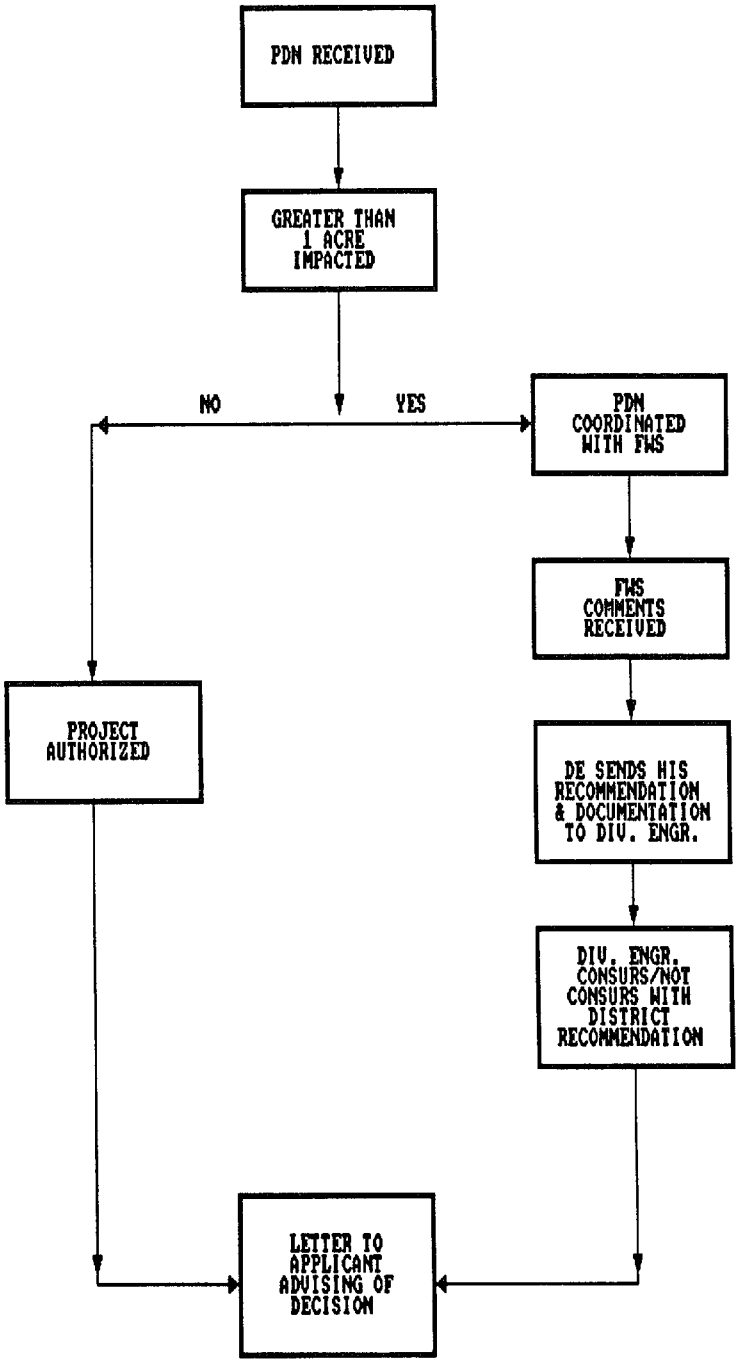
FLOW CHART 'E'

NATIONWIDE PERMIT 26 - PROCESS IN THE COASTAL ZONE



FLOW CHART 'F'

NATIONWIDE PERMIT 26 - PROCESS IN AREAS INLAND OF THE S. C. COASTAL ZONE



VII. WETLAND MASTER PLANNING

The Coastal Council, in conjunction with other state and federal agencies involved in wetland review, encourages a comprehensive approach to wetland management. To promote such an approach, the Council has utilized a "wetland master planning" concept. Simply stated, the guidelines are as follows:

> If a pre-development wetland master plan is prepared for a project identifing all wetlands, drainage patterns and conceptual development pattern, isolated freshwater wetlands of one (1) acre or less in size may be incorporated into the project development as necessary provided:
> 1. the wetlands contain no endangered species or critical habitat, and
> 2. the wetland losses are adequately mitigated.

The wetland master plan must be certified by the Coastal Council with input from other reviewing agencies as necessary.

VIII. GENERAL GUIDANCE

The following do's and don'ts are not conclusive but experience has shown that without adherence to these concepts substantial project delays can be anticipated.

A. Development Do's and Don'ts

DO'S

1. Avoid all encroachments into wetlands.
2. Minimize any impacts that cannot be avoided.
3. Incorporate wetlands in their natural state as part of a project's storm water management plan.
4. Get agency input by attending South Carolina Coastal Council interagency meeting before initiating a new project.
5. Include all phases of a development when submitting a plan for public review.The intended use for all wetlands on-site should be included.
6. Fully incorporate the freshwater wetlands into the master plan.
7. Incorporate buffer zones around preserved wetlands."

DON'TS

1. Don't finalize development plans before addressing site wetlands.
2. Don't purchase property until investigating amount of wetlands on site.
3. Don't proceed with project plans using consultant's wetland delineation. Always verify lines with Corps of Engineers first.
4. Don't submit development plans in a piecemeal fashion.
5. Don't submit mitigation plans until all other options are exhausted and wetlands impacts have been minimized to the greatest extent possible.
6. Don't plan extensive canals through freshwater wetlands to create waterfront lots or water access.

7. Don't excavate freshwater wetlands to create lakes or ponds.
8. Don't dam off flowing streams to create open water ponds.
9. Don't fill freshwater wetlands to create residential or commerical lots.
10. Don't undertake any project without first obtaining all necessary permits or certifications.

B. Planning Approach

In the early planning processes of developing a conceptual master plan for a development, either commerical or residential, careful consideration should be given to freshwater wetlands. In developing the master plan, the three considerations discussed below must be employed if a project is to proceed in an orderly and timely manner.

1. Avoidance

In developing a layout for a parcel or tract of land containing freshwater wetlands every effort should be made to avoid encroachments into these areas. A well planned development can capitalize on the presence of the wetlands by utilizing them in their natural state for storm water management, or as open space, green areas or natural areas. Wetlands can be a selling point for the development from both an aesthetic and an environmental viewpoint. While specific data is not available the general public are much more environmentally conscious than ever before. Thus, avoiding wetlands can enhance your development and allow the project to proceed unencumbered by the permitting process.

2. Minimization

If the wetlands located on the tract cannot be avoided, then every effort must be made to minimize encroachments into these areas. Early planning is always the key to minimizing impacts on the aquatic resource. The wetlands can be used for storm water management in either their natural state, as mentioned above, or by excavating a portion of the wetlands to increase the volume needed for retention. Minimization can be attained in a number of fashions but is generally considered to have occurred when the discharges are held to the minimum necessary to achieve a project purpose. Examples of minimization include but are not limited to:

a. obtaining access to the property through wetlands only when no highland access is available,
b. bridging all or a portion of the wetlands,
c. providing steeper side slopes for access fills,
d. providing a single access rather than multiple accesses,
e. confining the development to the highland areas with only minor encroachments to shape the land.

Minimization of project encroachments into wetlands can significantly shorten the time required to obtain authorization for the project under nationwide permit #26 or under an individual permit.

3. Compensation

Compensation for wetlands impacted by a project should be a consideration for developers from the early steps of planning even though it is not always required. If the project encroachments are

necessary to fulfill the intent of the project, the project is water dependent, and no other alternative sites or methods are available that would have lesser impacts on the aquatic resource, compensation may not be required. However, when encroachments cause impacts on wetlands beyond those absolutely necessary to accomplish the intent of the project, compensation will be required to offset the losses resulting from those encroachments. Compensation can take many forms. Some forms of compensation are as follows:

a. creation of vegetated wetlands. This is not always accomplished on a 1:1 ratio. In some instances the ratio can vary from the 1:1 to as much as 5:1. That is to say 5 acres for every acre impacted by the project.

b. restoration and/or enhancement of significantly impaired wetlands.

c. dedication of lands to an appropriate entity with provisions that require them to be preserved in their natural state in perpetuity.

A willingness to compensate for wetland impacts does not necessarily mean that a permit will be granted. First and foremost, a project must be found to be consistent with the 404(b)(1) Guidelines. In addition, a project must be determined to be "not contrary to the public interest". To reach these conclusions all efforts must have been made to avoid and/or minimize wetland encroachment/alterations. Compensation may be used to tip the public interest scales to the positive side and may also be used to influence a finding of compliance with the 404(b)(1) Guidelines.

APPENDIX A

REQUEST FOR WETLANDS DETERMINATION

DATE: _____

COUNTY: _____ TOTAL ACREAGE OF TRACT: _____

PROJECT NAME (if applicable): _____

PROPERTY OWNER (name, address and phone):

_____

_____

_____

_____

NAME OF AGENT, ENGINEER, DEVELOPER (if applicable):

_____

_____

_____

_____

STATUS OF PROJECT (check one):

( ) On-going site work for development purposes

( ) Development in planning stages
(Type of development: _____)

( ) No specific development planned at present

ADDITIONAL INFORMATION REQUIRED:

Check items submitted - forward as much information as is available. At a minimum, the following first two items must be forwarded.

( ) Accurate location map (from County map, USGS quad sheet, etc.)

( ) Survey Plant of property in question

( ) Aerial photograph (from County Assessors Office, or other source; property boundaries shown on the photo would be most helpful)

( ) Topographic survey

( ) Conceptual site plan for overall development

_____
Signature of Property Owner or Authorized Agent

SOUTH CAROLINA WATER RESOURCES COMMISSION

PERMIT APPLICATION
for
CONSTRUCTION IN NAVIGABLE WATERS

---

1. Applicant

Name: _____

Address: _____

_____

_____

Telephone: _____

Authorized Agent

Name: _____

Address: _____

_____

_____

Telephone: _____

---

2. Location where proposed activity exists or will occur.

County: _____

Nearest City or Town: _____

Nearest Street or Road: _____

Name of Waterbody: _____

One set of original drawings which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions).

3.

A. Describe the proposed activity, its purpose and intended use, including a description of the type of structures, and the type, composition and **quantity** (cubic yards) of materials to be deposited or excavated and means of conveyance.

B. If the proposed activity involves a water or wastewater project, please provide the applicable information requested below:

1. If the proposed activity is a water withdrawal structure, provide the maximum capacity of the intake structure and the location(s) where the water will be distributed and discharged.

_____

2. If the proposed activity is a wastewater discharge structure, provide the daily discharge rate and the location(s) of the source of the wastewater, and the original source(s) of water withdrawal.

_____

3. If the proposed activity is a water or sewer line crossing a stream, provide the location(s) of the original source(s) and ultimate discharge(s) of the water or wastewater

_____

4. Proposed Use (circle one)

Private Public Commercial Other (Explain in remarks)

_____

5. Name and mailing address of adjoining property owners whose property also adjoins the waterway. Applications submitted without the addresses of adjoining property owners will be returned as incomplete.

_____

6. Certification of publication or intent to publish notice of the proposed activity in a newspaper of general circulation in the county where the encroachment is sought must be attached to this application. Certification may be an affidavit of publication, dated newspaper clippings, or copy of an invoice from the newspaper showing intent to publish. See the attached "Certification of Publication" Statement for more information on this requirement.

_____

7. Evidence of ownership or the consent of the owner of the adjacent highland on which any part of the projected activity will be located must accompany this application. The attached form entitled (Affidavit of Ownership or Control" is to be used for this purpose. The affidavit is to be completed, notarized and returned as a part of this application.

---

8. Date activity is proposed to begin: _____

   Date activity is expected to be completed: _____

---

9. Is any portion of the activity for which authorization is sought now complete? Yes ____ No ____ If answer is "Yes" give reasons in the remarks section. Month and year the activity was completed: _____. Indicate the existing work on the drawings.

---

10. List all approvals or certifications required by other Federal, interstate, state, or local agencies for any structures, construction, discharges, deposits or other activities described in this application.

Issuing Agency	Type of Approval	Identification Number	Date of Application	Date of Approval

---

11. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein? Yes ____ No ____ (If "Yes explain in remarks)

---

12. Remarks:

---

13. Permits authorizing structures in navigable waters are generally issued for ten (10) years and are renewable. Construction of authorized structures must generally be completed within three (3) years of the date of permit issuance. Applicants requesting longer term permits must indicate the requested term and justification below.

Requested term: Justification: (Attach additional)

Structure ____ years
Construction ____ years

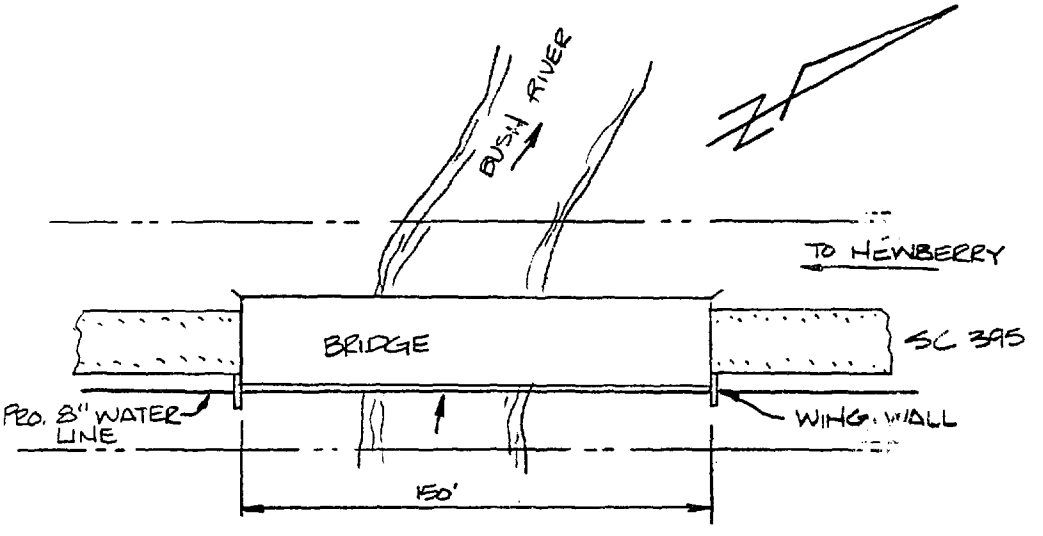
---

14. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activity.

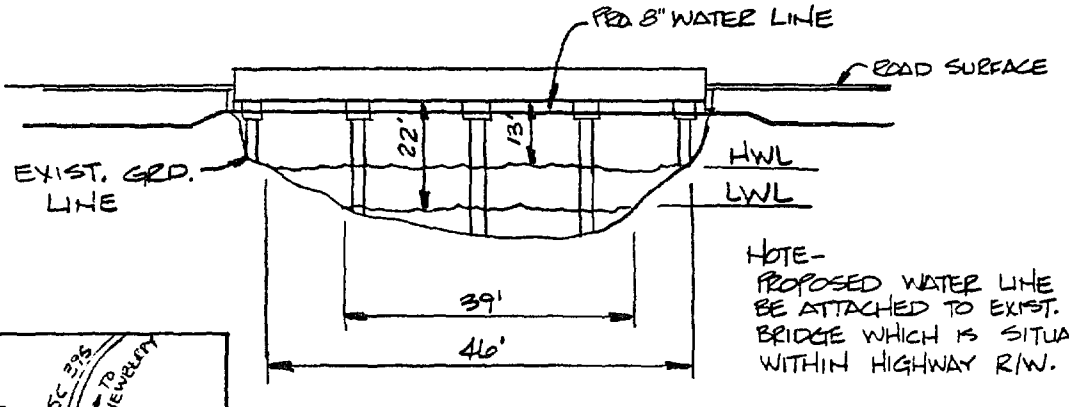
Signature of Applicant or Authorized Agent Date

Return completed application and all attachments to:

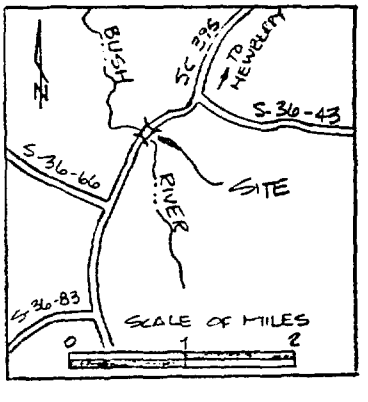
Permit Administrator
Surface Water Division
South Carolina Water Resources Commission
1201 Main Street
Suite 1100
Columbia, South Carolina 29201
Phone: (803) 737-0800



PLAN
1" = 50'



NOTE-
PROPOSED WATER LINE TO BE ATTACHED TO EXIST. BRIDGE WHICH IS SITUATED WITHIN HIGHWAY R/W.



PROFILE
1" = 50'

NEWBERRY COUNTY WATER SYS.
PHASE XV

AFFIDAVIT OF OWNERSHIP OR CONTROL

TO THE SOUTH CAROLINA WATER RESOURCES COMMISSION:

(1) [THIS PARAGRAPH SHALL BE COMPLETED BY THE RECORD OWNER] I hereby swear (or affirm) that I am the record owner of the highland property shown in the attached permit application situated in _____ _____ County, South Carolina; and that said property is all of the property that is contiguous to and landward of the area in which the work proposed in the permit application is to be conducted. Furthermore, I swear (or affirm) that as record owner I have the necessary approval or permission from all other persons with a legal interest in said property to conduct the work proposed in the permit application.

STATE THE NAME AND ADDRESS OF ALL OTHER PERSONS WITH A LEGAL INTEREST IN SAID PROPERTY:

_____

_____

_____

_____

_____

(2) [THIS PARAGRAPH IS TO BE COMPLETED ONLY IF THE PERMIT APPLICANT IS **NOT** THE SAME PERSON AS THE RECORD OWNER] I hereby swear (or affirm) that the applicant, _____, for the permit which is the subject of the attached permit application has been given the necessary approval and permission from me to conduct the work proposed in the permit application.

(3) [THIS PARAGRAPH TO BE COMPLETED IF THE PERMIT APPLICANT IS A RECORD EASEMENT HOLDER] As the record easement holder I hereby swear (or affirm) that I am the record easement holder of the highland property shown in the attached permit application situated in _____ County, South Carolina; and that said property is all of the property that is contiguous to and landward of the area in which the work proposed in the permit application is to be conducted, and the easement is sufficient to authorize the work proposed in the permit application. The easement relied upon was granted to me by (name of grantor) _____ on (date) _____, and the easement is recorded in the office of the Clerk of Court or Register of Mesne Conveyance for the County of in Book _____, at Page _____.

This Affidavit applies only to highland and does not apply to any area below mean high water in tidelands or ordinary high water in non-tidal waters.

_____
Affiant's Signature

_____
Date

Sworn to and subscribed before me at
_____,
_____ County,
_____,
this _____ day of _____, 19____.

_____
Notary Public
My Commission expires: _____

CERTIFICATION OF PUBLICATION

PROOF OF PUBLICATION OF A DESCRIPTION OF THE APPLICATION IN A NEWSPAPER OF GENERAL CIRCULATION IN THE COUNTY WHERE THE ENCROACHMENT IS SOUGHT AT LEAST ONCE IN EACH OF TWO CONSECUTIVE WEEKS IS REQUIRED TO BE FURNISHED BY ALL STATE PERMIT APPLICANTS. FAILURE TO PROVIDE PROOF OF PUBLICATION WILL RESULT IN AUTOMATIC OBJECTION TO THE PERMIT. PROOF OF PUBLICATION MUST BE FORWARDED TO THE SOUTH CAROLINA WATER RESOURCES COMMISSION EITHER IN THE FORM OF DATED NEWSPAPER CLIPPINGS OR BY AN AFFIDAVIT OF PUBLICATION FROM THE NEWSPAPER BEFORE FINAL PERMIT APPROVAL CAN BE GRANTED.

The newspaper publication should be in the following form:

PUBLIC NOTICE

(Applicant) has applied to the State of South Carolina for a permit to **(brief description of work)** for **(public/private)** use, at/in **(location & name of waterway).** Comments will be received by the South Carolina Water Resources Commission, 1201 Main Street, Suite 1100, Columbia, S.C. 29201 any time prior to the time the review of the application is complete, but in any event, comments will be received by the Commission until **(45 days after the date of publication of this notice*).** Persons who may wish to be notified of the initial permit decision by the State of South Carolina must comment on the application, make a request to receive notice of the permit decision and must provide the commission with the correct name and address for mailing. Persons who may wish to appeal the decision on this permit application must submit comments within the time limits indicated in this notice. Interested parties may obtain further information from the Commission.

* Insert the specific date here.

If the project is located in Horry, Georgetown, Charleston, Berkeley, Dorchester, Colleton, Beaufort or Jasper County, and also requires a Federal permit from the U. S. Army, Corps of Engineers or the U. S. Coast Guard, the following form should be used instead:

(Applicant) has applied to the State of South Carolina for a permit to **(brief description of work)** for **(public/private)** use, at/in **(location & name of waterway).** Comments will be

received by the South Carolina Water Resources Commission, 1201 Main Street, Suite 1100, Columbia, S.C. 29201 any time prior to the time the review of the application is complete, but in any event, comments will be received by the Commission until **(45 days after the date of publication of this notice*).** Persons who may wish to be notified of the initial permit decision by the State of South Carolina must comment on the application, make a request to receive notice of the permit decision and must provide the commission with the correct name and address for mailing. Persons who may wish to appeal the decision on this permit application must submit comments within the time limits indicated in this notice. Interested parties may obtain further information from the Commission. The South Carolina Coastal Council also invites public comment on its review of this application for Federal consistency certification. Information concerning this certification is available for inspection at and comments should be submitted to: S. C. Coastal Council, Office of Coastal Planning, Ashley Corporate Center, 4280 Place North, Suite 300, Charleston, South Carolina 29405.* Insert specific date here.

_____
(Date)

U.S. Army Corps of Engineers
Post Office Box 919
Charleston, South Carolina 29402-0919

Gentlemen:

This is to certify that the work subject to the jurisdiction of the U.S. Army Corps of Engineers as described in my application dated _____ is, to the best of my knowledge, consistent with the South Carolina Coastal Zone Management Program.

Since my project is located in the Coastal Zone of South Carolina, I understand that the Corps of Engineers must provide this statement to the South Carolina Coastal Council for its review and that a Department of the Army permit will not be issued until the Coastal Council concurs with my findings. I also understand that additional information concerning my project may be required by the South Carolina Coastal Council to facilitate its review of my project and that additional certifications may be required for other Federal and State authorizations.

_____
(Name)

_____
(Street Address)

_____
(City & State)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

(33 CFR 325)

OMB APPROVAL NO. 0702-0036
Expires 30 June 1989

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application *(see sample drawings and instructions)* and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER *(To be assigned by Corps)*

2. NAME AND ADDRESS OF APPLICANT

Telephone no. during business hours

A/C ( ) _____ *(Residence)*
A/C ( ) _____ *(Office)*

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

Telephone no. during business hours

A/C ( ) _____ *(Residence)*
A/C ( ) _____ *(Office)*

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT | DATE

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

4b. PURPOSE

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

ENG FORM 4345, Apr 86 EDITION OF APR 83 IS OBSOLETE (Proponent: DAEN-CWO-N)

5. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ALSO ADJOINS THE WATERWAY

6. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED

ADDRESS:

STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

COUNTY STATE ZIP CODE

LOCAL GOVERNING BODY WITH JURISDICTION OVER SITE

8. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☐ NO
If answer is "Yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

ISSUING AGENCY	TYPE APPROVAL	IDENTIFICATION NO.	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL

10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

(33 CFR 325)

OMB APPROVAL NO. 0702-0036
Expires 30 June 1986

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application *(see sample drawings and instructions)* and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER *(To be assigned by Corps)*

2. NAME AND ADDRESS OF APPLICANT

Fred R. Harris
852 West Branch Road
Blue Harbor, Maryland 21703

Telephone no. during business hours

A/C (301) 585-2779 *(Residence)*
A/C ( ) _____ *(Office)*

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

None

Telephone no. during business hours

A/C ( ) _____ *(Residence)*
A/C ( ) _____ *(Office)*

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT

DATE

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

Build timber bulkhead and pier and fill.

4b. PURPOSE

To provide boat access and prevent erosion of shoreline at my place of residence.

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

Approximately 200 cubic yards of upland fill will be placed between new bulkhead and existing shoreline.

SAMPLE

ENG FORM 4345, Apr 83 EDITION OF 1 OCT 77 IS OBSOLETE (Proponent: DAEN CWO N)

5. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC., WHOSE PROPERTY ALSO ADJOINS THE WATERWAY

Mary L. Clark
850 West Branch Road
Blue Harbor, Maryland 21703

(301) 585-8830

Harry N. Hampton
854 West Branch Road
Blue Harbor, Maryland 21703

(301) 585-3676

6. WATERBODY AND LOCATION ON WATERBODY WHERE ACTIVITY EXISTS OR IS PROPOSED

West Branch of the Haven River on Blue Harbor.

7. LOCATION ON LAND WHERE ACTIVITY EXISTS OR IS PROPOSED

ADDRESS:

852 West Branch Road
STREET, ROAD, ROUTE OR OTHER DESCRIPTIVE LOCATION

King Edward, Maryland 21703
COUNTY STATE ZIP CODE

Town of Blue Harbor
LOCAL GOVERNING BODY WITH JURISDICTION OVER SITE

8. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☒ NO
If answer is "Yes" give reasons, month and year the activity was completed. Indicate the existing work on the drawings.

9. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharges or other activities described in this application.

ISSUING AGENCY	TYPE APPROVAL	IDENTIFICATION NO.	DATE OF APPLICATION	DATE OF APPROVAL	DATE OF DENIAL
Town of Blue Harbor	Zoning	BH25172	6/20/82	6/30/82	
Md DNR	Certification	DNR258WQ	6/11/82	8/12/82	

10. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

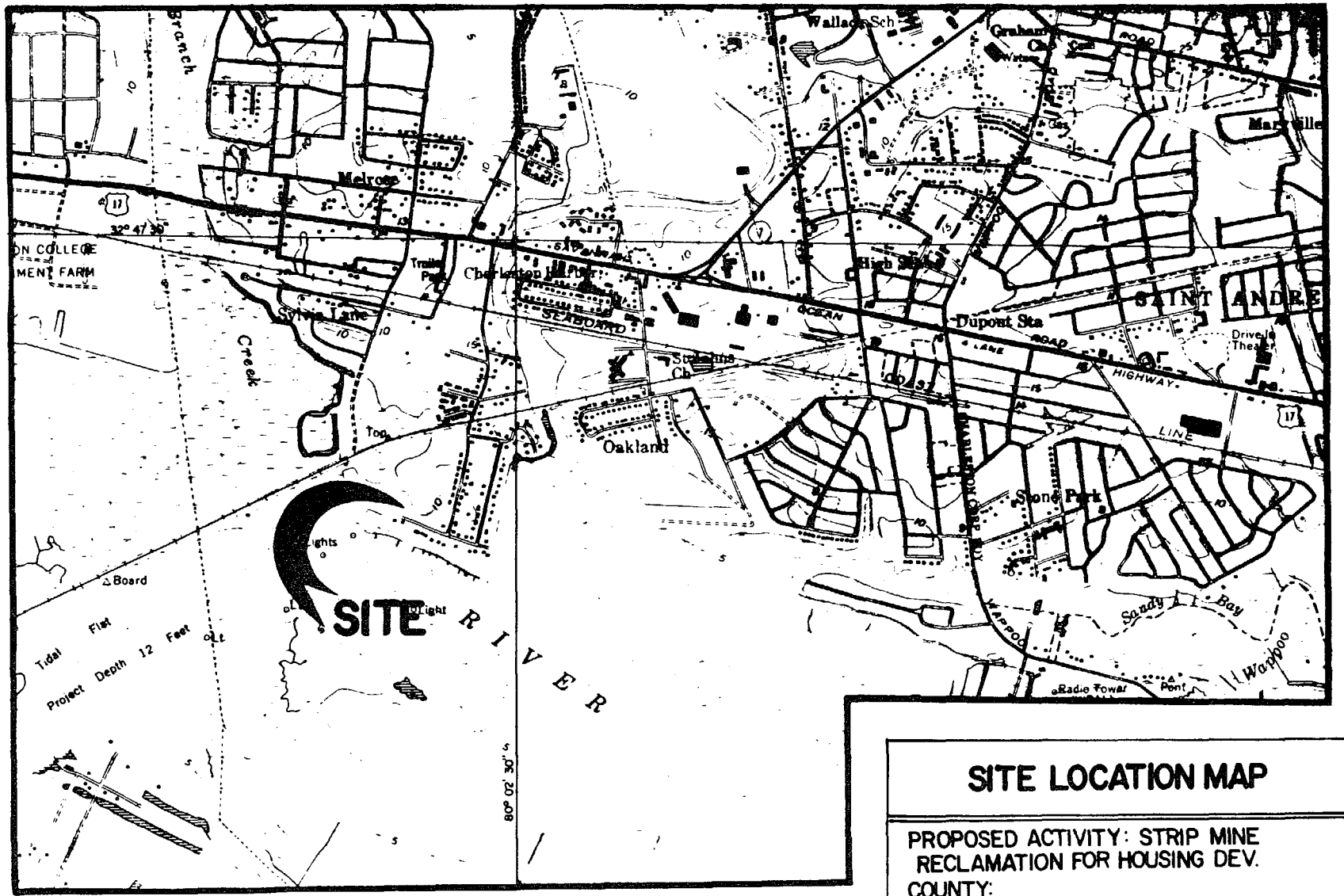
Fred R. Harris — Oct. 15, 1982
SIGNATURE OF APPLICANT — DATE — SIGNATURE OF AGENT — DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

SAMPLE



FROM USGS JOHNS ISLAND SC QUADRANGLE

SITE LOCATION MAP

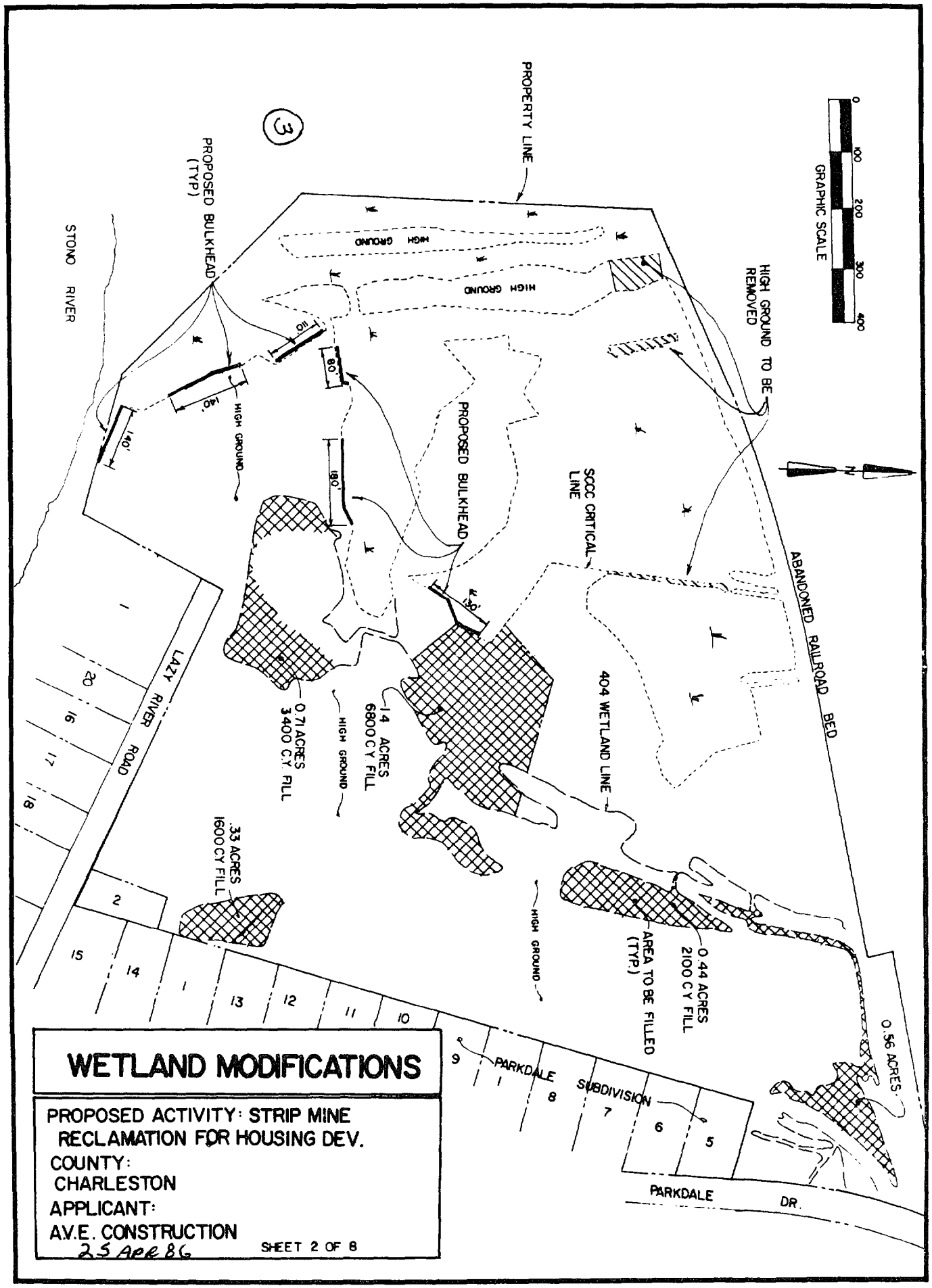
PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.

COUNTY:
CHARLESTON

APPLICANT:
A.V.E. CONSTRUCTION

25 APR 86

SHEET 1 OF 8



WETLAND MODIFICATIONS

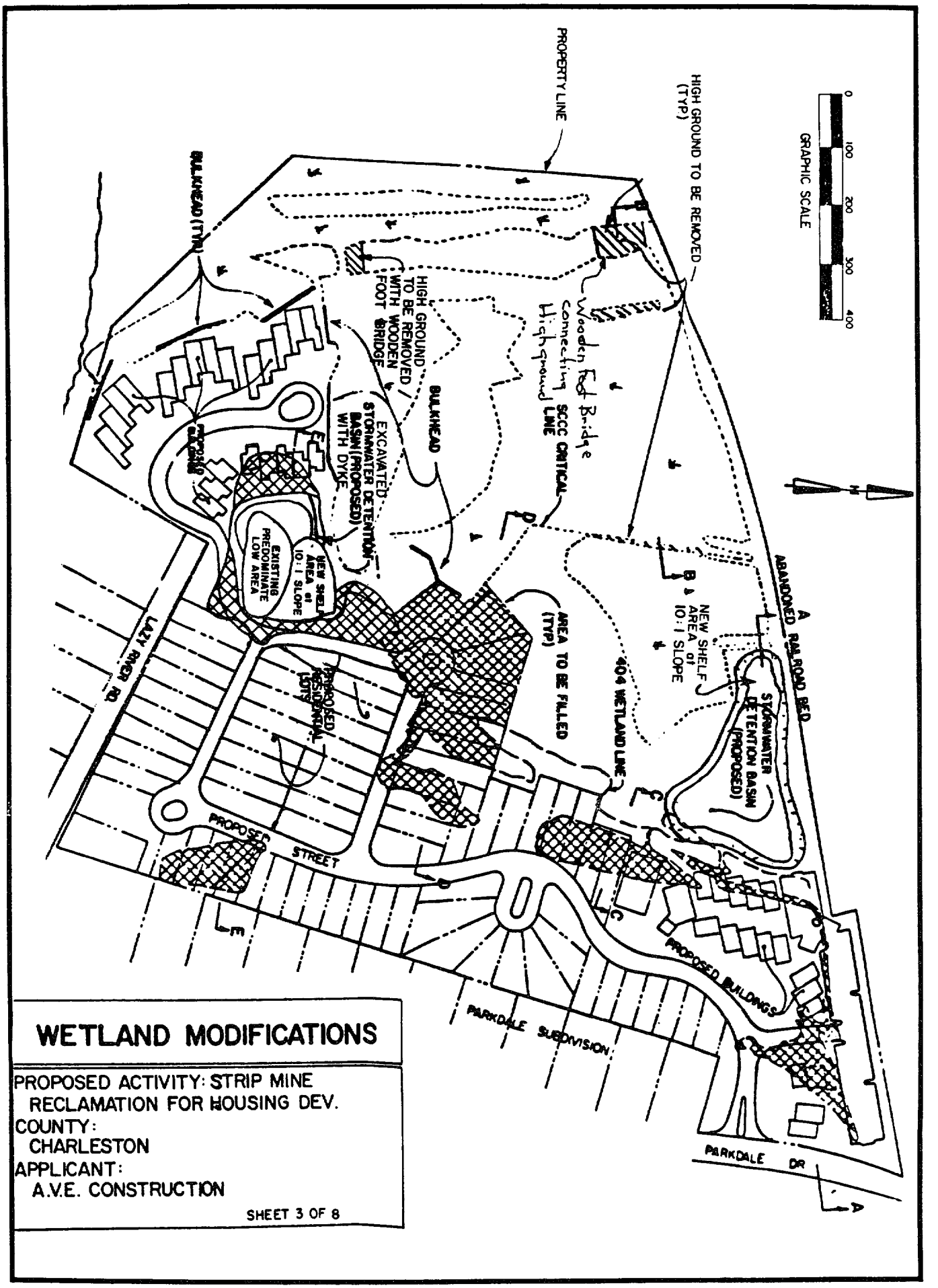
PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.

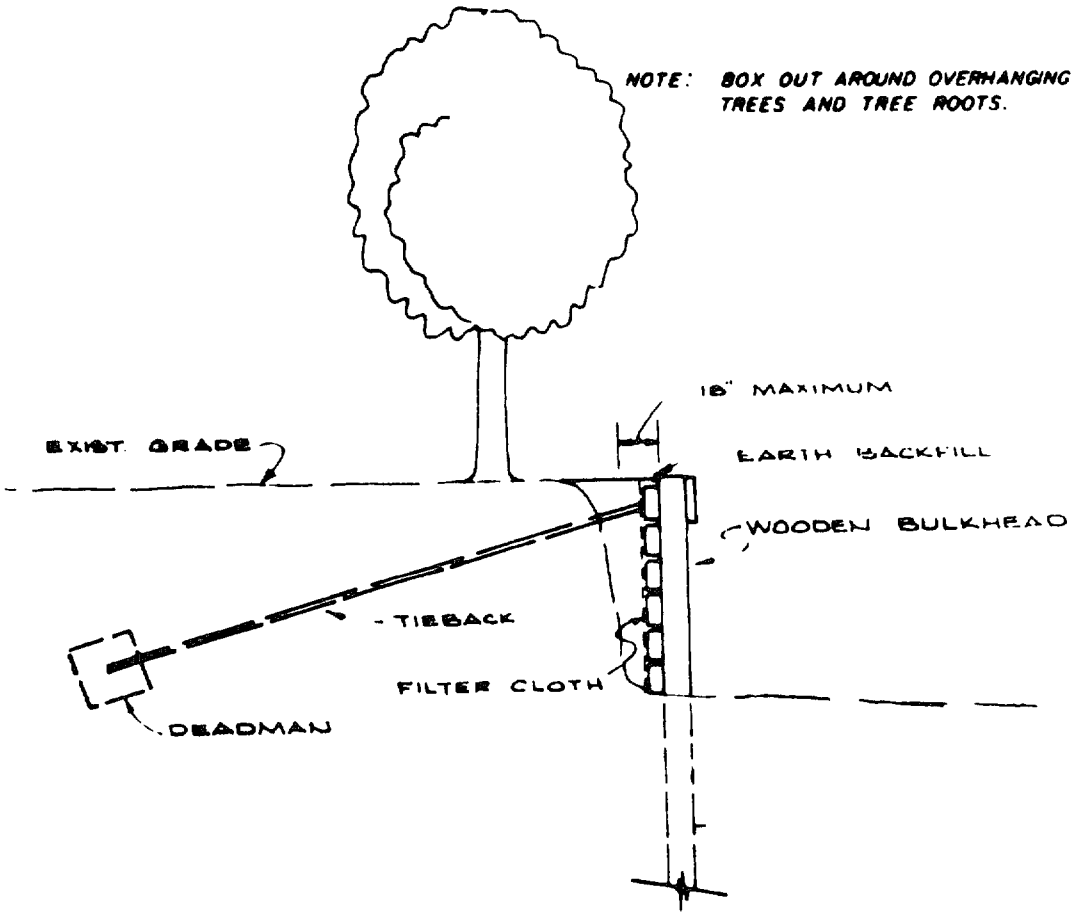
COUNTY: CHARLESTON

APPLICANT: A.V.E. CONSTRUCTION

25 APR 86

SHEET 2 OF 8

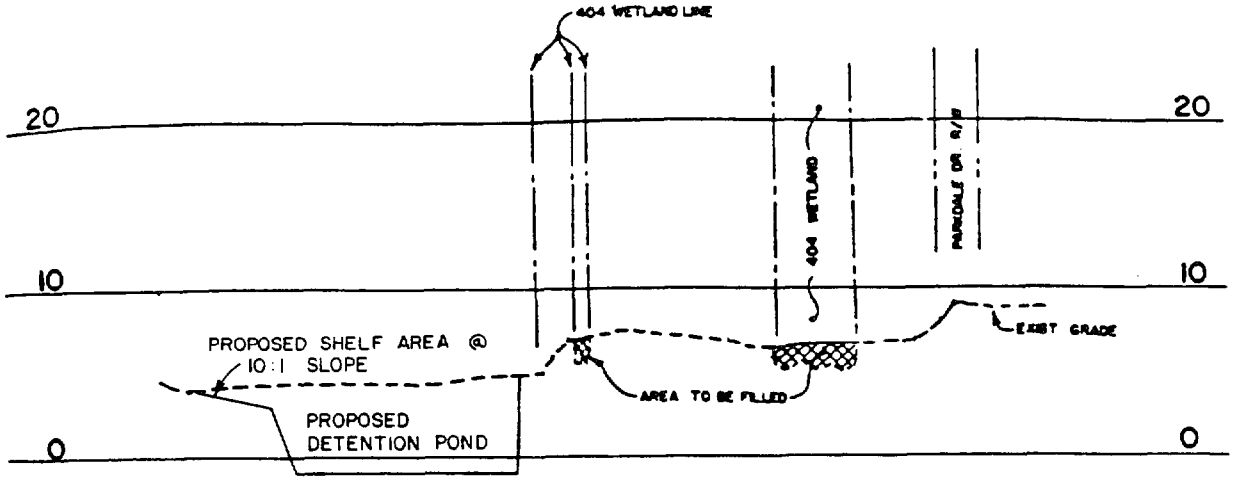

GRAPHIC SCALE
0
100
200
300
400
HIGH GROUND TO BE REMOVED (TYP)
PROPERTY LINE
Wooden Foot Bridge connecting High ground
SCCC CRITICAL LINE
404 WETLAND LINE
AREA TO BE FILLED (TYP)
NEW SHELF AREA of 10:1 SLOPE
ABANDONED RAILROAD BED
STORMWATER DETENTION BASIN (PROPOSED)
PROPOSED BUILDINGS
PARKDALE SUBDIVISION
PARKDALE DR
PROPOSED STREET
PROPOSED RESIDENTIAL LOTS
EXISTING PREDOMINATE LOW AREA
NEW SHELF AREA of 10:1 SLOPE
EXCAVATED STORMWATER DETENTION BASIN (PROPOSED) WITH DYKE
HIGH GROUND TO BE REMOVED / WITH WOODEN FOOT BRIDGE
BULKHEAD
BULKHEAD (TYP)
LAZY ROCK RD
WETLAND MODIFICATIONS
PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.
COUNTY: CHARLESTON
APPLICANT: A.V.E. CONSTRUCTION
SHEET 3 OF 8



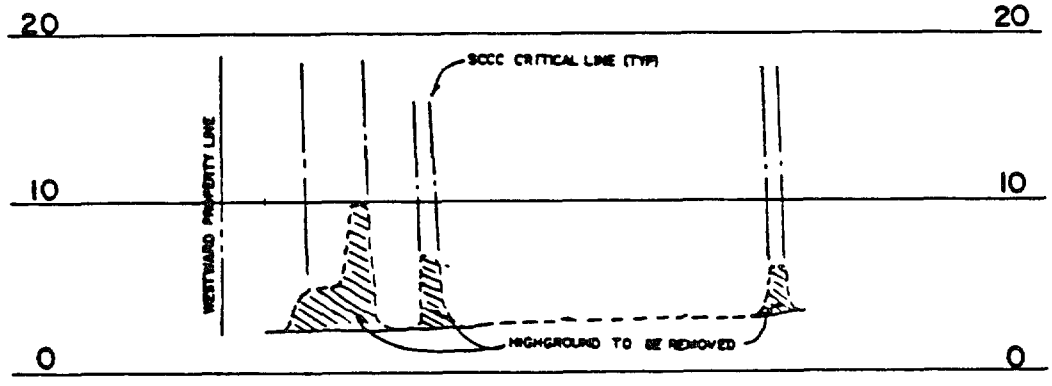
NOT TO SCALE

TYPICAL BULKHEAD SECTION

PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.
COUNTY:
CHARLESTON
APPLICANT:
A.V.E. CONSTRUCTION
25 APR 86 SHEET 4 OF 8

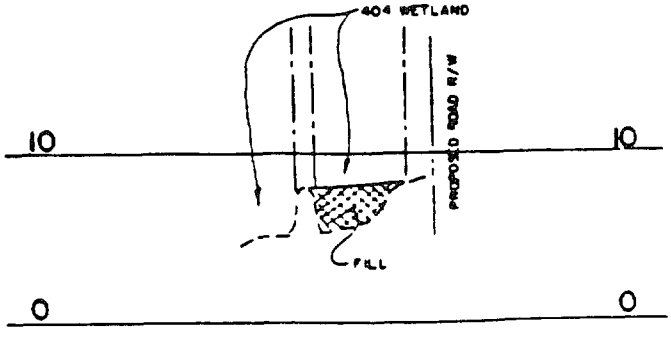


SECTION A-A



SCALE HOR. 1" = 200'
VERT. 1" = 10'

SECTION B-B



SECTION C-C

WETLAND MODIFICATIONS

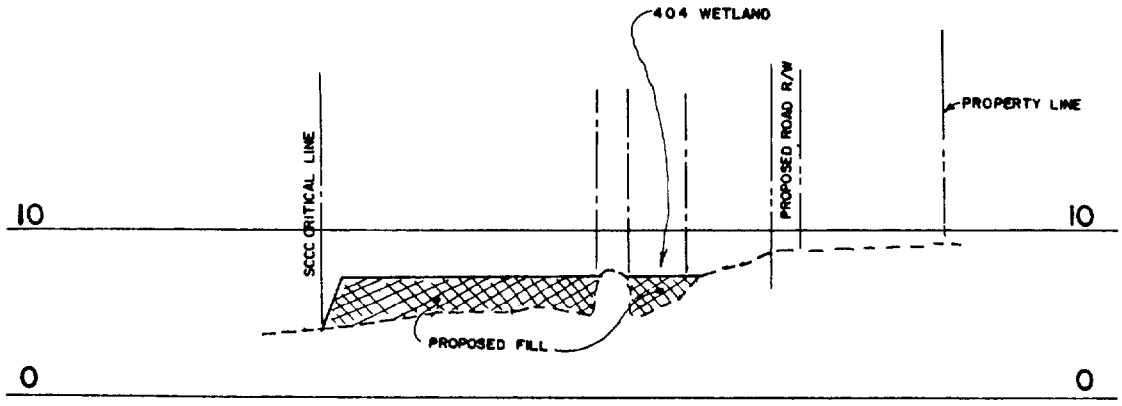
PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.

COUNTY: CHARLESTON

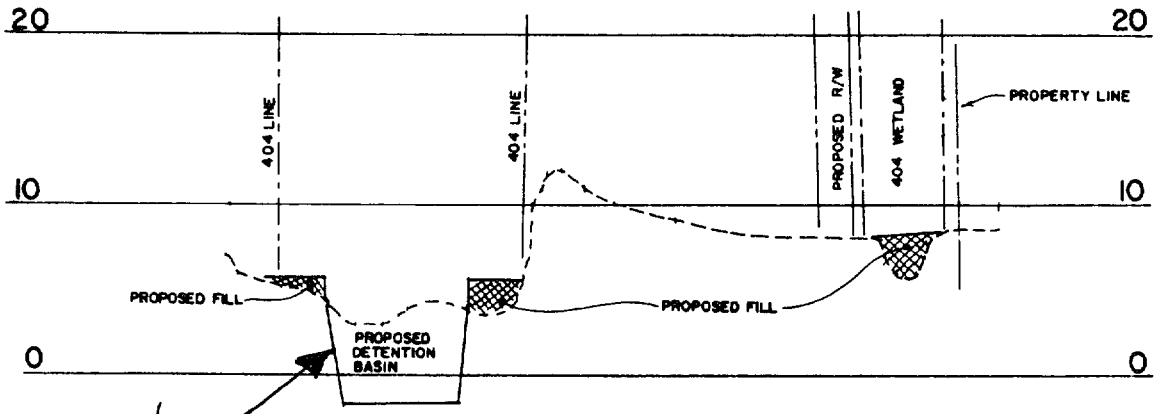
APPLICANT: A.V.E. CONSTRUCTION

SHEET 5A OF 8

Revised Sept. 4, 1986



SECTION D-D



SECTION E-E

Section Superceded by Section E-E on Sheet 5B of 8

SCALE: HOR. 1" = 200'
VERT. 1" = 10'

WETLAND MODIFICATIONS

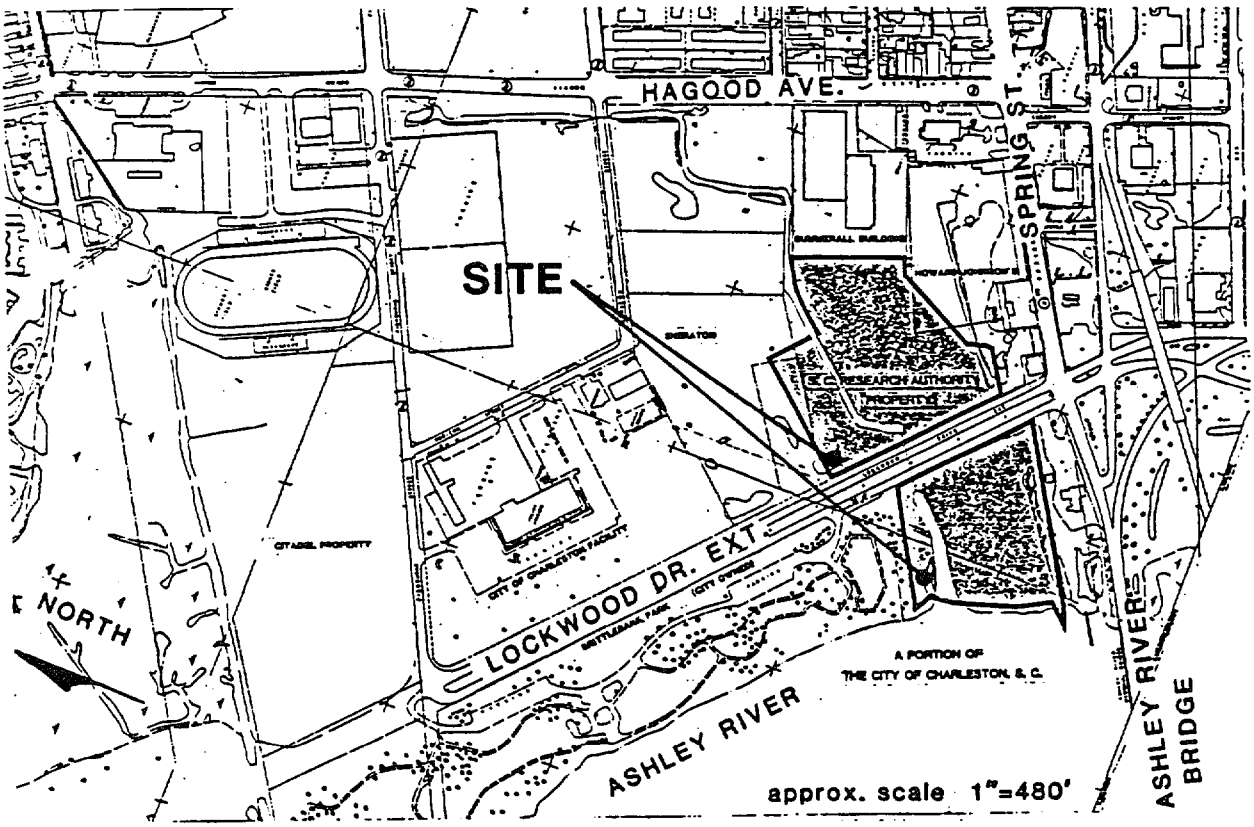
PROPOSED ACTIVITY: STRIP MINE RECLAMATION FOR HOUSING DEV.

COUNTY: CHARLESTON

APPLICANT: A.V.E. CONSTRUCTION

25 APR 86

SHEET 6 OF 8



SOURCE: CITY OF CHARLESTON
OFFICIAL ZONING GRID MAPS
PREPARED BY: ALSTER-AYRES & ASSOCIATES, INC.

latitude approximately 32°47'00"
longitude approximately 79°57'30"

JURISDICTION: CITY OF CHARLESTON

PROPOSED: LOCATION MAP

PURPOSE: RESEARCH PARK

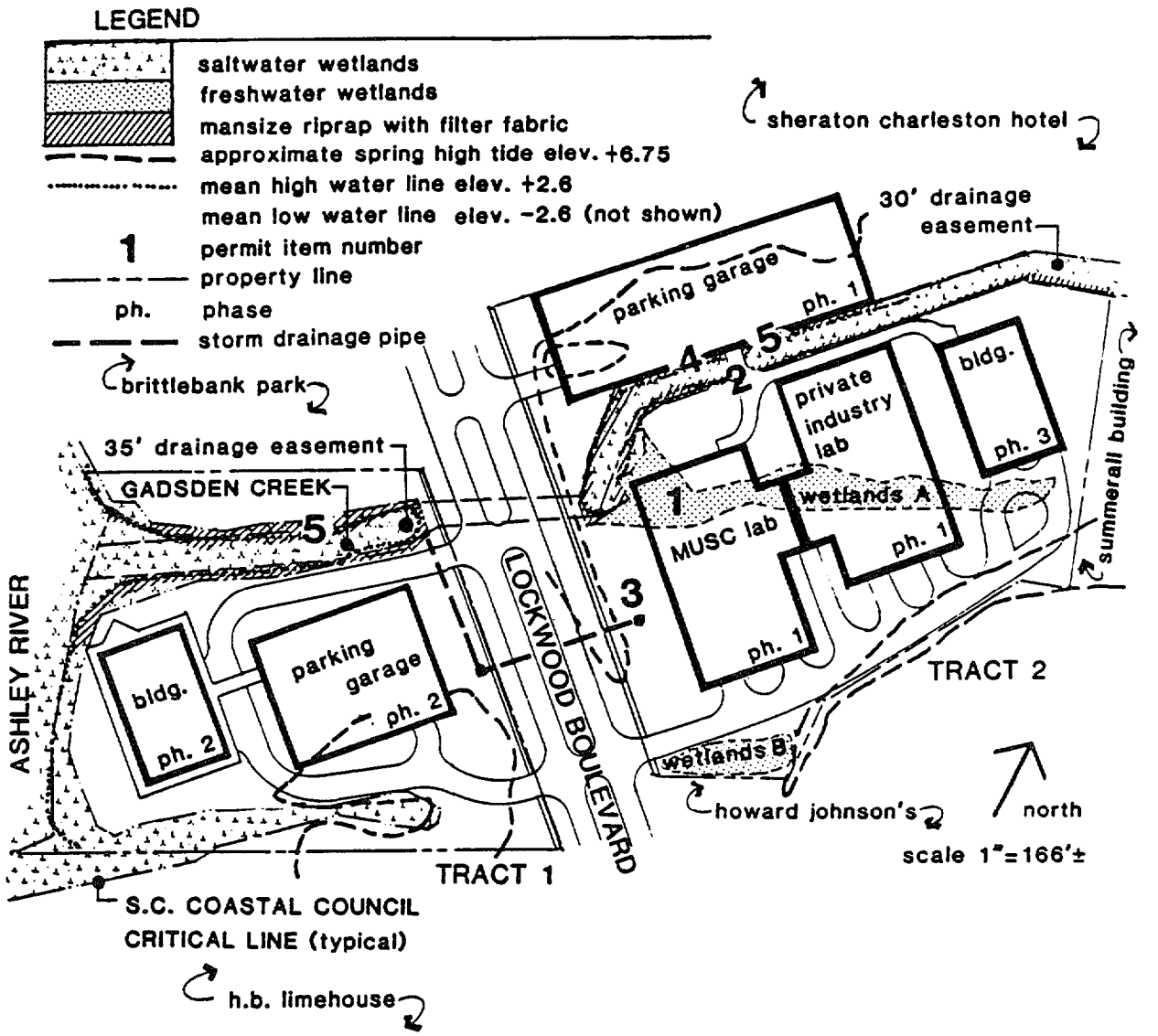
IN:

DATUM:

AT:

ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2.

CHARLESTON COUNTY: SC
APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY
SHEET 1 OF 6 DATE:9/17/87



PURPOSE: RESEARCH PARK

DATUM: M.S.L.

ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2. AND PLAN ABOVE

PROPOSED: MASTER PLAN

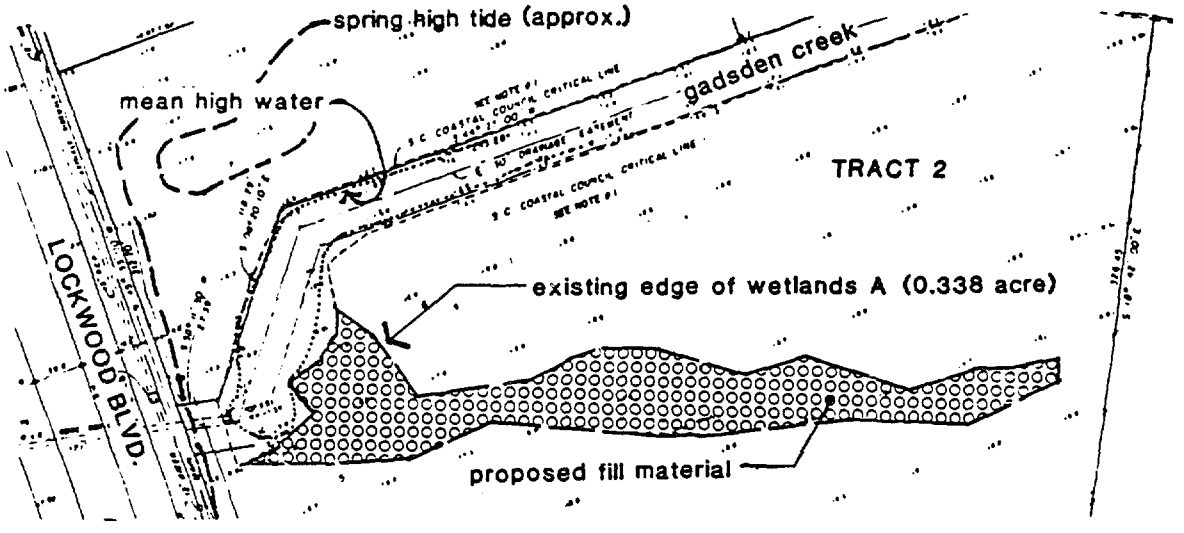
IN:

AT:

CHARLESTON COUNTY: SC

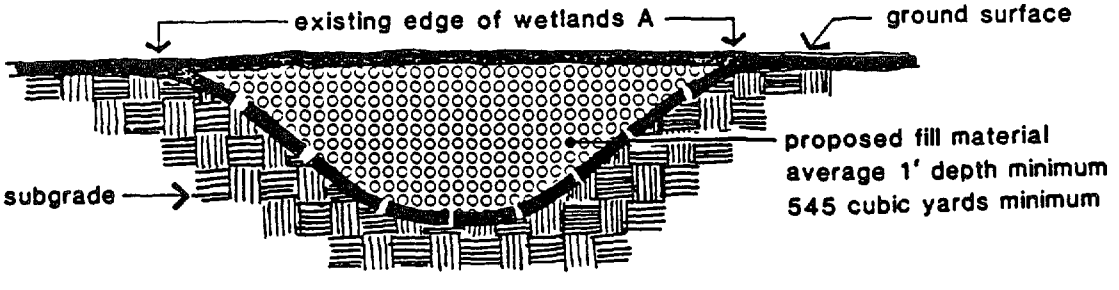
APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY

SHEET 2 OF 6 DATE: 9/17/87



PLAN

scale 1"=100'



SECTION

no scale

PURPOSE: RESEARCH PARK

DATUM: M.S.L.

ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2.

#1 PROPOSED:FILLING OF WETLAND

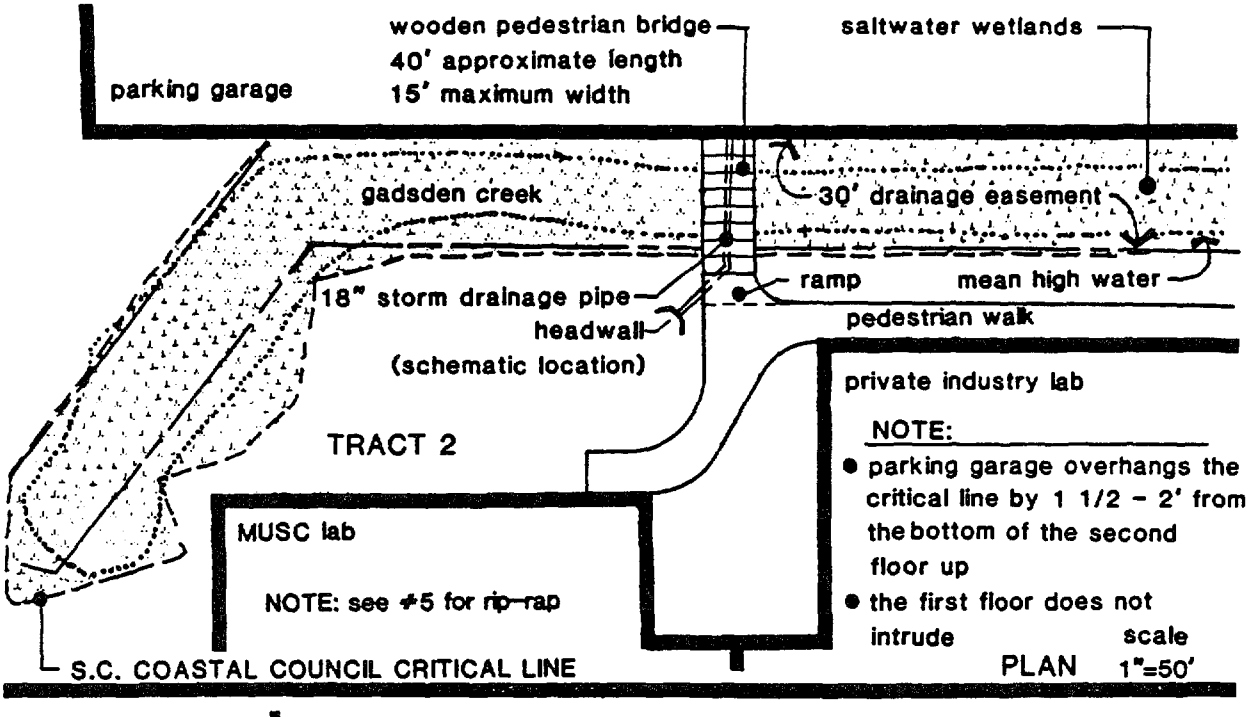
IN:

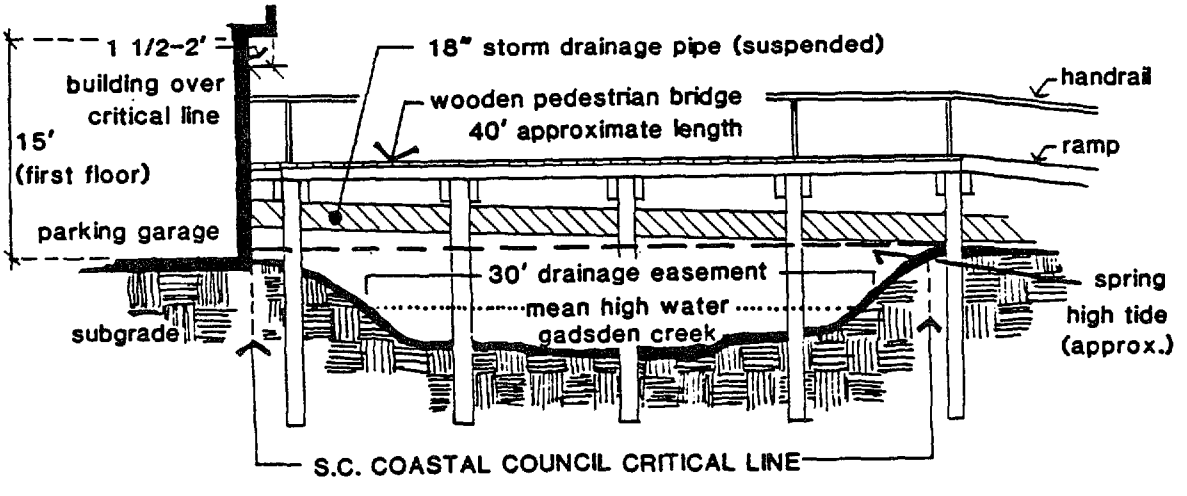
AT:

CHARLESTON COUNTY: SC

APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY

SHEET 3 OF 6 DATE:9/17/87





NOTE: see #5 for rip-rap

SECTION/ELEVATION no scale

#2 PROPOSED: PEDESTRIAN BRIDGE AND PIPE
and
#4 PROPOSED: BUILDING OVER CRITICAL LINE

PURPOSE: RESEARCH PARK

DATUM: M.S.L.

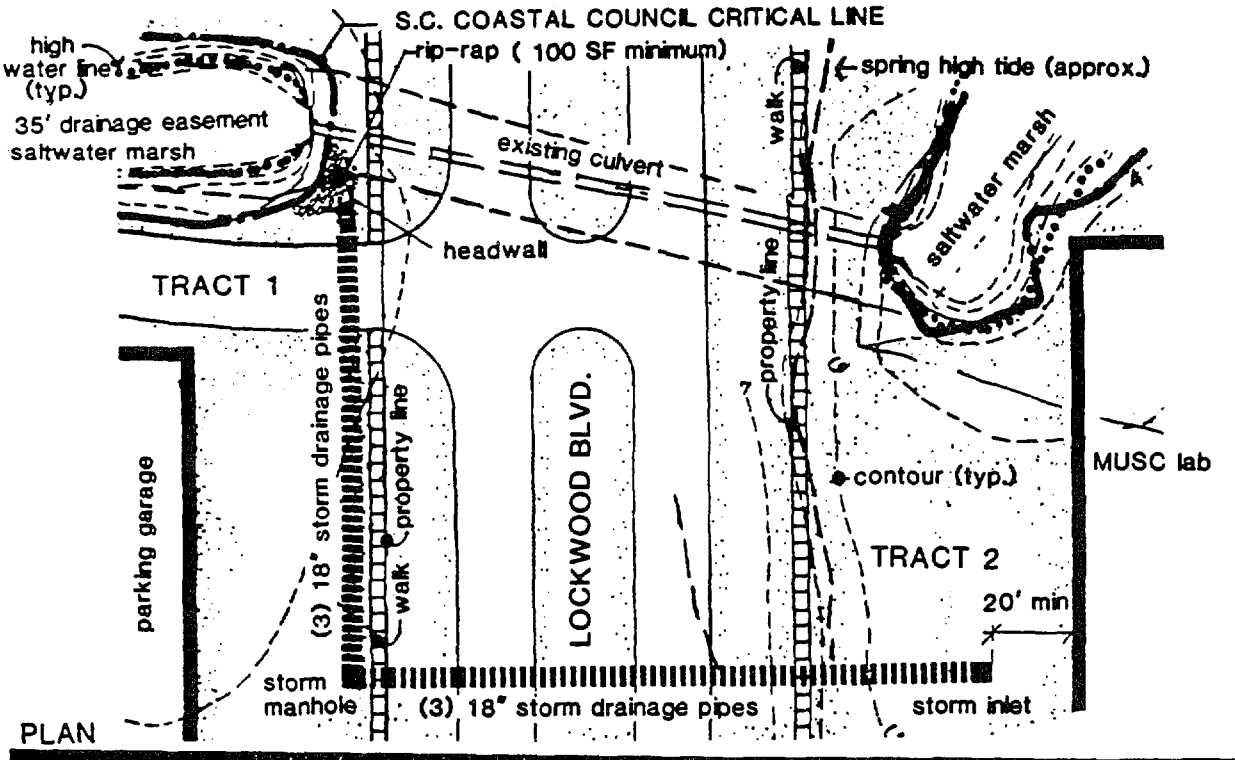
ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2.

IN: GADSDEN CREEK
AT: ASHLEY RIVER

CHARLESTON COUNTY: SC

APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY

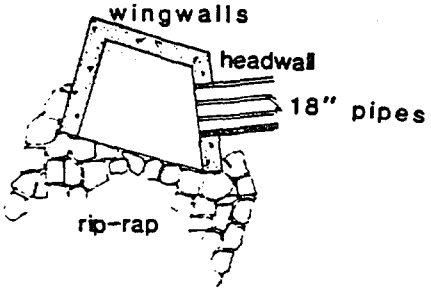
SHEET 4 OF 6 DATE: 9/17/87

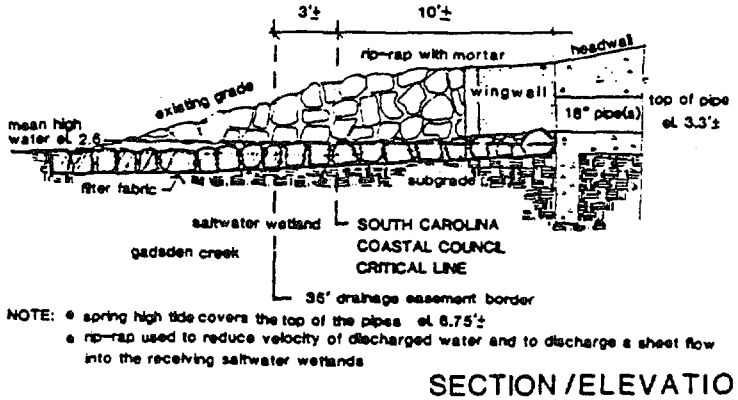


PLAN

scale 1"=50'

NOTE: see #5 for add'l rip-rap whithin the critical line





NOTE: • spring high tide covers the top of the pipes el. 6.75'±
• rip-rap used to reduce velocity of discharged water and to discharge a sheet flow into the receiving saltwater wetlands

PLAN

SECTION / ELEVATION

no scale

no scale

PURPOSE: RESEARCH PARK

DATUM: M.S.L.

ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2.

#3 PROPOSED: DISCHARGE OF STORM WATER

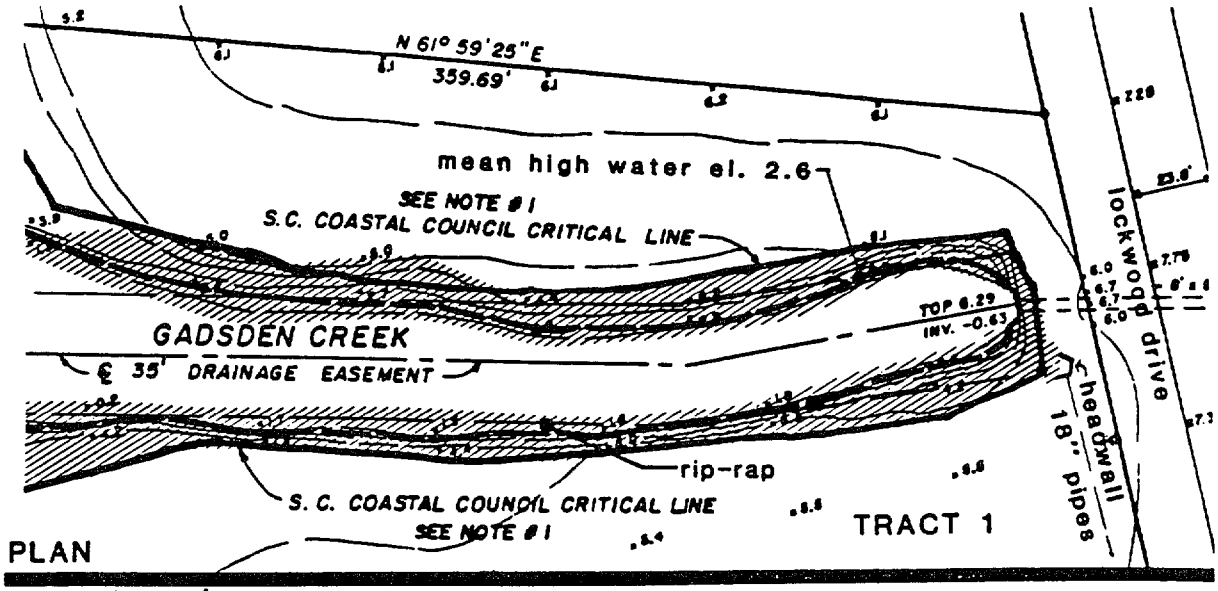
IN: GASDEN CREEK

AT: ASHLEY RIVER

CHARLESTON COUNTY: SC

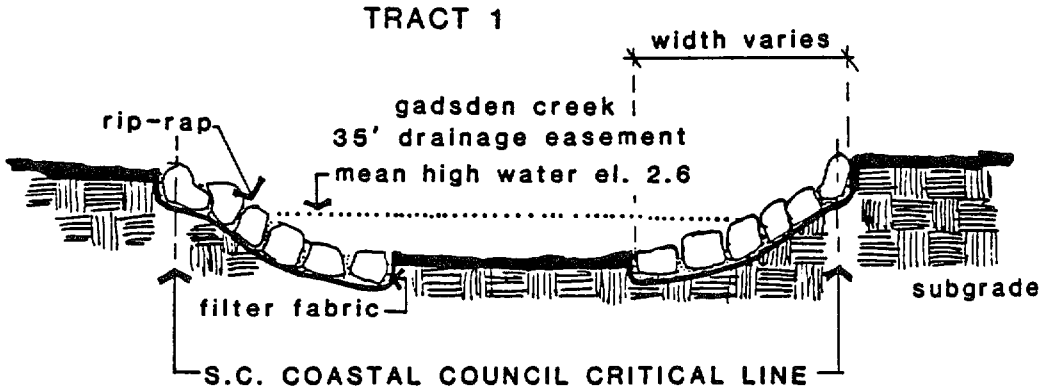
APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY

SHEET 5 OF 6 DATE: 9/17/87



PLAN

1" =50'



NOTE: • spring high tide floods the entire property shown here
• the banks of the drainage easement on tract 2 will be treated in the same fashion

SECTION

no scale

#5 PROPOSED: RIP-RAP

PURPOSE: RESEARCH PARK

IN: GADSDEN CREEK

DATUM: M.S.L.

AT: ASHLEY RIVER

ADJACENT PROPERTY OWNERS:
1.
SEE ATTACHMENT BLOCK 5
2.

CHARLESTON COUNTY: SC

APPLICATION BY: CHARLESTON RESEARCH PARK ASSOC. & S.C. RESEARCH AUTHORITY

SHEET 6 OF 6 DATE: 9/17/87

PROPOSED:

PURPOSE:

IN:

DATUM:

AT:

ADJACENT PROPERTY OWNERS:
1.

COUNTY: SC

2.

APPLICATION BY:

SHEET OF DATE:

General Information

Three types of drawings—Vicinity, Plan, and Elevation—are required to accurately depict activities (See sample drawings on pages 16 and 17).

Submit one original, or good quality copy, of all drawings on 8½ × 11 inch white paper (tracing cloth or film may be used). Submit the fewest number of sheets necessary to adequately show the proposed activity. Drawings should be prepared in accordance with the general format of the samples, using block style lettering. Each page should have a title block. See check list below. Drawings do not have to be prepared by an engineer, but professional assistance may become necessary if the project is large or complex.

Leave a 1-inch margin at the top edge of each sheet for purposes of reproduction and binding.

In the title block of each sheet of drawings identify the proposed activity and include the name of the body of water; river mile (if applicable); name of county and state; name of applicant; number of the sheet and total number of sheets in set; and date the drawing was prepared.

Since drawings must be reproduced, use heavy dark lines. Color shading cannot be used; however, dot shading, hatching, or similar graphic symbols may be used to clarify line drawings.

Vicinity Map

The vicinity map you provide will be printed in any public notice that is issued and used by the Corps of Engineers and other reviewing agencies to locate the site of the proposed activity. You may use an existing road map or U.S. Geological Survey topographic map (scale 1:24,000) as the vicinity map. Please include sufficient details to simplify locating the site from both the waterbody and from land. Identify the source of the map or chart from which the vicinity map was taken and, if not already shown, add the following:

- ☐ location of activity site (draw an arrow showing the exact location of the site on the map).
- ☐ latitude, longitude, river mile, if known, and/or other information that coincides with Block 6 on the application form.
- ☐ name of waterbody and the name of the larger creek, river, bay, etc., that the waterbody is immediately tributary to.
- ☐ names, descriptions and location of landmarks.
- ☐ name of all applicable political (county, parish, borough, town, city, etc.) jurisdictions.
- ☐ name of and distance to nearest town, community, or other identifying locations.
- ☐ names or numbers of all roads in the vicinity of the site.
- ☐ north arrow.
- ☐ scale.

Plan View

The plan view shows the proposed activity as if you were looking straight down on it from above. Your plan view should clearly show the following:

- ☐ Name of waterbody (river, creek, lake, wetland, etc.) and river mile (if known) at location of activity.
- ☐ Existing shorelines.
- ☐ Mean high and mean low water lines and maximum (spring) high tide line in tidal areas.
- ☐ Ordinary high water line and ordinary low water line if the proposed activity is located on a non-tidal waterbody.

- ☐ Average water depths around the activity.
- ☐ Dimensions of the activity and distance it extends from the high water line into the water.
- ☐ Distances to nearby Federal projects, if applicable.
- ☐ Distance between proposed activity and navigation channel, where applicable.
- ☐ Location of structures, if any, in navigable waters immediately adjacent to the proposed activity.
- ☐ Location of any wetlands (marshes, swamps, tidal flats, etc.)
- ☐ North arrow.
- ☐ Scale.
- ☐ If dredged material is involved, you must describe the type of material, number of cubic yards, method of handling, and the location of fill and spoil disposal area. The drawing should show proposed retention levees, weirs, and/or other means for retaining hydraulically placed materials.
- ☐ Mark the drawing to indicate previously completed portions of the activity.

Elevation and/or Cross Section View

The elevation and/or cross section view is a scale drawing that shows the side, front, or rear of the proposed activity. If a section view is shown, it represents the proposed structure as it would appear if cut internally for display. Your elevation should clearly show the following:

- ☐ Water elevations as shown in the plan view.
- ☐ Water depth at waterward face of proposed activity or, if dredging is proposed, dredging and estimated disposal grades.
- ☐ Dimensions from mean high water line (in tidal waters) for proposed fill or float, or high tide line for pile supported platform. Describe any structures to be built on the platform.
- ☐ Cross section of excavation or fill, including approximate side slopes.
- ☐ Graphic or numerical scale.
- ☐ Principal dimensions of the activity.

Notes on Drawings*

- ☐ Names of adjacent property owners who may be affected. Complete names and addresses should be shown in Block 5 on ENG Form 4345.
- ☐ Legal property description: Number, name of subdivision, block and lot number. Section, Township and Range (if applicable) from plot, deed or tax assessment.
- ☐ Photographs of the site of the proposed activity are not required; however, pictures are helpful and may be submitted as part of any application.

**Drawings should be as clear and simple as possible (i.e., not too "busy").*

CORPS OF ENGINEERS - CHARLESTON DISTRICT
NATIONWIDE PERMIT #26 NOTIFICATION FORM

APPLICANT INFORMATION:

Name: _____

Address: _____

_____

Point of Contact (if applicant is a company): _____

Phone (during normal working hours): _____

SITE INFORMATION:

Waterway name: _____

Location of planned work (attach location map):

in or near Town/City of _____;

_____ County, South Carolina.

PROJECT INFORMATION:

(Attach drawings or sketches, as appropriate, to aid in describing the work)

Description and specific purpose of the proposed work: _____

_____

_____

_____

Area of waters and/or wetlands (in square feet, acres, etc.) which would be lost or substantially adversely modified as a result of the work:

_____

ADDITIONAL INFORMATION: _____

_____

_____

_____

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT: _____

CORPS OF ENGINEERS - CHARLESTON DISTRICT
NATIONWIDE PERMIT #26 NOTIFICATION FORM

APPLICANT INFORMATION:

Name: Roger Jones

Address: 2 Mountain Lane
Big Mountain, S.C. 29000

Point of Contact (if applicant is a company): _____

Phone (during normal working hours): A/c 803-555-0000

SITE INFORMATION:

Waterway name: Swamp next to Drowning Branch

Location of planned work (attach location map):

in or near Town/City of Big Mountain;
Greenville County, South Carolina.

PROJECT INFORMATION:

(Attach drawings or sketches, as appropriate, to aid in describing the work)

Description and specific purpose of the proposed work: To deposit fill material in wetlands to raise the grade for commercial development.

Area of waters and/or wetlands (in square feet, acres, etc.) which would be lost or substantially adversely modified as a result of the work:

Approximately 1 acre of wetlands (43,560 sq.ft.) will be impacted.

ADDITIONAL INFORMATION: To get to the site take I-26 to U.S. Rte. 99 to County Rd. # 93, go approximately 1½ miles. Site on left side of road.

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT: _____

CORPS OF ENGINEERS - CHARLESTON DISTRICT
404 APPLICATION FORM: LESS THAN 10 ACRES

APPLICANT INFORMATION:

Name: _____

Address: _____

_____

Contact Person: _____ Phone: _____

Project Name (if any): _____

SITE INFORMATION:

Waterway Name: _____

In or Near Town/City of: _____ County: _____

Wetland area proposed for fill (acreage/sqaure feet): _____

Amount of fill (Cubic Yards): _____

SUPPORTING INFORMATION (Required by 15 CFR-930.58):

The below listed information is required and must be attached to this form:

(1) Brief narrative description of the project and the project location.

(2) Location maps of the project site indicating the precise location. Recommend using both USGS Topographic map and County highway map.

(3) Plan of project on 8 1/2' X 11" paper, clearly depicting the areas of 404 jurisdiction wetlands, the areas proposed to be filled or modified, the mitigation areas, the property and/or lot boundaries, roadways, structure locations, location of mean high water (MHW) and mean low water (MLW), and other revelant information.

(4) Cross Sections through the wetlands to be filled and/or altered.

(5) For other than single family lots a drainage and storm water management plan must be submitted directly to the South Carolina Coastal Council. Contact the South Carolina Coastal Council for drainage and storm water guidelines.

(7) Proof of publication in a local newspaper. Contact the South Carolina Coastal Council for additional information.

(8) For projects involving commercial and/or residential development an overall development plan must be provided. This plan must also be on 8 1/2" X 11" paper and identify all wetlands to be filled and/or altered. The information contained on the drawings must be readable.

_____ _____

DATE SIGNATURE OF APPLICANT OR AUTHORIZED AGENT

CORPS OF ENGINEERS - CHARLESTON DISTRICT
404 APPLICATION FORM: LESS THAN 10 ACRES

APPLICANT INFORMATION:

Name: Jones Development Co.

Address: 17 South Street
Summerville, S.C. 29483

Contact Person: Sam Jones Phone: 555-0000

Project Name (if any): Willow Lakes

SITE INFORMATION:

Waterway Name: Wetlands adjacent to Candy Branch

In or Near Town/City of: Summerville County: Dorchester

Wetland area proposed for fill (acreage/sqaure feet): 0.5 acres

Amount of fill (Cubic Yards): 2000 cu. yds

SUPPORTING INFORMATION (Required by 15 CFR-930.58):

The below listed information is required and must be attached to this form:

(1) Brief narrative description of the project and the project location.

(2) Location maps of the project site indicating the precise location. Recommend using both USGS Topographic map and County highway map.

(3) Plan of project on 8 1/2' X 11" paper, clearly depicting the areas of 404 jurisdiction wetlands, the areas proposed to be filled or modified, the mitigation areas, the property and/or lot boundaries, roadways, structure locations, location of mean high water (MHW) and mean low water (MLW), and other revelant information.

(4) Cross Sections through the wetlands to be filled and/or altered.

(5) For other than single family lots a drainage and storm water management plan must be submitted directly to the South Carolina Coastal Council. Contact the South Carolina Coastal Council for drainage and storm water guidelines.

(7) Proof of publication in a local newspaper. Contact the South Carolina Coastal Council for additional information.

(8) For projects involving commercial and/or residential development an overall development plan must be provided. This plan must also be on 8 1/2" X 11" paper and identify all wetlands to be filled and/or altered. The information contained on the drawings must be readable.

DATE SIGNATURE OF APPLICANT OR AUTHORIZED AGENT

SITE CHARACTERISTICS

The tract of land ranges in elevation from 18'MSL to 30'MSL and has a predominate drainage ditch that generally flows from east to west across the site. There is an existing outfall approximately 850 feet south of the intersection of Ashley Phosphate and Dorchester Road that consists of double 48" diameter culverts. With the past development of the general area, stormwater has been routed from north of Ashley Phosphate Road into this tract and thus has substantially increased the stormwater flow across this site. These routed flows are generally ditched into the major predominating feature that was previously mentioned.

This tact is heavily wooded with the exception of a previously cleared area of approximately 15 acres. The predominate growth is pine with isolated lower areas of hardwoods. This tract was timbered several years in the past and a relatively small area fronting along Ashley Phosphate Road was recently timbered.

Visual inspection of the site soils (there is an existing borrow/detention facility located contiguous to this tract along the south) reveal sandy soils with varying amounts of clay. The previously cleared area was also ditched and these banks reveal similar soils.

CONCEPTUAL PLAN

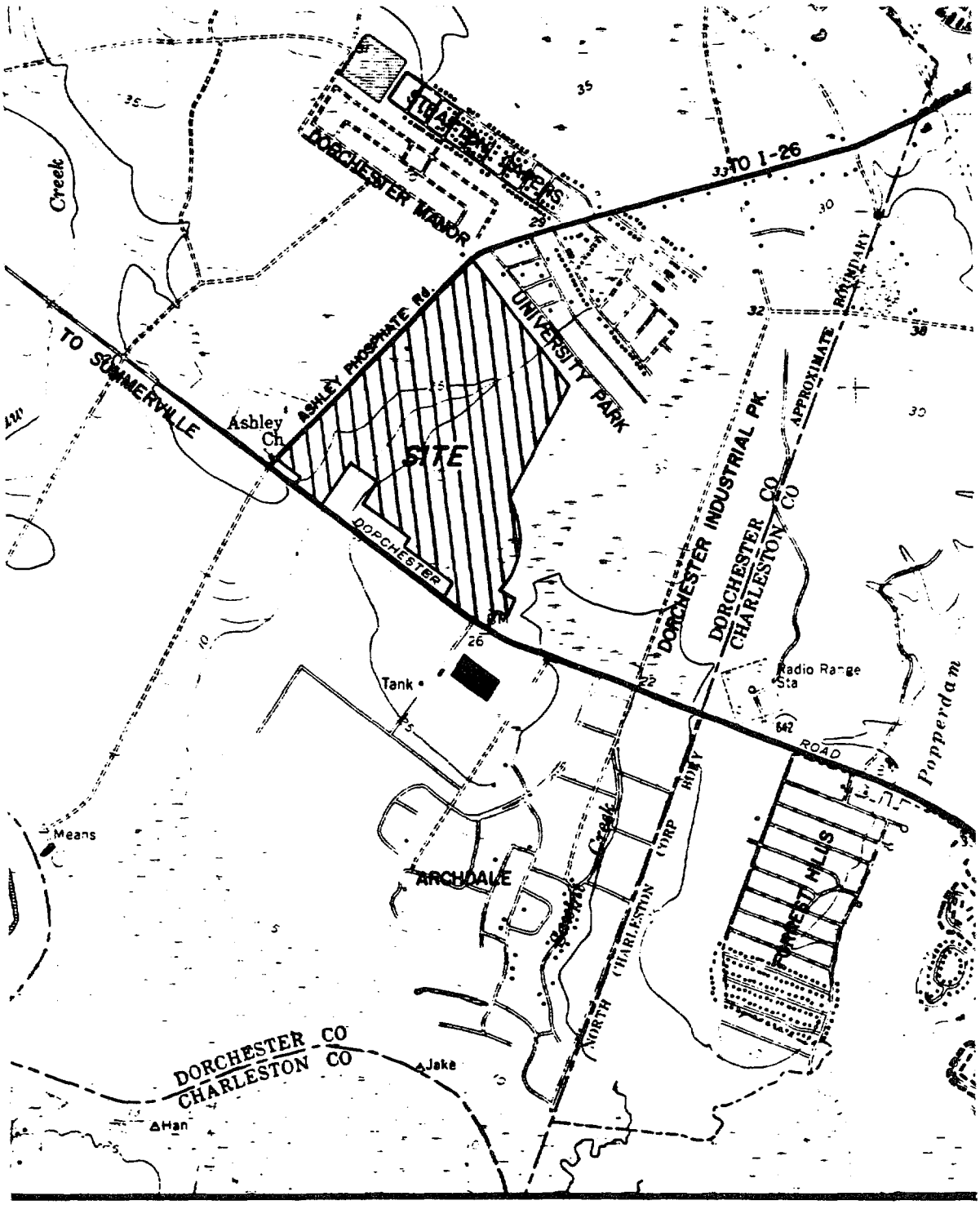
The tract is zoned for commercial development and several users have committed to the initial phase of this developmennt. Plans call for a four lane connector road to loop from Dorchester Road to Ashley Phosphate Road and in the future to extend into the new planning areas of Ladson and the City of North Charleston. The retail portion of this development will front along Ashley Phosphate Road with other business and commercial uses within the loop roadway system.

Due to the depth requirement of the retail use we see no alternative to the rerouting of the predominate drainage ditch running east to west across the site. This would require the filling of approximately 2.2 acres of designated wetland. Our conceptual plan calls for the protection and enhancement of 5.7 acres of other existing wetlands on this tract that we have been able to design around. In addition to these wetlands we propose several other management techniques to handle storm water. There will be approximately 12 acres of new detention lakes or "dry" storage areas. We also intend to use grass swales, rooftop detention routing, parking area storage, and piped infiltration facilties to assist in overall management. The existing sandy soils should prove useful in the successful implementation of this alternative. There is also an existing detention lake (12.4 acres) contiguous to this tract along the south that will be available for detention. Included in this report is a topographic survey of this site and a wetland delineation map.

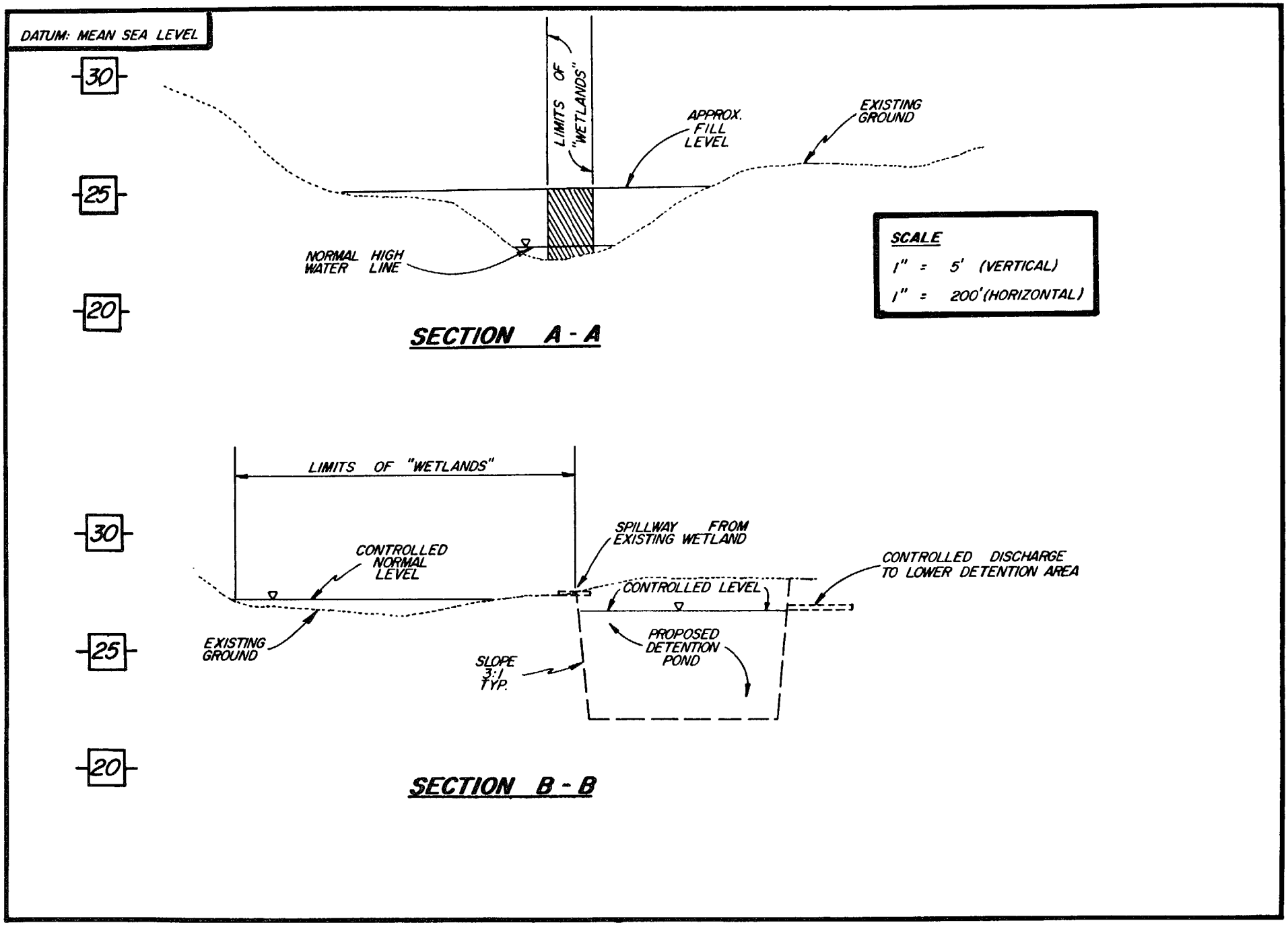
We have also included a sketch of the proposed roadway alignments and the areas to be designated for detention facilities.We are confident that this overall plan will be in accordance with the Storm Water Management Guidelines as published by the S.C. Coastal Council.

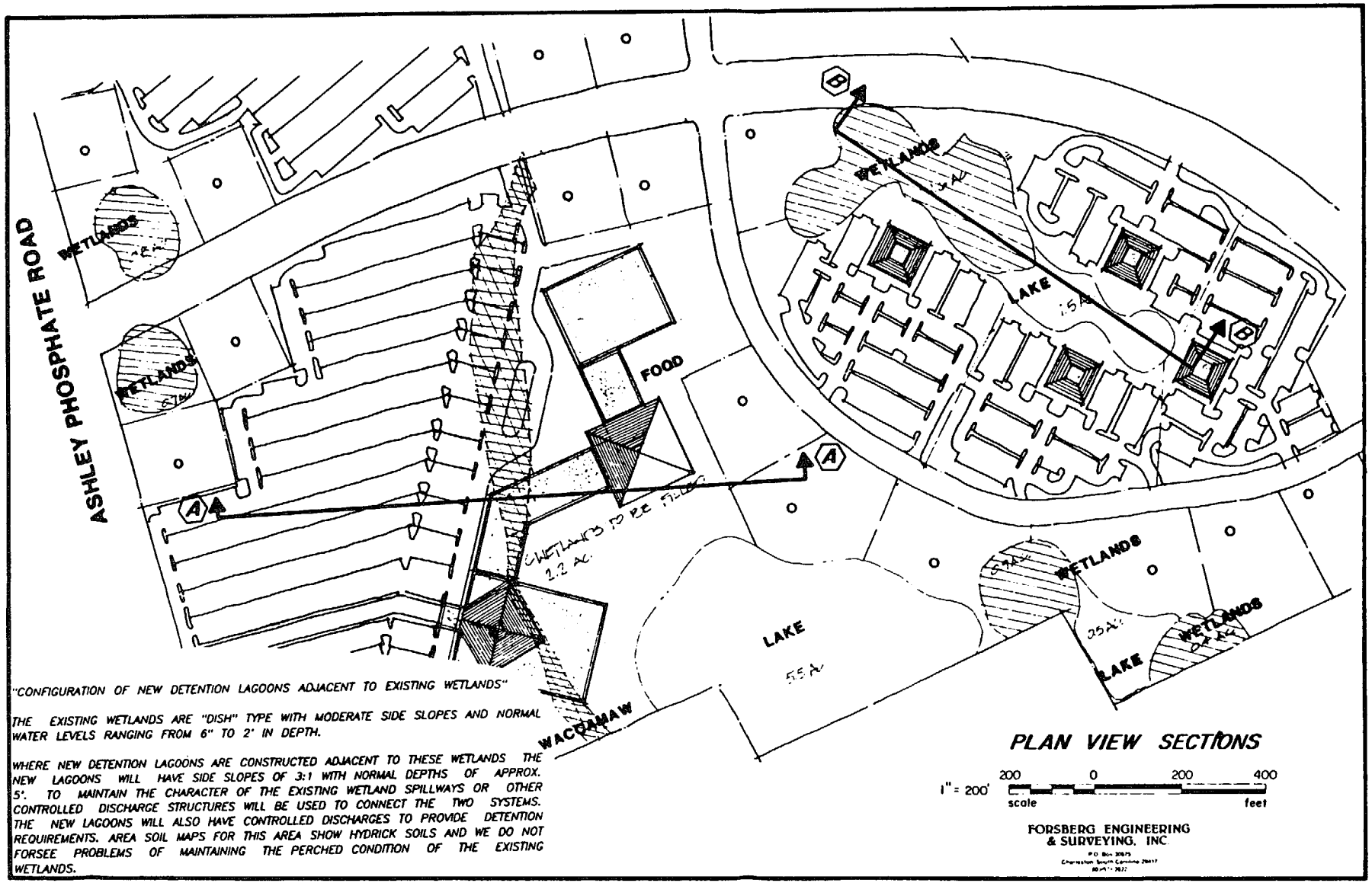
SITE INVENTORY

Total Site	1717.262 Acres
Total Wetlands	7.9 Acres
Affected Wetlands	2.2 Acres
Protected & Enhanced Wetlands	5.7 Acres
New Detention Lagoons & Dry Detention Areas	11.5 Acres
Existing Detention (Contiguous)	12.4 Acres
Total Wetland Storage & New Detention	18.1 Acres



VICINITY MAP SCALE: 1" = 2000'


DATUM: MEAN SEA LEVEL
30
25
20
LIMITS OF "WETLANDS"
APPROX. FILL LEVEL
EXISTING GROUND
NORMAL HIGH WATER LINE
SCALE
1" = 5' (VERTICAL)
1" = 200' (HORIZONTAL)
SECTION A - A
LIMITS OF "WETLANDS"
SPILLWAY FROM EXISTING WETLAND
CONTROLLED NORMAL LEVEL
CONTROLLED DISCHARGE TO LOWER DETENTION AREA
CONTROLLED LEVEL
EXISTING GROUND
PROPOSED DETENTION POND
SLOPE 3:1 TYP.
SECTION B - B



"CONFIGURATION OF NEW DETENTION LAGOONS ADJACENT TO EXISTING WETLANDS"

THE EXISTING WETLANDS ARE "DISH" TYPE WITH MODERATE SIDE SLOPES AND NORMAL WATER LEVELS RANGING FROM 6" TO 2' IN DEPTH.

WHERE NEW DETENTION LAGOONS ARE CONSTRUCTED ADJACENT TO THESE WETLANDS THE NEW LAGOONS WILL HAVE SIDE SLOPES OF 3:1 WITH NORMAL DEPTHS OF APPROX. 5'. TO MAINTAIN THE CHARACTER OF THE EXISTING WETLAND SPILLWAYS OR OTHER CONTROLLED DISCHARGE STRUCTURES WILL BE USED TO CONNECT THE TWO SYSTEMS. THE NEW LAGOONS WILL ALSO HAVE CONTROLLED DISCHARGES TO PROVIDE DETENTION REQUIREMENTS. AREA SOIL MAPS FOR THIS AREA SHOW HYDRICK SOILS AND WE DO NOT FORSEE PROBLEMS OF MAINTAINING THE PERCHED CONDITION OF THE EXISTING WETLANDS.

CONDITIONS AND "BEST MANAGEMENT PRACTICES" FOR ACTIVITIES AUTHORIZED UNDER CORPS OF ENGINEERS NATIONWIDE PERMITS

The following information has been compiled from Corps of Engineers regulations found at 33 CFR 330.5(b), and 330.6 indicates the conditions and "best management practices" which must be complied with in order for a project to be authorized under one of the nation wide permits.

CONDITIONS:

1. The discharge of dredged or fill material will not occur in the proximity of a public water supply intake.

2. The discharge will not occur in areas of concentrated shellfish production (unless the activity is related to shellfish harvesting as authorized under nationwide permit #4)

3. The work will not jeopardize a threatened or endangered species, or destroy or adversely modify the critical habitat of such species.

4. The activity will not significantly disrupt the movement of fish and other aquatic life in the affected waters (unless the purpose of the work is to impound water).

5. The material used will be free of toxic pollutants in toxic amounts.

6. The structure or fill will be properly maintained.

7. The activity will not occur in an area which has been included as part of the National Wild and Scenic River System.

8. The activity must not cause an unacceptable interference with navigation.

9. The "best management practices" listed below will be followed to the maximum extent practicable.

BEST MANAGEMENT PRACTICES:

The following practices should be followed, to the maximum extent possible in order to minimize the adverse effects on the aquatic environment. Failure to comply with these practices may be cause for the district engineer to recommend to the division engineer that an individual permit be required.

1. Discharges of dredged or fill material into waters of the United States shall be avoided or minimized through the use of practical alternatives.

2. Discharges into spawning areas during spawning seasons shall be avoided.

3. Discharges shall not restrict or impede the movement of aquatic species indigenous to the waters or the passage of normal or expected high flows, or cause the relocation of water (unless the primary purpose of the fill is to impound waters).

4. If the discharge creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, shall be minimized.

5. Discharge in wetland areas shall be avoided.

6. Heavy equipment working in wetlands shall be placed on mats.

7. Discharges into breeding areas for migratory waterfowl shall be avoided.

8. All temporary fills shall be removed in their entirely.

If you have any questions concerning any of the above, do not hesitate to contact the Charleston District Regulatory Branch at (803) 724-4330.

APPENDIX B

PLANT LIST

This list contains many of the species described in the earlier chapters of this booklet and is provided as supplemental information.

This list contains a designation referred to as "STATUS", where a value of 1, 2 or 3 is given. The definition for this status is as follows:

1 - A plant that is generally found only in wetlands under natural conditions.

2 - A plant that is usually (greater than 2/3 of the time) found in wetlands, but which may be occasionally found in non-wetland areas under natural conditions.

3 - A plant that sometimes (1/3 to 2/3 of the time) occurs in wetlands, but is also commonly found in uplands.

TREES

STATUS	COMMON NAME	SCIENTIFIC NAME
1	Bald Cypress	*Taxodium distichum*
1	Swamp Tupelo	*Nyssa aquatica*
1	Carolina Ash	*Fraxinus caroliniana*
1	Planer Tree	*Planera aquatica*
1	Black Willow	*Salix nigra*
1	Hazel Alder	*Alnus serrulata*
1	Pond Pine	*Pinus serotina*
1	*Sweet Bay*	*Magnolia virginiana*
1	River Birch	*Betula nigra*
1	Water Hickory	*Carya aquatica*
2	Laurel Oak	*Quercus laurifolia*
2	Swamp Chestnut Oak	*Quercus michauxii*
2	American Elm	*Ulmus americana*
2	Black Gum	*Nyssa sylvatica (biflora)*
2	Red Bay	*Persea borbonia*
2	Loblolly Bay	*Gordonia lasianthus*
2	Sweet Gum	*Liquidambar styraciflua*
2	Lowland Hackberry	*Celtis laevigata*
2	Box Elder	*Acer negundo*
2	Bitternut Hickory	*Carya cordiformis*
3	Red Maple	*Acer rubrum*
3	Ironwood	*Carpinus caroliniana*
3	Cottonwood	*Populus deltoides*
3	Loblolly Pine	*Pinus teada*
3	Longleaf Pine	*Pinus palustris*

SHRUBS

STATUS	COMMON NAME	SCIENTIFIC NAME
1	Buttonbush	*Cephalanthus occidentalis*
1	Sweetspire	*Itea virginica*
2	Fetterbush	*Leucothoe racemosa*
2	Titi	*Cyrilla racemiflora*
2	Swamp Dogwood	*Cornus foemina*
2	Gallberry	*Ilex coriacea*
2	Inkberry	*Ilex glabra*
2	Fetterbush	*Lyonia lucida*
2	Sweet Pepperbush	*Clethra alnifolia*
2	Silverling	*Baccharis halimifolia*
2	Swamp Azalea	*Rhododendron canescens*
2	Elderberry	*Sambucus canadensis*
2	Dwarf Palmetto	*Sabal minor*
3	Arrow Wood	*Viburnum dentatum*
3	Wax Myrtle	*Myrica cerifera*

FERNS

STATUS	COMMON NAME	SCIENTIFIC NAME
1	Royal Fern	*Osmunda regalis*
1	Netted Chain Fern	*Woodwardia aerolata*
1	Virginia Chain Fern	*Woodwardia virginica*
2	Cinnamon Fern	*Osmunda cinnamomea*
2	Sensitive Fern	*Onoclea sensibilis*
3	Southern Lady Fern	*Athyrium asplenoides*

HERBACEOUS PLANTS

STATUS	COMMON NAME	SCIENTIFIC NAME
1	Bulrushes	*Scirpus spp.**
1	Bur-reeds	*Sparganium spp.*
1	Lizard's Tail	*Saururus cernuus*
1	False Nettle	*Boehmeria cylindrica*
1	Arrowheads	*Sagittaria spp.*
1	Pitcher Plants	*Sarracenia spp.*
1-2	Sedges	*Carex spp.*
1-2	Rushes	*Juncus spp.*
1-2	Spike Rushes	*Eleocharis spp.*
1-2	Umbrella Sedges	*Cyperus spp.*
1-2	Smart Weeds	*Polygonum spp.*
1-2	Yellow-eyed Grass	*Xyris spp.*
2	Jack-in-the-pulpit	*Arisaema triphyllum*

VINES

STATUS	COMMON NAME	SCIENTIFIC NAME
2	Pepper Vine	*Ampelopsis arborea*
2-3	Cat Brier, Green Brier	*Smilax spp.*
2-3	Grape Vine	Vitis spp.

*** ("spp." indicates numerous species)**

United States
Department of
Agriculture

Soil
Conservation
Service

Hydric Soils of the State of South Carolina 1985

In cooperation with the National Technical Committee for Hydric Soils

National Technical Committee for Hydric Soils:

Keith Young, Chairman, Soil Survey Division, SCS, Washington, DC
P.R. Johnson, Soil Staff, MWNTC, SCS, Lincoln, NE
Arville Touchet, State Soil Scientist, SCS, ALexandria, LA
W.B. Parker, National Wetlands Inventory FWS, St. Petersburg, FL
Del Fanning, Dept. of Agronomy, University of Maryland, College Park, MD
W. H. Patrick, Jr., Laboratory for Wetland Soils and Sediments, Louisiana State University, Baton Rouge, LA
Carl Thomas, Ecological Sciences Division, SCS Washington, DC
Keith Schmude, Resources Inventory Division, SCS, Washington, DC
Richard Guthrie, Dept. of Agronomy and Soils, Auburn University, Auburn, AL
Bill Sipple, Environmental Protection Agency, Washington, DC
D.R. Sanders, Waterways Experiment Station, USAE, Vicksburg, MS
Dick Kover, Head, Soils Staff, WNTC, SCS, Portland, OR
Oliver Rice, Soils Staff, NNTC, SCS, Chester, PA

PROCEDURE FOR ADDING OR DELETING SOILS FROM THE LIST OF HYDRIC SOILS

If soils are on the list of hydric soils that should be removed or soil that are not on the list that should be listed, gather supporting data to make your case and either:

1. submit the rational and the proposed changes in the hydric soils criteria along with your supporting data to Keith Young, Chairman, National Technical Committee for Hydric Soils, SCS, P.O. Box 2890, Washington, DC 20013 or

2. submit the rational and proposed changes in the SOI-5 data or definition of the soil series to the state soil scientist in the state that has the responsibility for the series. The state soil scientist will follow the normal SCS update procedures (see National Soils Handbook, section 603.12(c)(2).

REVISED EDITIONS OF THE LIST OF HYDRIC SOILS

The list of hydric soils will be updated as changes in the criteria are initiated or changes in the soil interpretations (SOI-5 data) or soil series are made. A revised edition will be printed as needed.

First Edition
October 1985

INTRODUCTION

The list of hydric soils contains soils that are sufficiently wet under undrained conditions to support the growth and regeneration of hydrophytic vegetation. The list includes hydric soils that are either drained or undrained; therefore, not all areas of hydric soils support predominantly hydrophytic vegetation and thus are not wetland. In some soil series only those phases that are ponded or are frequently flooded for long or very long duration meet the criteria for hydric soils.

This list of hydric soils was created by computer using criteria that was developed by the National Technical Committee for Hydric Soils and reviewed by the agencies making up the committee.The criteria are selected soil properties that are documented in Soil Taxonomy and Soil Interpretations Records (SOI-5).

This list will have a number of agricultural and non-agricultural applications. These include assistance in land-use planning, conservation planning, mapping, classifying and delineating wetlands, mitigation planning, and assessment of potential wildlife habitat. This list, used in conjunction with the list of hydrophytes, is part of the procedure for classifying wetland as described in "Classification of Wetlands and Deepwater Habitats of the United States", U. S. Fish and Wildlife Service, December 1979.

DEFINITION OF HYDRIC SOIL

A hydric soil is a soil that in its undrained condition is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation.

CRITERIA FOR HYDRIC SOILS

1. All Histosols except Folists, or

2.Soils in Aquic suborders, Aquic subgroups, Albolls suborder, Salorthids great group, or Pell great groups of Vertisols that are:

   a. Somewhat poorly drained and have water table less than 0.5 ft. from the surface at some time during the growing season, or

   b. poorly drained or very poorly drained and have either:

      (1) water table at less than 1.0 ft. from the surface at some time during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within 20 inches, or

      (2) water table at less than 1.5 ft. from the surface at some time during the growing season if permeabilityis less than 6.0 in/hr. in any layer within 20 inches, or

3. Soils that are ponded during any part of the growing season, or

4. Soils that are frequently flooded for long duration or vary long duration during the growing season.

GLOSSARY OF TERMS USED IN DEFINING HYDRIC SOILS

Anaerobic: a situation in which nolecular oxygen is absent from the environment.

Drained: a condition in which ground or surface water has been removed by artificial means.

Flooded: a condition in which the soil surface is temporality covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high ties, or any combination of sources.

Frequently Flooded: a class of flooding in which flooding in likely to occur often under usual weather conditions (more than 50 percent chance of flooding in any year, or more than 50 items in 100 year).

Growing Season: the portion of the year when soil temperatures are above biologic zero (5 degrees C), as defined by Soil Taxonomy. The following growing season months are assumed for each of the soil temperature regimes:

Isohyperthermic: January-December
Hyerthermic: February-December
Isothermic: January-December
Thermic: March-October
Isomesic: January-December
Mesic: April-October
Frigid: June-September
Cryic: June-August
Pergelic: July-August

Hydrophytic Vegetation: plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

Long Duration (flooding): a duration class in which inundation for a single event ranges from 7 days to 1 month.

Permeability: the quality of the soil that enables water to move downward through the profile, measured as the number of inches per hour that water moves downward through the saturated soil.

Phase Soil: subdivision of a soul series based on features (e.g. slope, surface texture, stoniness, and thickness).

Ponded: a condition in which water stands in a closed depression. The water is removed only by percolation, evaporation, or transpriation.

Poorly Drained: water is removed from the soil so slowly that the soil is saturated periodically during the growing season or remains wet for long periods. SATURATED: a condition in which all voids (pores) between soil particles are filled with water.

Soil Series: a group of soils having horizons similar in differentiating characteristics and arrangements in the soil profile, except for texture of the surface layer.

Somewhat Poorly Drained: water is removed slowly enough that the soil is wet for significant periods during the growing season.

Very Long Duration (flooding): a duration class in which inundation for a single event is greater than 1 month.

Very Poorly Drained: water is removed from the soil so slowly that free water remains at or on the surface during most of the growing season.

Water Table: the zone of saturation at the highest average depth during the wettest season. It is at least six inches thick and persists in the soil for more than a few weeks.

HYDRIC SOILS OF
SOUTH CAROLINA

REVISED AUGUST 6, 1985

(THE "HYDRIC CRITERIA NUMBER" COLUMN INDICATES WHAT CAUSED THE SOIL TO BE INCLUDED IN THE HYDRIC LIST. SEE THE "CRITERIA FOR HYDRIC SOILS" TO DETERMINE THE MEANING OF THIS COLUMN.)

SERIES AND SUBGROUP	TEMPER-ATURE	DRAIN-AGE CLASS	HIGH WATER TABLE		PERM. WITHIN 20 INCHES	FLOODING			HYDRIC CRI-TERIA NUMBER	CAPABILITY	
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
ARGENT (SC0019) TYPIC OCHRAQUALFS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W
ARMENIA (SC0087) TYPIC ARGIAQUOLLS	THERMIC	P	0.5-1.5	DEC-APR	<6.0	RARE-COMMON	BRIEF	DEC-APR	2B2	RARE,OCCAS FREQ	3W 6W
BARATARI (SC0028) AERIC HAPLAQUODS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	4W 6W
BAYBORO (NC0029) UMBRIC PALEAQUULTS	THERMIC	VP	0 -1.0	DEC-MAY	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
BAYBORO, PONDED (NC0141) UMBRIC PALEAQUULTS	THERMIC	VP	+1 -1.0	DEC-MAY	<6.0	NONE			2B2	ALL	6W
BETHERA (SC0023) TYPIC PALEAQUULTS	THERMIC	P	+1 -1.5	DEC-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
BETHERA, FLOODED (SC0109) TYPIC PALEAQUULTS	THERMIC	P	0 -1.5	DEC-APR	<6.0	COMMON	BRIEF-LONG	DEC-APR	2B2	OCCAS FREQ	4W 6W
BIBB (AL0033) TYPIC FLUVAQUENTS	THERMIC	P	0.5-1.5	DEC-APR	<6.0	COMMON	BRIEF	DEC-MAY	2B2	OCCAS FREQ	3W 5W
BLADEN (GA0007) TYPIC ALBAQUULTS	THERMIC	P	0 -1.0	DEC-MAY	<6.0	NONE			2B2	UNDRAINED DRAINED	6W 3W
BLADEN, PONDED (GA0070) TYPIC ALBAQUULTS	THERMIC	P	+1 -1.0	DEC-MAY	<6.0	NONE			2B2	ALL	5W
BOHICKET (SC0022) TYPIC SULFAQUENTS	THERMIC	VP	+3 -0	JAN-DEC	<6.0	FREQUENT	V.BRIEF	JAN-DEC	2B2	ALL	8W
BROOKMAN (GA0065) TYPIC UMBRAQUALFS	THERMIC	VP	0 -1.0	NOV-MAY	<6.0	NONE-COMMON	LONG	NOV-APR	2B2	UNDRAINED DRAINED	6W 3W
BYARS (SC0036) UMBRIC PALFAQUULTS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
BYARS, FLOODED (SC0119) UMBRIC PALEAQUULTS	THERMIC	VP	0 -1.0	JAN-DEC	<6.0	COMMON	LONG	FEB-MAY	2B2	ALL	6W
CANTEY (SC0048) TYPIC ALBAQUULTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W

SOUTH CAROLINA
HYDRIC SOILS -- CONTINUED

REVISED AUGUST 6, 1985

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SERIES AND SUBGROUP	TEMPER-ATURE	DRAIN-AGE CLASS	HIGH WATER TABLE		PERM. WITHIN 20 INCHES	FLOODING			HYDRIC CRI-TERIA NUMBER	CAPABILITY	
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
CAPE FEAR (NC0061) TYPIC UMBRAQUULTS	THERMIC	VP	0 -1.5	DEC-APR	<6.0	NONE-RARE			2B2	UNDRAINED DRAINED	6W 3W
CAPERS (GA0010) TYPIC SULFAQUENTS	THERMIC	VP	+1 -1.0	JAN-DEC	<6.0	FREQUENT	V.BRIEF	JAN-DEC	2B2	ALL	8W
CARTECAY, PONDED (GA0085) AQUIC UDIFLUVENTS	THERMIC	SP	+1 -1.5	OCT-JUL	<6.0	NONE			2A	ALL	7W
CHASTAIN (SC0035) TYPIC FLUVAQUENTS	THERMIC	P	0 -1.0	NOV-MAY	<6.0	COMMON	V.LONG	DEC-APR	2B2	OCCAS FREQ	4W 6W
CHENNEBY, PONDED (AL0105) FLUVAQUENTIC DYSTROCHREPTS	THERMIC	SP	+1 -1.5	DEC-JUN	<6.0	NONE			2A	ALL	4W
COXVILLE (NC0045) TYPIC PALEAQUULTS	THERMIC	P	0 -1.5	NOV-APR	<6.0	NONE			2B2	UNDRAINED DRAINED	4W 3W
DASHER (GA0040) TYPIC MEDIHEMISIS	THERMIC	VP	+3 -0.5	NOV-AUG	<6.0	NONE			1	UNDRAINED DRAINED	7W 4W
DAWHOO (SC0070) TYPIC HUMAQUEPTS	THERMIC	VP	0 -1.0	NOV-APR	>=6.0	FREQUENT	LONG	NOV-APR	2B1	DRAINED UNDRAINED	4W 6W
DELOSS (NC0109) TYPIC UMBRAQUULTS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
DOROVAN (MS0076) TYPIC MEDISAPRISTS	THERMIC	VP	+1 -0.5	JAN-DEC	<6.0	COMMON	V.LONG	JAN-DEC	1	ALL	7W
ELLOREE (SC0113) ARENIC OCHRAQUALFS	THERMIC	P	0 -1.0	NOV-APR	>=6.0	COMMON	LONG	DEC-APR	2B1	ALL	6W
ENOREE (SC0065) AERIC FLUVAQUENTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	FREQUENT	BRIEF	JAN-DEC	2B2	DRAINED UNDRAINED	4W 5W
GRADY (GA0008) TYPIC PALEAQUULTS	THERMIC	P	+2 -1.0	DEC-JUN	<6.0	NONE			2B2	ALL	5W
GRADY, DRAINED (GA0072) TYPIC PALEAQUULTS	THERMIC	P	0 -1.0	DEC-JUN	<6.0	NONE			2B2	ALL	4W
GRIFTON (NC0034) TYPIC OCHRAQUALFS	THERMIC	P	0.5-1.0	DEC-MAY	<6.0	NONE-OCCASIONAL	BRIEF	DEC-MAY	2B2	UNDRAINED DRAINED	6W 3W

SOUTH CAROLINA
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SERIES AND SUBGROUP	TEMPER-ATURE	DRAIN-AGE CLASS	HIGH WATER TABLE		PERM. WITHIN 20 INCHES	FLOODING			HYDRIC CRI-TERIA NUMBER	CAPABILITY	
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
HANDSBORO (MS0092) TYPIC SULFIHEMISTS	THERMIC	VP	+3 -0.5	JAN-DEC	<6.0	FREQUENT	V.LONG	JAN-DEC	1	ALL	8W
HOBCAW (SC0096) TYPIC UMBRAQUULTS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
HOBCAW, FLOODED (SC0108) TYPIC UMBRAQUULTS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	RARE-COMMON	LONG	DEC-APR	2B2	RARE OCCAS,FREQ	3W 6W
HOBONNY (SC0061) TYPIC MEDISAPRISTS	THERMIC	VP	+1 -0	JAN-DEC	<6.0	FREQUENT	V.LONG	JAN-DEC	1	ALL	7W
HYDE (NC0084) TYPIC UMBRAQUULTS	THERMIC	VP	0 -1.5	DEC-APR	<6.0	RARE			2B2	DRAINED UNDRAINED	3W 6W
JOHNSTON (NC0043) CUMULIC HUMAQUEPTS	THERMIC	VP	+1 -1.5	NOV-JUN	<6.0	COMMON	BRIEF-LONG	NOV-JUL	2B2	UNDRAINED,FREQ DRAINED,OCCAS	7W 4W
LEAF (MS0063) TYPIC ALBAQUULTS	THERMIC	P	0.5-1.5	JAN-APR	<6.0	NONE-COMMON	BRIEF	JAN-APR	2B2	ALL	4W
LENOIR (NC0048) AERIC PALEAQUULTS	THERMIC	SP	1.0-2.5	DEC-MAY	<6.0	FREQUENT	LONG	DEC-JUN	4	FREQ	5W
LEON (FL0051) AERIC HAPLAQUODS	THERMIC	P	0 -1.0	JUN-FEB	<6.0	NONE			2B2	ALL	4W
LEON, FLOODED (FL0406) AERIC HAPLAQUODS	THERMIC	P	0 -1.0	JUN-FEB	<6.0	COMMON	LONG	MAR-SEP	2B2	OCCAS FREQ	4W 6W
LEVY (SC0060) TYPIC HYDRAQUENTS	THERMIC	VP	+2 -+1	JAN-DEC	<6.0	FREQUENT	V.LONG	JAN-DEC	2B2	ALL	7W
LUMBEE (NC0076) TYPIC OCHRAQUULTS	THERMIC	P	0 -1.5	NOV-APR	<6.0	RARE-COMMON	BRIEF-LONG	NOV-MAR	2B2	UNDRAINED DRAINED	6W 3W
LYNN HAVEN (FL0052) TYPIC HAPLAQUODS	THERMIC	P	0 -1.0	JUN-FEB	<6.0	NONE			2B2	ALL	4W
MCCOLL (SC0011) TYPIC FRAGIAQUULTS	THERMIC	P	+1 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED UNDRAINED	3W 6W
MEGGETT (GA0068) TYPIC ALBAQUALFS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE-COMMON	LONG	DEC-APR	2B2	NONE,RARE OCCAS,FREQ DRAINED	4W 6W 3W

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			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
MYATT (AL0036) TYPIC OCHRAQUULTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE-COMMON	BRIEF	NOV-MAR	2B2	NONE,RARE, DRAINED NONE,RARE,OCCAS FREQ	3W 4W 5W
OGEECHEE (GA0036) TYPIC OCHRAQUULTS	THERMIC	P	0 -0.5	DEC-MAY	<6.0	NONE-COMMON	BRIEF	DEC-MAY	2B2	DRAINED UNDRAINED	3W 4W
OGEECHEE, PONDED (GA0081) TYPIC OCHRAQUULTS	THERMIC	P	+1.-0.5	DEC-MAY	<6.0	NONE			2B2	ALL	5W
OSIER (GA0025) TYPIC PSAMMAQUENTS	THERMIC	P	0 -1.0	NOV-MAR	>=6.0	NONE-RARE			2B1	DRAINED UNDRAINED	3W 5W
OSIER, FLOODED (GA0089) TYPIC PSAMMAQUENTS	THERMIC	P	0 -1.0	NOV-MAR	>=6.0	COMMON	BRIEF	DEC-APR	2B1	DRAINED UNDRAINED	3W 5W
OSIER, PONDED (GA0078) TYPIC PSAMMAQUENTS	THERMIC	P	+1 -1.0	NOV-MAR	>=6.0	NONE			2B1	ALL	5W
PAMLICO (NC0050) TERRIC MEDISAPRISTS	THERMIC	VP	0 -1.0	DEC-MAY	<6.0	RARE	LONG	JAN-DEC	1	UNDRAINED DRAINED	7W 4W
PAMLICO, FLOODED (NC0159) TERRIC MEDISAPRISTS	THERMIC	VP	+1 -0	JAN-DEC	<6.0	FREQUENT	BRIEF-LONG	JAN-DEC	1	ALL	7W
PAMLICO, LOAMY SUBSTRATUM (NC0154) TERRIC MEDISAPRISTS	THERMIC	VP	0 -1.0	JAN-DEC	<6.0	RARE			1	ALL	7W
PAMLICO, PONDED (NC0155) TERRIC MEDISAPRISTS	THERMIC	VP	+2 -0	DEC-MAY	<6.0	RARE			1	ALL	7W
PANTEGO (NC0051) UMBRIC PALEAQUULTS	THERMIC	P	0 -1.5	DEC-MAY	<6.0	NONE-RARE			2B2	UNDRAINED DRAINED	6W 3W
PAXVILLE (SC0052) TYPIC UMBRAQUULTS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W
PELHAM (GA0015) ARENIC PALEAQUULTS	THERMIC	P	0.5-1.5	JAN-APR	>=6.0	NONE-RARE			2B1	DRAINED UNDRAINED	3W 5W
PELHAM, FLOODED (GA0088) ARENIC PALEAQUULTS	THERMIC	P	0.5-1.5	JAN-APR	>=6.0	COMMON	BRIEF	DEC-MAR	2B1	DRAINED UNDRAINED	3W 5W

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HYDRIC SOILS -- CONTINUED

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SERIES AND SUBGROUP	TEMPER-ATURE	DRAIN-AGE CLASS	HIGH WATER TABLE		PERM. WITHIN 20 INCHES	FLOODING			HYDRIC CRI-TERIA NUMBER	CAPABILITY	
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
PELHAM, PONDED (GA0079) ARENIC PALEAQUULTS	THERMIC	P	+1 -1.5	JAN-APR	>=6.0	NONE			2B1	ALL	5W
PICKNEY (SC0027) CUMULIC HUMAQUEPTS	THERMIC	VP	+1 -1.0	NOV-APR	>=6.0	NONE			2B1	DRAINED UNDRAINED	4W 6W
PLUMMER (GA0031) GROSSARENIC PALEAQUULTS	THERMIC	P	0 -1.5	DEC-JUL	<6.0	NONE-COMMON	BRIEF	DEC-JUL	2B2	UNDRAINED DRAINED	4W 3W
PLUMMER, PONDED (GA0071) GROSSARENIC PALEAQUULTS	THERMIC	P	+2 -1.5	DEC-JUL	<6.0	NONE			2B2	ALL V LONG	5W 7W
POCOMOKE, DRAINED (MD0114) TYPIC UMBRAQUULTS	THERMIC	VP	0 -1.5	DEC-MAY	<6.0	NONE			2B2	SL,FSL LS	3W 3W
POCOMOKE, PONDED (MD0002) TYPIC UMBRAQUULTS	THERMIC	VP	+1.-0	NOV-JUN	<6.0	NONE			2B2	ALL	4W
POLAWANA (SC0032) CUMULIC HUMAQUEPTS	THERMIC	VP	+1 -0.5	NOV-APR	>=6.0	FREQUENT	V.LONG	DEC-MAR	2B1	DRAINED UNDRAINED	4W 6W
PONZER (NC0077) TERRIC MEDISAPRISTS	THERMIC		0 -1.0	DEC-MAY	<6.0	RARE-COMMON	BRIEF-LONG	DEC-MAY	1	UNDRAINED DRAINED,BRIEF	7W 4W
PORTSMOUTH (NC0128) TYPIC UMBRAQUULTS	THERMIC	VP	0 -1.0	DEC-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W
PUNGO (NC0096) TYPIC MEDISAPRISTS	THERMIC	VP	0 -1.0	DEC-MAY	<6.0	RARE			1	UNDRAINED DRAINED	7W 4W
RAINS (SC0020) TYPIC PALEAQUULTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE			2B2	ALL	3W
RAINS, FLOODED (SC0116) TYPIC PALEAQUULTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	COMMON	BRIEF	NOV-APR	2B2	OCCAS FREQ	4W 6W
REMBERT (SC0010) TYPIC OCHRAQUULTS	THERMIC	P	+1 -1.0	NOV-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W

SOUTH CAROLINA
HYDRIC SOILS -- CONTINUED

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SERIES AND SUBGROUP	TEMPER-ATURE	DRAIN-AGE CLASS	HIGH WATER TABLE		PERM. WITHIN 20 INCHES	FLOODING			HYDRIC CRI-TERIA NUMBER	CAPABILITY	
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
ROANOKE (VA0074) TYPIC OCHRAQUULTS	THERMIC	P	0 -1.0	NOV-MAY	<6.0	NONE-FREQUENT	BRIEF	NOV-JUN	2B2	DRAINED, NONE, RARE, OCCAS UNDRAINED, NONE, RARE, OC ? FREQ	3W 4W 5W
ROANOKE, PONDED (VA0198) TYPIC OCHRAQUULTS	THERMIC	P	+3 -0	OCT-JUL	<6.0	FREQUENT	V.LONG	OCT-JUL	2B2	ALL	7W
ROSEDHU (SC0029) TYPIC HAPLAQUODS	THERMIC	P	+1 -1.0	NOV-MAY	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	4W 6W
RUTLEGE (MD0003) TYPIC HUMAQUEPTS	THERMIC	VP	0 -1.0	DEC-MAY	>=6.0	COMMON	BRIEF	DEC-MAY	2B1	DRAINED UNDRAINED	4W 6W
RUTLEGE, PONDED (MD0102) TYPIC HUMAQUEPTS	THERMIC	VP	+2 -1.0	DEC-MAY	>=6.0	NONE			2B1	DRAINED UNDRAINED	4W 6W
SANTEE (SC0038) TYPIC ARGIAQUOLLS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	NONE-COMMON	BRIEF-LONG	NOV-APR	2B2	NONE, RARE, DRAINED UNDRAINED OCCAS, DRAINED	3W 6W 4W
STONO (SC0071) TYPIC ARGIAQUOLLS	THERMIC	VP	+1 -1.0	NOV-APR	<6.0	COMMON	LONG	NOV-APR	2B2	DRAINED UNDRAINED	3W 6W
TAWCAW (SC0034) FLUVAQUENTIC DYSTROCHREPTS	THERMIC	SP	1.5-2.5	NOV-APR	<6.0	FREQUENT	LONG	DEC-APR	4	FREQ	6W
TOMOTLEY (SC0076) TYPIC OCHRAQUULTS	THERMIC	P	0 -1.0	DEC-MAR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 4W
TORHUNTA (NC0067) TYPIC HUMAQUEPTS	THERMIC	VP	0.5-1.5	DEC-MAY	<6.0	NONE-COMMON	BRIEF	NOV-APR	2B2	DRAINED UNDRAINED	3W 6W
WADMALAW (SC0067) UMBRIC OCHRAQUALFS	THERMIC	P	+1 -1.0	NOV-APR	<6.0	NONE-RARE			2B2	DRAINED UNDRAINED	3W 6W
WEHADKEE (NC0052) TYPIC FLUVAQUENTS	THERMIC	P	0 -2.5	DEC-MAY	<6.0	COMMON	BRIEF	NOV-JUN	2B2	DRAINED, OCCAS UNDRAINED, FREQ	4W 6W
WILLIMAN (SC0054) ARENIC OCHRAQUULTS	THERMIC	P	0 -1.0	DEC-APR	<6.0	NONE-RARE			2B2	ALL	3W
WOODINGTON (NC0036) TYPIC PALEAQUULTS	THERMIC	P	0.5-1.0	DEC-MAY	<6.0	NONE			2B2	UNDRAINED DRAINED	6W 3W

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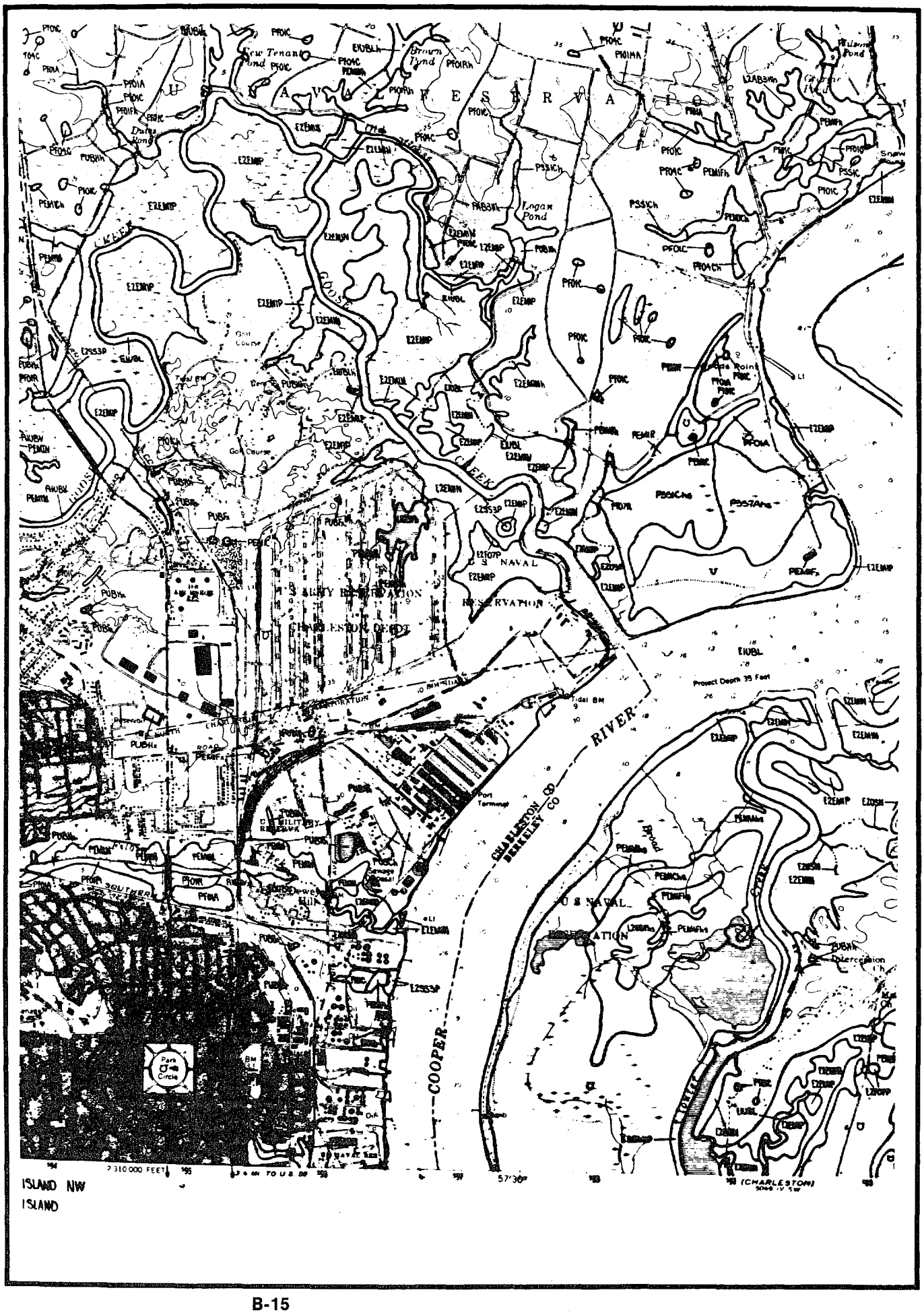
			DEPTH	MONTHS		FREQUENCY	DURATION	MONTHS		CRITICAL PHASE CRITERIA	CLASS AND SUB-CLASS
WORSHAM (VA0009) TYPIC OCHRAQUULTS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE			2B2	0-3%	5W
										3-8%	4W
YONGES (SC0056) TYPIC OCHRAQUALFS	THERMIC	P	0 -1.0	NOV-APR	<6.0	NONE			2B2	DRAINED	3W
										UNDRAINED	6W
YONGES, FLOODED (SC0112) TYPIC OCHRAQUALFS	THERMIC	P	0 -1.0	NOV-APR	<6.0	COMMON	BRIEF	DEC-APR	2B2	OCCAS	4W
										FREQ	6W



U S NAVAL RESERVATION
Brown Pond
Logan Pond
Golf Course
Project Depth 35 Feet
Tidal BM
RIVER
COOPER
CHARLESTON CO
BERKELEY CO
U S NAVAL RESERVATION
Park Circle
2 310 000 FEET
57'30"
(CHARLESTON)
ISLAND NW
ISLAND

SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE

Preservation Programs

Survey
National Register of Historic Places
Survey and Planning Grants
Review and Compliance
Tax Incentives
Certificated Local Governments
Statewide Comprehensive Historic Preservation Plan

Review and Compliance

The Review and Compliance program advises and assists Federal agencies and the South Carolina Coastal Council in their compliance with federal and state regulations. The purpose of the State Historic Preservation Office's (SHPO) Review and Compliance program is to ensure Federal agency compliance of Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and to protect and preserve the irreplaceable archaeological, architectural, and cultural resources significant to the Nation's and/or State's heritage. Section 106 stipulates the following:

> "The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or priorto the issuance of any license, as the case may be, may take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking."

Section 106 compliance procedures apply to undertakings which involve Federal property, assistance, and licensing.Under South Carolina Coastal Council regulations at "General Areas of Particular Concern," similar compliance procedures are required for undertakings which require Coastal Council permits or certification. Typical steps in the Section 106 compliance process include the following:

1. Federal agency or representative notifies SHPO of a proposed undertaking.

2. SHPO reviews proposed undertaking and submits written recommendations and opinions to Federal agency with copies to appropriate parties. If a cultural resources survey is recommended, the SHPO offers to provide technical assistance such as sample Request for Proposals (RFP) and review of proposals.

3. Federal agency, after consultation with SHPO, notified applicant of required compliance stipulations which must occur prior to approval or initiation of proposed project.

4. SHPO may be asked by agency or applicant for technical assistance. (We recommend that the applicant and his contract archaeologist work closely with the SHPO; SHPO review and comment of the Research Proposal can prove beneficial to all parties.)

5. SHPO receives two review copies of the technical Report of Investigations. The report is accompanied by a letter stating the agency's opinion of the results of the cultural resources investigations and a request for the SHPO's review and consultation regarding that opinion.

6. SHPO reviews the report with particular attention paid to research procedures, descriptions, and National Register eligibility assessments and justifications.SHPO's letter to the agency provides SHPO's opinion of the research, National Register eligibility evaluations, and effect of the project on significant properties.SHPO letter advises the agency of recommended procedures which should next take place.

7. If there is a determination of adverse effect, the SHPO, agency, and interested parties seek project design alternatives which will avoid adverse effects.

8. If Register listed or eligible properties will be adversely affected by the proposed undertaking, the SHPO, agency, and applicant, in consultation with the Advisory Council on Historic Preservation, develop a Memorandum of Agreement for the preservation and/or mitigation of the resources.

9. If there is a failure to agree, the agency may consult with and seek the opinion of the Advisory Council.

10. At no stage of the undertaking should landscape altering activities be conducted prior to final project approval by the federal agency, in consultation with the SHPO.

South Carolina Coastal Council: Typical steps in the Coastal Council compliance process include the following:

1. Applicant notifies S.C. Coastal Council of proposed undertaking.

2. Coastal Council reviews project and notifies applicant and SHPO of permit/certification stipulations regarding archaeological survey and mitigation of significant cultural resources.

3. The Coastal Council and SHPO coordinate to notify applicant of required compliance procedures and undertakings which must occur prior to permit approval or project certification. The SHPO coordinates with the applicant by providing recommendations for the cultural resources survey and/or mitigation of cultural resources. The SHPO offers technical assistance such as sample Request for Proposals (RFP), review of proposals, and archaeological guidelines.

4. SHPO receives two review copies of the technical Report of Investigations. The report is accompanied by a request for the SHPO's review and opinion.

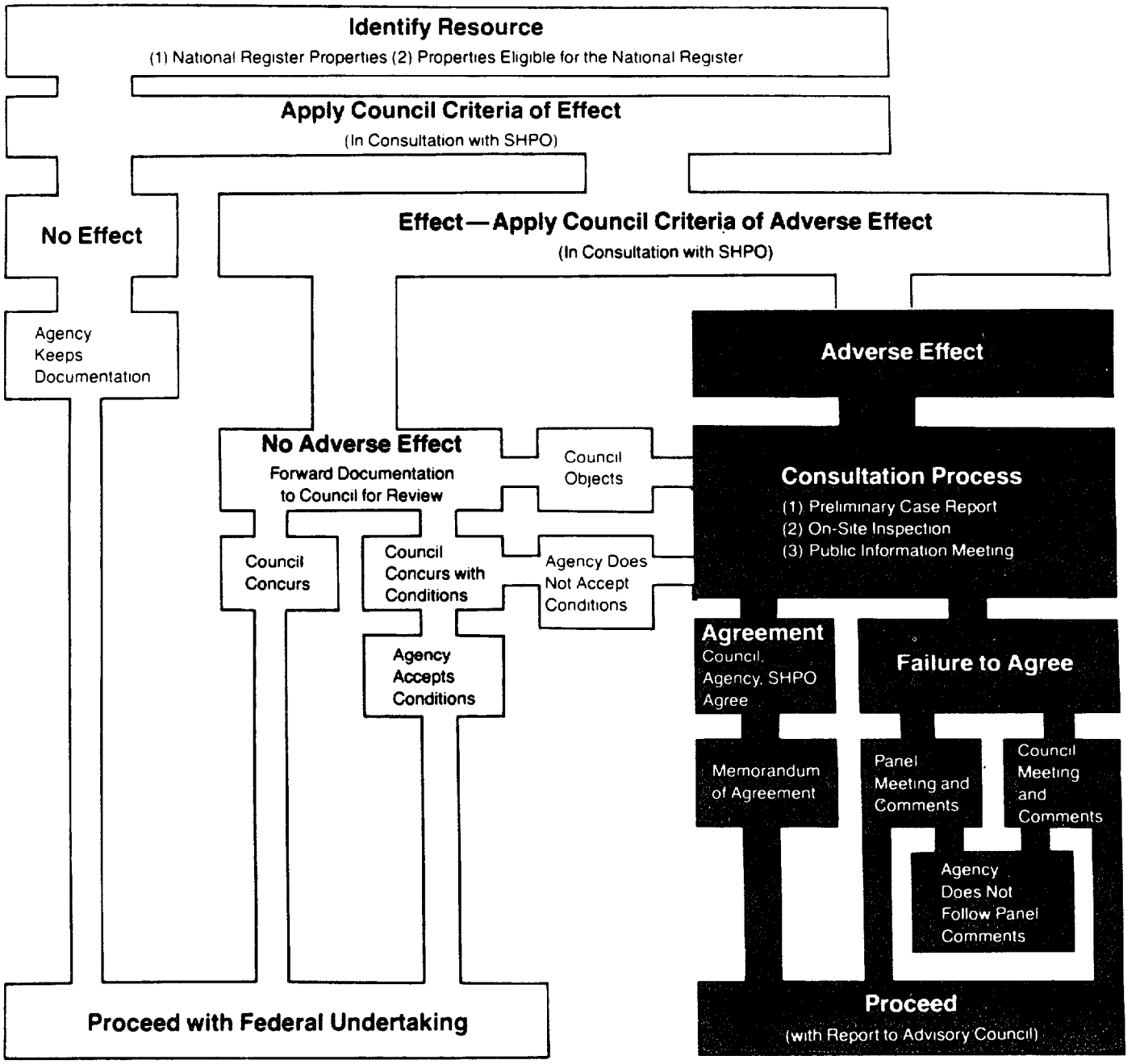
5. SHPO reviews the report with particular attention to research procedures, site descriptions, and National Register eligibility assessments and justifications. SHPO, in consultation with the Coastal Council, provides SHPO's opinion of the research, National Register eligibility evaluations, and effect of the project on significant properties. SHPO advises Coastal Council of recommended procedures which should take place next.

6. If there is a determination of adverse effect on Register listed or eligible properties, the SHPO, Coastal Council, and applicant seek project design alternatives which will avoid adverse effects. Stipulations for the preservation and/or mitigation (through data recovery) of the resources are defined in a Memorandum of Agreement signed by three parties.

7. At no stage of the undertaking should landscape altering activities be conducted prior to final approval by the Coastal Council, in consultation with the SHPO.

SECTION 106 DIAGRAMMED

The chart below illustrates the three basic "action tracks" for Section 106 review: no effect, no adverse effect, and adverse effect.



ARCHAELOGICAL GUIDELINES (1987)
South Carolina State Historic Preservation Office

To date, the South Carolina SHPO has no extensive printed standards and guidelines for archaeological investigations and reports subject to Section 106 and S.C. Coastal Council compliance review. We suggest guidelines and standards used by qualified archaelogists should include but not be limited to the following.

Advisory Council on Historic Preservation

1980 TREATMENT OF ARCHAELOGICAL PROPERTIES: A HANDBOOK.
Advisory Council on Historic Preservation, Washington, D.C.

National Park Service

1983 ARCHEOLOGY AND HISTORIC PRESERVATION: Secretary of the Interior's Standards and Guidelines. FEDERAL REGISTER, Part IV 48(2):44716-44740. Department of the Interior, National Park Service, Washington, D.C.

Society for American Archaelogy

1983 Editorial Policy and Style Guide for AMERICAN ANTIQUITY.
AMERICAN ANTIQUITY 48(2):429-442.

Technical reports of investigation should conform to standard, professionally acceptable style guidelines as described in AMERICAN ANTIQUITY. At least two (2) copies of each report of investigation should be submitted for SHPO review. State site inventory forms should be completed and submitted, with appropriate site locational maps, to the South Carolina Institute of Archaeology and Anthropology which will issue permanent site numbers upon receipt of this information. The state site inventory number must be used when sites are referenced in final reports. We also strongly recommend the submittal of copies of final reports to the SCIAA Information Management Division and Library.

Basic elements of archaeological investigations and the final report of investigations should include, but not necessarily limited to, information relevant to:

a.) Scope-of-work
b.) Research Proposal/Design
c.) Background/archival research and procedures
d.) Cultural overview
e.) Environmental overview
f.) Field methods and procedures
g.) Laboratory procedures and curation
h.) Inventoried sites
i.) National Register eligibility assessments, justifications,, and recommendations

Survey methodology and procedures should be systematic. In addition to ground surface survey, we suggest that subsurface testing (approximately .50X.50m) be conducted in areas predicted to possess high site probability and at systematic intervals along transects in the remaining portions of the survey tract. When sites are discovered, limited systematic testing is also suggested for determining site boundaries, density of cultural deposits, clarity, and etc.

Site descriptions generated as a result of reconnaissance survey, intensive survey, or limited testing should include the following basic yet detailed information.

1. Survey and/or testing procedures
2. Collection and/or recovery procedures
3. Site location (also clearly indicated on a map of the study area)
4. Environmental description (vegetation, soil, etc.)
5. Site landscape integrity (i.e., eroded; deep-plowed, etc.)
6. Site dimensions and/or boundaries
7. Site type
8. Artifact inventory
9. Cultural affiliation
10. National Register of Historic Places assessment (eligible, not eligible, or potentially eligible needing additional testing)
11. Justification for National Register assessment
12. Recommendations

If subsurface testing was conducted, the site description should also include but not be limited to the following:

1. Soils description (Munsell)
2. Stratigraphy
3. Integrity of cultural deposits
4. Density of cultural deposits
5. Depth of cultural deposits
6. Cultural affiliation

The eligibility assessment should contain the following:

1. Clearly stated National Register assessment of: a) eligible, (b) not eligible, or (c) potentially eligible
2. Justification of that assessment, based on National Register criteria (cf. "Guidelines for Level of Documentation, "FEDERAL REGIONAL, Vol. 42, No. 183, September 21, 1977); "significance," as dealt with in the professional literature; and other significance criteria such as integrity, density of cultural deposits, etc.

We urge that, prior to responding to a Request for Proposals or any other type of project request from a sponsor, you to determine whether you have adequate qualified personnel, facilities, and time (especially if you are the Principal Investigator) to conduct investigations which will be acceptable to the SHPO, the professional community, and the needs of your client. In some cases the Principal investigator (PI) is unable to be in the field and laboratory to direct and interpret archaeological research. If the PI is not in the field greater than 50% of the project field time, the field

director/field assistant should meet the Secretary of Interior's Professional Qualifications Standards (see below).

At the preliminary stage of a project (prior to the conduct of field investigations), we strongly recommend that archaeologists:

1. Contact the SHPO in order to:
   a) Inform us of your activities
   b) Learn of the Section 106 status of the proposed project
   c) Check the National Register of Historic Places listing
   d) Determine that the SHPO has a current copy of your qualifications statement and **vitae** of key personnel. If personnel vary from project to project, a current **vita** of key personnel should be provided no later than at the time of report submittal (may be included as a appendix to the report).
2. Conduct background research, including a check of the State Site Inventory files at the South Carolina institute of Archaeology and Anthropology.
3. Conduct archival research which includes utilization of **primary** resources/documents.

Archaeologists conducting compliance projects which encompass survey of architectural properties should obtain the services of a qualified architectural historian to identify, describe, and assess such properties. In addition, archival/historical research should be conducted by a qualified individual. The minimum education and experience required to perform identifications, evaluation, registration, and treatment activities are defined by the Secretary of Interior (NPS 1983) as follows:

Archeology

The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus:

1. At least on year of full-time professional experience or equivalent specialized training in archeological management;
2. At least four months of supervised field and analytic experience in general North American archeology; and
3. Demonstrated ability to carry research to completion.

In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archaeological resources of the historic period.

Architectural History

The minimum professional qualifications in architectural history are a graduate degree in architectural history, art history, historic preservation, or closely related field with coursework in American architectural history; or a bachelor's degree in architectural history, art history, historic preservation or closely related field plus one of the following:

1. At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or
2. Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

History

The minimum professional qualifications in history are a graduate degree in history or closely related field; or a bachelor's degree in history or closely related field plus one of the following: History The minimum professional qualifications in history are a graduate degree in history or closely related field; or a bachelor's degree in history or closely related field plus one of the following:

1. At least two years of full-time experience in research, writing, teaching, interpretation, or other demonstrable professional activity with an academic institution, historic organization or agency, museum, or other professional institution; or
2. Substantial contribution through research and publication to the body of scholarly knowledge in the field of history.

GLOSSARY of ACRONYMS and TERMS

certification - the result of a review performed by the South Carolina Coastal Council and/or the SC Department of Health and Environmental Control which provides assurance to the permitting agency that the proposed work is consistent with the Coastal Zone Management Plan (in the case of the SCCC, "CZM" certification), or that the project will not contravene State water quality standards (in the case of DHEC, "water quality" or "401" certification). In both instances, a Department of the Army permit cannot be issued without these certifications.

COE - Corps of Engineers

community - all of the plant populations occurring in a shared habitat or environment.

CWA - Clean Water Act (formerly known as the Federal Water Pollution Control Act)

CZM - Coastal Zone Management (Program or Plan)

DAH - South Carolina Department of Archives and History

DHEC - South Carolina Department of Health & Environmental Control

DOJ - Department of Justice

Dredged Material - any material that is excavated or dredged from waters of the United States.

EPA - Environmental Protection Agency

fill material - any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a waterbody.

FWS - Fish and Wildlife Service, US Department of the Interior

grandfather - a bureaucratic term used when changes in programs result in the regulation of areas or activities not previously subject to such authority. This action allows work under way to be completed within certain parameters.

headwaters - normally refers to the very upper reaches of a stream, however, as used in the permit program it has a more definite meaning. The term refers to a point on a non-tidal stream above which the average annual flow is less than five cubic feet per second (from Corps of Engineers Regulations 33 CFR 330.2(b)).

hydrophytic vegetation - plants which have morphological, physiological, and/or reproductive adaptations that allow them to grow, persist and reproduce in areas that are periodically inundated or have saturated soil conditions.

IAA - Institute of Archeology and Anthropology, University of South Carolina (Director of Institute is the SC State Archeologist)

nationwide permit - a type of authorization contained in Corps of Engineers regulations (33 CFR 330) which authorizes certain types of work in certain geographical areas on a blanket, nationwide basis, provided that pertinent conditions and best management practices can be met.

navigable waters of the State of South Carolina - for the purposes of requiring a State permit, this is defined as those waters which are now navigable, or have been navigable at any time, or are capable of being rendered navigable by the removal of accidental obstructions, by rafts of lumber or timber or by small pleasure or sport fishing boats. State navigability is determined by the SC Water Resources Commission by visual field determination based on the criteria described above (see Section 49-1-10 and Regulation 19-450, Code of Laws of South Carolina, 1976, as amended).

navigable waters of the United States - waters that are subject to the ebb and flow of the tide, shoreward to the mean high water mark. Also includes non-tidal waters rivers or streams administratively determined to meet the criteria of being presently used, or have been used in the past, or may be susceptible to use for transporting interstate or foreign commerce. These waters are subject to Corps jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 as well as under Section 404 of the Clean Water Act. This is a subset of "waters of the United States".

NMFS - National Marine Fisheries Service, US Department of Commerce

NWI - National Wetland Inventory, US Fish and Wildlife Service

NWP - Nationwide Permit; any of a number of blanket, nationwide Corps authorizations for different types of work (see 33 CFR 330.5).

PDN - "pre-discharge notification"; an abbreviated application process necessary to perform work under Nationwide Permit 26.

prevalent vegetation - the plant community or communities that occur in an area during a given period. The prevalent vegetation is characterized by the dominant species that comprise the plant community.

public notice - the primary method of advising all interested parties of an activity for which a permit is sought and of soliciting comments and information necessary to evaluate the request. A public notice is normally distributed to a standard mailing list of agencies and other parties, as well as adjoining property owners, and must therefore contain sufficient information to give a clear understanding of the nature and magnitude of the activity to generate meaningful comment.

RHA - Rivers and Harbors Act

SCB&CB - South Carolina Budget and Control Board

SCCC - South Carolina Coastal Council

SCDAH - South Carolina Department of Archives and History

SCDH&PT - South Carolina Department of Highways and Public Transportation

SCLRC - South Carolina Land Resources Commission

SCS - Soil Conservation Service, US Department of Agriculture

SCWRC - South Carolina Water Resources Commission

SCW&MRD - South Carolina Wildlife and Marine Resources Department

SHPO - State Historic Preservation Officer (Director, SCDAH)

SPA - South Carolina State Ports Authority

special aquatic sites - this term is used in the EPA 404(b) Guidelines (40 CFR 230) and basically includes all wetland and open water areas.

USDA - United States Department of Agriculture

USGS - United States Geological Survey

water dependent - requiring access to, proximity to, or siting within a given wetland area to fulfill the basic purpose of the project (summarized from EPA Regulations, 40 CFR 230.10(a)(3)).

waters of the United States - basically means all waterbodies and their adjacent wetlands as well as wetland areas independent of a river, stream or lake. A complete definition can be found in Corps of Engineers Regulations at 33 CFR 328.3(a). This term is very broad and defines the extent of Corps jurisdiction for the purposes of Section 404 of the Clean Water Act. It is of interest to note that, while this definition covers virtually every type of wet area conceivable, there are a few exceptions. For instance, waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act, and artifical waterbodies created by excavating or diking dry land primarily for aesthetic purposes are not considered to be waters of the US.

wetlands - those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. (from COE Regulations, 33 CFR 328.3(b)).

WRC - South Carolina Water Resources Commission