

# **ENVIRONMENTAL ACTIVITIES**

## **CHAPTER 800**

## **801 INTRODUCTION**

This section describes the Consulting Engineer's involvement in fulfilling the various permit requirements which the Department is subject to by State Statutes and Federal regulations.

The Consulting Engineer should be aware of the environmentally sensitive areas within the project early in the design process and consider mitigating measures and alternatives as design progresses.

The Consulting Engineer will be required to prepare and submit to the Department in a specified format all the necessary information required for submission of the various permit applications.

The Department will compile the application packages and transmit them to the appropriate regulatory agencies for approval. The Consulting Engineer may be required to incorporate modifications to the contract documents as necessary to comply with State or Federal Regulatory reviews.

At various stages of the design, the Consulting Engineer will be required to make periodic submissions, attend review meetings and respond to written comments.

It must be recognized that the Environmental Permit requirements are constantly being revised and, therefore, close coordination with the Department is required.

The Department's Office of Environmental Planning has prepared a document entitled "Water Resources Coordination and Permit Processing Manual." The Consultant should review this manual prior to starting design activities in order to become familiar with the regulatory programs and requirements.

## **802 WETLAND DELINEATION/MITIGATION**

The following activities are associated with the various Environmental Permits and shall be performed by the Consulting Engineer as an integral part of the design of the project.

## **802.01      WETLAND DELINEATION**

Prior to the Preliminary Design, the Consulting Engineer will review, identify, verify and delineate any inland wetlands, tidal wetlands and watercourses which will be impacted by the project. Identification of inland wetlands, as regulated by Connecticut, will be based upon soil type as defined in Section 22a-38 of the General Statutes of Connecticut, and boundaries will be field verified by a State certified soil scientist. Identification of watercourses, as regulated by Connecticut, will be based upon the definitions contained in Section 22a-38 of the General Statutes of Connecticut.

Identification of Tidal Wetlands will be based upon the definitions contained in Section 22a-29 of the General Statutes of Connecticut. Tidal Wetlands are also mapped by the Department of Environmental Protection (DEP) and are on file at the Office of Long Island Sound Programs and at the Town Clerk's office in the towns where the Tidal Wetlands are located.

The Consulting Engineer will, if necessary, identify, verify and delineate Army Corps regulated waters of the United States and wetlands based upon the definitions contained in 33 CFR 3.23.2(a) through (f). A technical report has been prepared by the Federal Resource Agencies entitled "Federal Manual for Identifying and Delineating Jurisdictional Wetlands, 1987" to assist in determining the limits of Corps regulated areas. The Consulting Engineer will submit the required Army Corps' "Wetland Delineation Data Sheets" with the application package.

Field verified wetlands, waters and watercourses will be accurately depicted on design plans and index plans and will be submitted to the Department with the Preliminary Design. This information will also be incorporated into the Final Design plans.

Wetlands and watercourses will also be evaluated as part of an Environmental Assessment report as required by DEP (see applicable DEP instruction sheets, ref. sec. 804.01 - Jurisdiction). Information for this assessment should be obtained by the individuals responsible for delineating wetlands.

## **802.02      MITIGATION AND WETLAND CREATION**

The Consultant is to identify and consider any feasible way of minimizing wetland impacts during the preliminary design phase.

The need for creating new wetlands to compensate for unavoidable impacts will be evaluated by the Department. The Consulting Engineer will be directed by the Department to develop a wetland creation design if necessary.

## **802.03      FISH PASSAGE**

Provisions for fish passage shall be considered as a form of mitigation of impacts associated with crossings and relocation of watercourses. The Project Engineer shall arrange for the Consulting Engineer to meet with a fish biologist from DEP and a representative from the Department's Hydraulics and Drainage Unit at the project site to review all streams and determine which crossings and channels will be designed for fish passage. This meeting will be held prior to the completion of Preliminary Design and prior to the hydraulic designs. Facilities for fish passage will be described as part of the required permit application phase.

## **803      DEPARTMENT OF THE ARMY**

The Department of the Army Permit program regulates:

1. The discharge of dredged or fill material in all waters of the United States, including wetlands (both adjacent and isolated) pursuant to Section 404 of the Federal Water Pollution Control Act Amendments of 1972, now known as the Clean Water Act.
2. The obstruction or alteration of navigable waters of the United States pursuant to Section 10 of the Rivers and Harbors Act of 1899.

Regulated activities that are minor or routine with minimum impacts may qualify under pre-authorized general permits. The Consulting Engineer shall contact the Department's Project Engineer for determination of the permit requirements. Regulated activities of a larger nature will require an individual permit and an application package shall be prepared by the Consultant if it was part of the project assignment. A copy of the most current application form will be provided by the Department.

**804**    **CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**REGULATORY PROGRAMS**

**804.01**        **JURISDICTION**

The Consulting Engineer may be required to prepare an application package for any of the following regulatory programs:

- 804.02        Tidal Wetlands
- 804.03        Structures and Dredging
- 804.04        Coastal Zone Management Consistency
- 804.05        Inland Wetlands and Watercourses
- 804.06        Stream Channel Encroachment Line
- 804.07        Water Diversion
- 804.08        Flood Management
- 804.09        Discharge Of Stormwater And Dewatering Wastewaters Associated With Construction Activities

A project may require a permit application package that includes a combination of the above types of permit requests. This package should be coordinated and assembled in accordance with the following requirements established by DEP.

The Tidal Wetlands Permit as well as the Structures and Dredging Permit and Coastal Zone Management Consistency Review are administered by DEP's Office of Long Island Sound Programs. The application instructions [DEP-OLIS-INST-100] contain specific information on the preparation of the permit application [form DEP-OLIS-APP-100].

The Inland Wetlands and Watercourses Permit, Stream Channel Encroachment Line Permit, Water Diversion Permit and Flood Management Approval are administered by DEP's Bureau of Water Management, Inland Water Resources Division. The application instructions [DEP-IWRD-INST-100] contain specific information on the preparation of the application [forms DEP-IWRD-ARP-101, 102, 104 and 105]. The General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities is administered by DEP's Bureau of Water Management, Permitting, Enforcement and Remediation Division [form DEP-PERD-GP-015].

#### **804.02      TIDAL WETLANDS**

Sections 22a-28 through 35 of the General Statutes of Connecticut regulate all physical alterations to designated Tidal Wetlands, such as draining, dredging, dumping and removing or depositing material. Certain Tidal Wetland boundaries have been mapped by DEP; however, all areas must be field checked and areas flagged as Tidal Wetlands by a qualified individual and shown on the plans.

#### **804.03      STRUCTURES AND DREDGING**

Sections 22a-359 through 363, as amended by Public Act 87-495, and 22a-383 through 390 of the General Statutes of Connecticut regulate structures and dredging in tidal, coastal and navigable waters. The landward limit of the State's jurisdiction has been defined as the high tide line in a 1987 revision to the "Structures and Dredging Act." This line is coincident with the Corps of Engineers jurisdictional boundary for coastal areas.

**Navigable Waters:** include Long Island Sound and Connecticut's rivers from Long Island Sound up to the first dam, except the Connecticut River, which is regulated to the Massachusetts State border.

**Tidal Waters:** are all waters which are influenced by tidal action whether or not they are located on the coast. Usually a Structures and Dredging Permit will be required for bridge and drainage outfall modifications in Tidal Waters.

#### **804.04      COASTAL ZONE MANAGEMENT CONSISTENCY**

Sections 22a-90 through 22a-112 as amended of the General Statutes of Connecticut regulate State actions within the "Coastal Boundary" defined by Section 22a-94. Coastal boundary maps are available at the town clerk offices, DEP's Coastal Resources Management Division, DEP's Natural Resources Center and also from the Project Engineer.

If any portion of a proposed project falls within the established coastal boundaries, a DEP Coastal Management Consistency Review Worksheet will be required. Copies of this worksheet are available from DEP's Office of Long Island Sound Programs or the Project Engineer. The proposed construction activity is to be consistent with the applicable statutory policies listed in Section 22a-92 of the General Statutes of Connecticut, as

amended, and must demonstrate that all reasonable measures mitigating adverse impacts on coastal resources and water dependent development have been incorporated into the proposal. In particular, the use of stormwater pretreatment measures should be investigated. The Department will prepare the worksheet based on information provided by the consultant and submit the consistency determination to the DEP.

**804.05      INLAND WETLANDS AND WATERCOURSES**

Sections 22a-36 through 22a-45 of the General Statutes of Connecticut require that an Inland Wetlands and Watercourses Permit be obtained for activities to remove or deposit material, obstruct, construct, alter or pollute any wetland or watercourse. The Inland Wetlands Permit application will be transmitted by the Department to DEP. If a project does not involve State roads or lands, the permit may be processed through the local wetlands agency.

In addition, DEP has adopted a General Permit for Water Resource Construction Activities. Certain activities which result in minor impacts to designated inland wetlands are eligible for this program.

**804.06      STREAM CHANNEL ENCROACHMENT LINE**

Sections 22a-342 through 22a-348 of the General Statutes of Connecticut require that activities riverward of the established encroachment lines have a Stream Channel Encroachment Line Permit. These activities include:

1. Placement of fill
2. Construction of any structure
3. Storage of any construction material
4. Excavation or grading
5. Any other activity deemed by the Commissioner (DEP) to pose a threat to life or property, riverward of the established lines

Stream Channel Encroachment Lines have been established on a number of rivers and watercourses in Connecticut. A listing of regulated areas may be obtained from DEP's Bureau of Water Management, Inland Water Resources Division. Encroachment line maps have been produced whereby the encroachment lines can be located by ground survey. Copies of the maps are on file with the town clerks of the respective towns, the

Department's Hydraulics and Drainage Section, and at the office of DEP's Inland Water Resources Division. Hydraulic reports used to establish the encroachment lines are also available for review at the Inland Water Resources Division.

Hydraulic design documentation will be provided by the Department's Hydraulics and Drainage Section or by the Consulting Engineer, as defined in the "Assignment of Work" package.

The Consulting Engineer shall provide all environmental information required for this application in accordance with the Stream Channel Encroachment Line application instructions and State statutes.

The Consulting Engineer shall submit the required Stream Channel Encroachment Line information to the Department for review. This information should be provided as soon as possible following the Preliminary Design phase of the project. The Department will submit the final package to DEP.

#### **804.07      WATER DIVERSION**

Sections 22a-365 through 22a-378, as amended, of the General Statutes of Connecticut require that any activity which causes, allows or results in the alteration, modification or diminution of the volume of water that would occur in the ground or surface water at any given point at any moment constitutes a diversion. In particular, the construction or alteration of dams, storm drainage or flood control systems, or stream reallocations and bypass channels which collect water from a drainage area of 100 acres or more in size, will require a Water Diversion Permit.

The Department has been exempted from the requirement for filing for a Water Diversion Permit if the project is reviewed under the provisions of the Inland Wetland or Structures and Dredging Regulations and involves the modification of an existing roadway culvert.



## **804.08      FLOOD MANAGEMENT**

The Connecticut Flood Management regulations for state agencies are found in Sections 25-68 (b-h) of the General Statutes of Connecticut. Any activity within or affecting a flood plain will require a submission to DEP assuring that the activity is consistent with all applicable standards and criteria in Section 25-68d of the General Statutes and Sections 25-68h-1, 2, 3 of the Administrative Regulations. The established flood plain limits are based on the Federal Emergency Management Agency's Insurance studies. Maps showing these boundaries are available from DEP's Inland Water Resources Division or the Department.

In particular, no filling, dumping or construction will be allowed which would increase the base flood by more than that which is indicated in the Flood Insurance studies (one foot maximum) or adversely affect the hydraulic characteristics of the flood plain. Other restrictions are listed in the regulations and should be addressed as necessary.

Section 25-68h-3 of the regulations enumerates the requirements of the Stormwater Management Standards. These standards must be applied as necessary to ensure that the project has been designed to minimize any adverse effects resulting from an increase in stormwater runoff. This section of the regulations also contains guidelines for the design of stormwater detention facilities, storm drainage systems, open channels, culverts and bridges. Hydrologic studies will be required to evaluate the probable impacts of the project.

The Consultant may also be required to submit a hydraulic report including: narrative of the proposed activity, water surface profiles, data sheets, computer programs, summary and appropriate plans. Refer to "Model Hydraulic Analysis" (DEP-IWRD-GUID-001) for specific guidance regarding the character of hydraulic studies. The Department will review the Consultant's submission and then will forward the documentation to DEP.

**804.09            DISCHARGE OF STORMWATER AND DEWATERING**  
**WASTEWATERS ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

When construction activities will result in the disturbance of a total of 5 acres or more of land within the project limits, the Department must ensure compliance with all conditions of DEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (GPSD). "Construction Activities" as defined in the GPSD include, but are not limited to, the following: clearing, grubbing, grading, excavation, placement of fill, and dewatering activities.

The Consulting Engineer will incorporate a Stormwater Pollution Control Plan within the contract documents in order to ensure compliance with the conditions of the GPSD. The Stormwater Pollution Control Plan addresses pollution caused by soil erosion and sedimentation during and after construction as well as the long term use of the facility after construction is completed. A copy of the GPSD will be included in the contract special provisions. The Consulting Engineer will be required to sign the Engineering Certification statement contained in the GPSD form. The Department will be the Registrant and Permittee for the purpose of filing the registration.

The Consulting Engineer must be familiar with the requirements outlined in the GPSD. The GPSD requires that the Consulting Engineer follow the fundamental aspects of the document, "Connecticut Guidelines for Soil and Erosion and Sediment Control," prepared by the Soil Conservation Service. Chapters 400 and 500 of this document present an outline for the preparation of the required stormwater pollution control plan. The Consulting Engineer should also be familiar with the Department's document, "On-site Mitigation for Construction Activities," prepared by the Department's Office of Environmental Planning. Depending on the particular site conditions and construction scope, the Consulting Engineer must design a plan which adequately addresses erosion control measures throughout the project life, including the post construction condition. The goal of 80 percent removal of suspended solids should be strived for but is not an absolute requirement. The need for permanent and temporary sedimentation basins should be looked at in detail in accordance with the requirements of the GPSD.

The Consulting Engineer should incorporate appropriate drainage details for

sedimentation control measures in the contract drawings and also include any special provisions as necessary. The Consulting Engineer should address the requirements for temporary access and staging areas in the plan and in the contract drawings. The contract must show the stages of construction and temporary sediment control measures for each of these stages. The required map showing the existing and proposed outfalls will be submitted to the Department along with the signed registration form. The Consulting Engineer will submit the required narrative and supporting documentation for review prior to final submission. Every effort shall be made to ensure that the Stormwater Pollution Control Plan is incorporated into the contract documents.

The Consulting Engineer is advised that the certification statement submitted only covers the information prepared by the firm. It will be the responsibility of the Department to ensure compliance with the GPSD for any revisions made during construction which were not prepared by the Consulting Engineer. The Department will provide the required inspection services as described in the GPSD.

#### **805 UNITED STATES COAST GUARD**

The United States Coast Guard Bridge Permit program regulates the location and plans of bridges and causeways over navigable waters pursuant to Section 9 of the River and Harbors Act of 1899 and the General Bridge Act of 1946.

When any project requires the construction of or a modification to a bridge over a navigable waterway, the Consulting Engineer should request the Department to obtain an official determination from the Coast Guard of its jurisdiction. When it has been determined that the Coast Guard has jurisdiction, the Consulting Engineer shall prepare a permit application package.

The Coast Guard has a specialized permit application format. The Consulting Engineer shall follow the information contained in the "Bridge Permit Application Guide" as published by the Coast Guard. The Consulting Engineer will provide the Department with a draft "Letter of Application for Permit" as described in Appendix D, and mylar plates and additional information, as necessary and listed in Appendix E of the above noted document.

The Department will prepare the final application letter to the Coast Guard with the information provided by the Consulting Engineer.

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