



**Connecticut Department of
Energy & Environmental Protection**
Bureau of Water Protection & Land Reuse
Office of Long Island Sound Programs

ATTACHMENT D: SHELLFISH COMMISSION DEEP PERMIT CONSULTATION FORM

You need to complete and submit this form only if your town has a Shellfish Commission.

To the applicant- Prior to the submission of your permit application to the Connecticut Department of Energy and Environmental Protection- Office of Long Island Sound Programs (DEEP- OLISP), please complete Part I and submit this form to your local shellfish commission (contact the town for the appropriate contact person) with a location map of your site and project plans. Once the commission returns the completed form to you, please submit it along with your permit application to the DEEP.

Part I: To be completed by APPLICANT

1. List applicant information.

Name: Connecticut Department of Transportation

Mailing Address: P.O. Box 317546, 2800 Berlin Turnpike

City/Town: Newington

Business Phone: 860-594-2931

Contact Person: Mark Alexander

Email: Mark.W.Alexander@ct.gov

State: CT

Zip Code: 06131-7546

ext.

Fax: 860-595-3028

Title: Assistant Director

2. List engineer/surveyor/agent information.

Name: URS Corporation

Mailing Address: 500 Enterprise Drive, Suite 3B

City/Town: Rocky Hill

Business Phone: 860-529-8882

Contact Person: Fraser Walsh, P.E.

Service Provided: Engineering Design

State: CT

Zip Code: 06067

ext.

Fax: 860-529-3991

Title: Project Manager

3. Site Location:

Street Address or Location Description: Igor I. Sikorsky Memorial Airport, 1000 Great Meadow Drive

City/Town: Stratford

State: CT

Zip Code: 06615

Tax Assessor's Reference: Map 50.04

Block 3

Lot 1

4. Are plans attached? Yes No If Yes, provide date of plans: Feb. 2013

5. Provide or attach a brief, but thorough description of the project: See attached project description

Part II: To be completed by SHELLFISH COMMISSION

This consultation form is required to be submitted as part of an application for a Structures, Dredging & Fill permit (section 22a-361 CGS) and/or Tidal Wetlands permit (section 22a-32 CGS) to the DEEP- OLISP. The application has not yet been submitted to the DEEP. Please review the enclosed materials and determine whether the project will adversely impact shellfish beds. You may also provide comments or recommendations regarding the proposal. Should you have any questions regarding this process, please call DEEP-OLISP at (860) 424-3034 to speak with the analyst assigned to the town in which the work is proposed. **Please return the completed form to the applicant.**

SHELLFISH COMMISSION DETERMINATION:

Project located on (check one): natural bed state bed local bed none
 other, please specify:

If project is located upon a franchised or leased shellfish bed, please provide the owner or lessee's contact information below.

Check one of the following:

- I have determined that the work described in Part I of this form and attachments **WILL NOT** adversely impact a shellfish area.
- I have determined that the work described in Part I of this form and attachments **WILL** adversely impact a shellfish area. A summary of the Shellfish Commission's project-specific concerns/comments is described below or attached.

COMMENTS/RECOMMENDATIONS (check the box if attached:):

RECEIVED
STRATFORD PUBLIC WORKS
2013 JUN 18 AM 9:14

Brian Carey

Signature of Commission Representative

6-18-2013

Date

BRIAN CAREY

Print Name of Commission Representative

CONSERVATION Administrator

Title

Attachment D: Shellfish Commission DEEP Permit Consultation Form

Part I, 5. Provide or attach a brief, but thorough description of the project.

Project Description

The Connecticut Department of Transportation (CTDOT) and City of Bridgeport are proposing to construct improvements to the Runway Safety Area (RSA) adjacent to Runway 24 at the Igor I. Sikorsky Memorial Airport (BDR), in Stratford, Connecticut. See Figure 1 for a map of the site. A partial relocation of State Route (SR) 113 is required to accommodate the RSA improvements. These safety improvements include an engineered material arresting system (EMAS) to replace the existing concrete blast fence adjacent to Runway 24. The proposed improvements also include the rehabilitation of existing Runway 6-24. A congressional mandate has been issued requiring completion of the airport safety improvements by December 2015. There will also be a reduction in flooding of Route 113, and improved stormwater management and treatment as a result of the project.

The proposed project includes the following activities within the airport proper:

- Construction of an RSA that is 500 feet in width (250 feet on either side of the runway centerline) by 300 feet in length, including installation of an EMAS (100 feet in width by 300 feet in length);
- Installation of new runway edge lights on Runway 6-24;
- Relocation of Runway End Identifier Lights (REILS);
- Construction of a new connector taxiway (35 feet in width by 300 feet in length) from Taxiway A to Runway 24 and demolition of the existing connector Taxiway D at the intersection of Runways 6-24 and 11-29;
- Removal of the existing blast fence located adjacent to Runway 24;
- Installation of new Airport Security Fence;
- Construction of a Turn Around for Runway 6;
- Rehabilitation and removal of pavement (reduction in width) on Runway 6-24;
- Relocation of the Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI) visual landing aids on Runways 6 and 24; and
- The construction of wetland mitigation and listed species mitigation areas.

The proposed project includes the following activities within the vicinity of Route 113:

- Construction of a realigned segment of Route 113 including an improved stormwater drainage system and multi-use path (to accommodate the RSA);
- Relocation of all underground utilities from the existing Route 113 right-of-way to the proposed right-of-way;
- Closure and removal of the abandoned segment of Route 113;
- Delineation, removal and disposal of existing Raymark Superfund Site waste materials within the vicinity of the realigned Route 113;

- Construction of a new tidal channel to convey treated stormwater runoff and tidal flows;
- Wetland mitigation activities including restoration and enhancement areas; and
- Creation and enhancement of several listed species mitigation areas.

No project activities are planned directly within Bridgeport Harbor, the Housatonic River, or Long Island Sound. No project activities are planned within mapped oyster bed, soft clam bed, hard clam bed or mud flat areas. (See Figure 2 for details) According to resource mapping, the marine basin, adjacent to and east of the Route 113 realignment, falls within a prohibited shellfish area. Details of the work planned within and in the vicinity of the marine basin, as well as previous coordination with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) are included below.

Marine Basin

The construction of a new tidal channel will connect the project stormwater system to the marine basin. This activity will have a minor impact to tidal wetlands and open water within the marine basin. See Figure 3 and attached photographs for details.

In February 2010, NMFS provided the City of Bridgeport with information regarding fisheries resources for the Reevaluation of the Environmental Impact Statement for BDR. That letter identified and addressed potential adverse impacts to essential fish habitat (EFH) for public trust resources. According to the letter, EFH has been designated for 17 federally managed species within and adjacent to the project area. The winter flounder (*Pseudopleuronectes americanus*) was identified as a species to focus on because they utilize shallow areas near the shore (such as in the marine basin – See Figure 2 and Photographs) for spawning and feeding as adults. Larvae, eggs and juveniles also use such areas for development in their early stages of life. Tidal wetlands were also identified as an important habitat for foraging species, such as the winter flounder. NMFS Protected Resources Division also reviewed the project and determined that no listed species were likely to be present.

The marine basin may also be utilized by the catadromous American eel (*Anguilla rostrata*) and anadromous species such as shad (*Alosa*) and herring (*Celhua*). Juveniles of several non-EFH species could likely use the marine basin as a refuge.

As part of the project, a tidal channel is proposed to be constructed to maintain the hydraulic connection from the marine basin to the existing tidal ditch located south of Route 113, allowing treated stormwater to flow from the airport and Route 113 to the marine basin. The existing ditches that had previously provided the hydraulic connection are currently not functioning due to an existing tide gate which is broken and not allowing water to pass. Also, the existing culvert under Route 113 is clogged and does not allow any tidal flow to reach the south side of the roadway. Aside from acting as stormwater discharge facilities, these existing ditches were also historically used by the Stratford Army Engine Plant (SAEP) to discharge wastewaters from their former wastewater treatment plant. Sampling and analysis completed in 2012 within the ditches found contamination from the wastewaters discharged from the SAEP. The Connecticut Department of Energy and Environmental Protection (CTDEEP) has expressed concerns that re-opening these existing channels to regular tidal flows and conveyance of stormwater may cause

these contaminants to transport to the marine basin and Housatonic River. To avoid this, the CT DOT and the City of Bridgeport propose that a new channel constructed in cleaner materials be utilized instead. The existing ditches and tidal gate will be left intact until the contaminants in the ditches can be removed in the future by others.

The proposed channel is designed to include a more natural round stone bottom and side slope up to the Mean High Water (MHW) elevation, as opposed to an angular riprap protection. The bottom of the channel will be 15 feet wide, with sloping banks at a 3:1 grade. Native vegetation will be allowed to recolonize the channel bank above the MHW elevation. (See Figure 3)

Disturbed areas above the Coastal Jurisdiction Line (CJL) (or High Tide Line – 5.9 feet NGVD29 & 4.8 NAVD 88) will be planted with native, non-invasive upland species. A tidal vegetation zone, approximately 2,859 square feet (sf) will be established on the northwest side of the channel as shown in Figure 3. A planting shelf for reestablishment of the state-endangered saltpond grass (*Leptochloa fusca* ssp. *Fascicularis*) will also be constructed adjacent to the tidal vegetation zone. The channel will extend from the marine basin to a new culvert that will be placed under Route 113, and will have a maintenance/access road along the top of its southern bank. The existing tidal channel on the south side of Route 113 will be extended to the new culvert location. See Figure 3 for details.

The area where the newly constructed channel would connect to the marine basin is an earthen berm of compacted soil with riprap armor comprised of large boulders on the marine basin side. Upland vegetation, including goldenrod (*Solidago* sp.) and honeysuckle (*Lonicera* sp.), covers this area and a footpath runs along the top of the berm. A narrow shelf dominated by saltmarsh cordgrass (*Spartina alterniflora*) grows within the sediment that has accumulated at the edge of the marine basin and along the toe of riprap boulders. This narrow sliver of saltmarsh cordgrass (approximately 178 sf) is the only area of fisheries habitat that may be impacted by the connection of the new channel. See Impacts section and Photographs for details.

Use of Best Management Practices (BMPs)

Before the start of construction, a turbidity curtain barrier will be placed in the marine basin downstream of the proposed berm cut location. Inspection of the turbidity curtain barrier will occur prior to and during active construction on a daily basis and repairs will be made as necessary. The turbidity curtain installation will take place as required by NMFS and CT DEEP's Marine Fisheries and Office of Long Island Sound Programs (OLISP) to avoid potential impacts to fisheries. No materials or equipment will be stored or maintained within designated wetland areas. When not in use, equipment will be positioned in a designated staging area to avoid disturbance of tidal wetlands. Turbidity curtain barriers will be removed at the project's completion, in compliance with any requirements by governing regulatory agencies.

Overall Project Impacts

All project activities will be conducted on airport and CTDOT properties. Total temporary and permanent impacts to tidal wetland resources are estimated to be approximately 1.3 acres of vegetated tidal wetlands, one acre of land capable of supporting tidal vegetation, and approximately 17 acres of disturbance below the Coastal Jurisdiction Line (CJL), (which is 5.9

feet NGVD29 & 4.8 NAVD 88 for the site). The majority of these vegetated tidal wetland areas are of low quality and are currently maintained as mowed lawn areas. However, some higher value tidal wetlands will also be impacted. A small portion of this impact includes approximately 178 sf of impact to saltmarsh cordgrass tidal wetland within the marine basin from the construction of the new tidal channel. For details on anticipated impacts to wetlands at the site see Table 1 below.

Table 1: Sikorsky Runway Safety Area Project Wetland Impacts

Impact Areas	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Coastal Jurisdiction Line /High Tide Line Areas (up to elev. 5.9)			
Pavement	1.08	0.83	1.91
Upland of Tidal Vegetation Line	7.05	8.05	15.1
Tidal Wetland Areas			
Tidal Wetlands	0.5	0.8	1.3
Tidal Open Water	0.01	0.08	0.09
Tidal Riprap Shore	0	0.01	0.01
Land Capable of Supporting Tidal Wetland Line Areas (elev. 5.9 to 6.9)			
Pavement	0	0.08	0.08
Upland of CJL/HTL Line	0.11	0.81	0.92
Total	8.67	10.64	19.41

Note: Includes runway and roadway work

Work associated with the Raymark waste removal will occur below the CJL and within various regulated areas. The removal and associated waste management areas will be located between the existing and proposed Route 113 alignments. As a result, this work will have no adverse impact to shellfish, fisheries or their essential habitat. The Raymark waste removal area will be separated from the adjacent tidal ditches with sheet pile coffer dam. The removal of Raymark waste will be permitted and regulated under the jurisdiction of the U.S. Environmental Protection Agency through the Superfund Program. Coordination between the CTDOT, CTDEEP, City of Bridgeport and Town of Stratford is on-going as part of the permitting process.

Listed Species

Field surveys were conducted on BDR property during the 2012 field season for listed vegetation, bird, and invertebrate species. These surveys documented state-listed vegetation, bird and invertebrate species on BDR property. The CTDOT and City of Bridgeport are currently coordinating with the CTDEEP Wildlife Division to provide a suitable mitigation strategy to compensate for potential impacts to these species. Approximately 1.2 acres of listed plant mitigation is planned, including, but not limited to:

- Creation of additional habitat for the state-endangered coast violet along the east side of Taxiway H (Site 3); and
- Relocation and expansion of habitat for the state-endangered Saltpond Grass along the proposed drainage ditch and existing road bed (Site 4).

Mitigation

A compensatory wetland mitigation program has been developed as part of the project. The mitigation plan will include a total of 18.0 acres of mitigation, comprised of 17.4 acres of wetland enhancement, 0.5 acres of wetland restoration, and 0.1 acres of wetland creation.

The planned mitigation will include improvements of more wetlands and listed species habitat than will be impacted by the project activities. There will be an overall improvement of vegetative communities and enhancement of habitat as part of this project. The proposed mitigation plan includes the following activities listed below in Table 2.

Table 2: Sikorsky Runway Safety Area Project Wetland Mitigation

Mitigation Site	Activities	Area of Mitigation (acres)	Type of Mitigation
1	Enhancement of existing wetlands near the airport driveway through the creation of a new tidal channel to restore daily flushing and passively remove invasive Phragmites vegetation	3.2	Enhancement
1	Restoration of tidal wetlands in a former area of fill material, currently dominated by invasive vegetation species.	0.1	Restoration
2	Enhancement of the tidal channel along the west side of Taxiway H by removal of Phragmites.	1.0	Enhancement
2	Enhancement of tidal marsh on the east side of Taxiway H	13.2	Enhancement
2	Restoration of new tidal channel from the west side of Taxiway H to the east side of Taxiway H to provide tidal flushing to a large Phragmites-dominated wetland	0.4	Restoration
4	High tidal marsh creation along the drainage channel	0.1	Creation
Total		18.0	Various Types

In addition, construction of the proposed new tidal channel and culvert will re-establish daily tidal flushing to the wetland area south of Route 113, and will enhance tidal habitat in this area

over time. The project will provide an overall improvement to vegetative communities and enhancement of habitat.

Numerous approaches will be undertaken to minimize potential impacts from proposed regulated activities including:

- The ditch will be planted with native, non-invasive herb and shrub species above the rounded stone bottom armor.
- The entire ditch will be subject to daily tidal flows.
- The ditch will be constructed using only clean fill.
- Dewatering is anticipated during construction, but will be managed by using large frac tanks on trucks so wastewater will be treated prior to its discharge to surface waters.
- The entire ditch will be constructed and stabilized first, with the last section consisting of the punch-through connection to the marine basin.
- A silt curtain will be installed in the marine basin at the punch-through area prior to the connection taking place. This curtain will be firmly anchored and will be inspected on a daily basis to ensure proper function. Work activities will be coordinated with NMFS, CT DEEP's Marine Fisheries and OLISP to ensure these agencies' requirements are incorporated into the project design and schedule.

A compensatory mitigation package, which is being developed through coordination with the CT DEEP, U.S. Army Corps of Engineers (USACE), U.S. Environmental Protection Agency, NMFS, Federal Aviation Administration (FAA) and CTDOT, is currently under final design. A conceptual mitigation plan is attached that summarizes the planned activities including: removal of invasive plant species, creation of seed beds and transplant areas for listed plant species, conversion of asphalt areas into grasslands, restoration, creation and enhancement of tidal wetlands, enhancement of existing upland habitat and improvement of stormwater management. See Figure 4 for details.