



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
55 Great Republic Drive  
Gloucester, MA 01930-2276

MAY 1 - 2014

Mr. Juan C. Hernandez  
State Conservationist  
Natural Resources Conservation Service  
United States Department of Agriculture  
967 Illinois Ave., Suite 3  
Bangor, Maine 04401

**RE: *Revised* Essential Fish Habitat (EFH) Programmatic Consultation on Natural Resources Conservation Service (NRCS) Conservation Practices in the State of Maine**

Dear Mr. Hernandez:

In September 2012, our staffs held a meeting to discuss the possibility of creating an Essential Fish Habitat (EFH) programmatic consultation for certain conservation projects that you support on agricultural lands in Maine. Projects may include removing vegetation or other obstructions from natural or improved channels and streams, installing irrigation systems, or creating various types of buffers to filter out materials that may adversely affect an adjacent body of water. The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires consultation for any action that may adversely affect EFH. Under the current process, we review a number of your projects on an individual basis, which can be time consuming. By creating an EFH programmatic consultation, as described in 50 CFR 600.920(a)(2) of the EFH regulations, we can group a potentially large number of individual projects together and simultaneously address all reasonably foreseeable adverse effects on EFH for future projects. This will result in streamlining of the EFH review process and reduce the number of projects which require individual EFH consultation. Based upon our review of your Conservation Practices we have determined that an EFH programmatic consultation pursuant to Section 305(b)(2) of the MSA and its implementing regulations at 50 CFR Part 600.920(a)(1) is appropriate for this program.

This consultation concludes with conservation practices grouped into 3 EFH consultation results:

- (1) General Concurrence – Actions are identified that will have either no effect or will not cause greater than minimal individual or cumulative adverse effects on EFH; Actions under the General Concurrence do not require further EFH consultation.
- (2) Programmatic – Actions are identified that are likely to have adverse effects to EFH, but effects can be minimized by implementing practice-specific conservation recommendations described in Appendix A.
- (3) Individual - Actions are identified that will require project-specific consultation. In addition, if practice-specific conservation recommendations cannot be implemented according to Appendix A, an individual EFH consultation will be required.



### **The U.S. Department of Agriculture's Natural Resources Conservation Service**

The NRCS provides leadership and technical assistance to address natural resource conservation issues on private land. Your employees work to improve and protect natural resources in partnership with Maine's sixteen Soil and Water Conservation Districts; Federal, state and local agencies; farmers; landowners; and communities. The partnership's commitment to conservation provides a solid foundation to a locally-led program delivery system. The partnership is also committed to a voluntary, incentive-based approach to private land stewardship and conservation treatment. To carry out the mission of improving and protecting natural resources, you provide funds to individuals to help resolve identified resource problems and to conserve soil, water, air, plant and animal resources. In 2009, your funding for conservation practices conducted in the state of Maine exceeded \$11 million.

Presently, you provide funding to non-Federal entities to carry out more than 100 different conservation practices throughout Maine ranging from brush management, composting, fish passage, irrigation systems, forestry, and farming to wetland restoration. Your conservation practice standards establish the acceptable level of quality for planning, designing, installing, operating, and maintaining conservation practices. Each conservation practice standard consists of the following: a definition, purpose, conditions where the practice applies, design criteria, plans and specifications, operation and maintenance requirements, and additional considerations. Details regarding the conservation practices and standards in Maine can be found at [http://efotg.sc.egov.usda.gov//efotg\\_locator.aspx](http://efotg.sc.egov.usda.gov//efotg_locator.aspx).

### **Relationship between EFH and ESA**

You currently have a valid Informal Programmatic ESA Section 7 Consultation with our Protected Resources Division pursuant to Section 4(b)(2) of the Endangered Species Act (ESA). However, this only pertains to Atlantic salmon and habitats located within the distinct population segments. Under our EFH mandate, Section 600.10 of the MSA, defines EFH as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity, as well as those areas historically used by the managed species. As such EFH for Atlantic salmon in Maine is designated in 21 rivers, while the ESA only covers 11 of them (See Table 1).

**Table 1. EFH Designated Atlantic salmon Rivers and Streams in Maine**

• Saco River	• Pleasant River
• Androscoggin River	• East Machias River
• Presumpscot River	• S. Croix River
• Kennebec River	• Dennys River
• Sheepscot River	• Hobart Stream
• Ducktrap River	• Passagassawaukeag River
• Union River	• Aroostook River
• Penobscot River	• Patten Stream
• Narraguagus River	• Boyden River
• Machias River	• Orland River
• Tunk Stream	

Additionally, diadromous fish (Atlantic salmon, river herring, shad, American eel, etc.) serve as prey for a number of federally-managed species and are considered a component of EFH pursuant to the MSA, whereby the presence of prey species makes the waters and substrate function as feeding habitat for the managed species. Reducing the availability of prey species adversely affects EFH. Therefore, this EFH programmatic consultation includes conservation recommendations for diadromous species that are preyed upon by other MSA managed species.

### **Essential Fish Habitat**

Our staffs have worked cooperatively to develop specific conservation standards that would apply programmatically to certain NRCS practices for EFH of Atlantic salmon in Maine as well as other diadromous prey species. This effort culminated in the development of required conservation recommendations for 32 conservation practices, that when implemented, will ensure that all adverse effects of these actions on EFH and associated species are no more than minimal and temporary in nature.

### **The EFH for Atlantic Salmon is Described Below:**

Atlantic salmon require cool, clean, well-oxygenated fresh water streams, rivers, ponds, and lakes and utilize a wide variety of habitat types. During their migration upstream in their native freshwater streams, Atlantic salmon require habitats with resting and holding pools. Upon reaching the spawning area, the mature female Atlantic salmon creates "redds," or nests, with her tail in course gravel or cobble stones in which she will lay the eggs. Spawning occurs in October and November in areas where water temperatures are below 10° C. Once the eggs are laid and fertilized, she will cover the eggs with more gravel or cobble stones. The eggs hatch in March or April; however, they remain in the redd until they have absorbed their yolk sacs and develop into alevin. Once the alevin develop into the next stage, fry, they leave the redd in search for food. This typically occurs in May. As they grow, the juveniles, or parr, seek deeper pools and protection under or around boulders, rocks, aquatic vegetation, large woody debris and overhanging stream banks where water temperatures fall below 25° C, water depths fall between 20 cm and 61 cm, and water velocities reach between 30 and 92 cm per second. As the parr mature, they move considerable distances in search of new habitats that offer rougher and larger substrates that provide better cover and foraging areas. Parr develop into smolts as they grow and undergo drastic changes as they prepare to migrate downstream into the Atlantic Ocean. The migration takes place from April through June. Post-smolts migrate to salt waters and typically live near the surface of the water. As they mature, they migrate into the Labrador Sea off the west coast of Greenland. After overwintering, some may return to their native streams to spawn again, while some may spend another year or more at sea before migrating back to spawn again (New England Fishery Management Council, 1998).

There are a number of potential negative impacts on salmon EFH associated with NRCS practices. For instance, activities that produce suspended sediments can harm the gills of fish or smother redds; dams obstruct the waterway passage preventing upstream migration; and, the removal of riparian areas can allow the runoff of nutrients that then depletes the amount of oxygen in the water necessary for the survival of Atlantic salmon, and other diadromous species. Based upon this information, we have concluded that NRCS activities fall into the following 3 consultation categories:

## 1. General Concurrence:

Table 2 lists the conservation practices for which the EFH General Concurrence applies. These actions have been determined to have no more than minimal or temporary adverse impact on EFH either individually or cumulatively and further EFH consultation is not required.

**Table 2: Natural Resources Conservation Service Conservation Practices and Codes that have No or Minimal Adverse Effect on EFH (General Concurrence)**

Conservation Practice	Code	Conservation Practice	Code
Access Control	472	Nutrient Management	590
Agrichemical Handling Facility	309	Obstruction Removal	500
Anaerobic Digester	366	Pipeline	516
Brush Management	314	Pond Sealing/Lining, Betonite	521a
Composting Facility	317	Pond Sealing/Lining, Flex Membrane	521c
Conservation Cover	327	Pond Sealing/Lining, Soil Dispersant	521b
Conservation Crop Rotation	328	Prescribed Grazing	524
Contour Buffer Strips	332	Recreation Trail and Walkway	568
Contour Farming	330	Residue/Tillage Manage, Mulch Till	345
Cover Crop	340	Residue/Tillage Manage, No/Strip Till	329
Critical Area Planting	342	Residue/Tillage Manage, Ridge Till	346
Deep Tillage	324	Residue Manage, Seasonal	346
Diversion	363	Riparian Forest Buffer	391
Early Successional Hab. Manage	367	Road/Trail/Landing Closure/Treatment	654
Farm Energy Improvements	374	Roof Runoff Structure	558
Fence	382	Roofs and Covers	367
Field Border	386	Seasonal High Tunnel for Crops	798
Filter Strip	393	Solid/Liquid Waste Separation Facility	632
Firebreak	394	Stripcropping	585
Forage and Biomass Planting	512	Terrace	600
Forage Harvest Management	511	Tree/Shrub Establishment	612
Forest Stand Improvement	666	Tree/Shrub Pruning	660
Heavy Use Area Protection	561	Tree/Shrub Site Preparation	490
Hedgerow Planting	422	Upland Wildlife Habitat Management	645
Herbaceous Weed Control	315	Vegetated Treatment Area	635
Integrated Pest Management	595	Waste Transfer	634
Irrigation Pipeline	430	Waste Treatment	629
Irrigation Water Management	449	Waste Utilization	633
Land Clearing	460	Watering Facility	614
Land Smoothing	466	Windbreak/Shelterbelt Establishment	380
Mulching	484		

## 2. Programmatic Consultation:

The conservation practices found in Table 3 fit into the following seven general categories of activities: 1) Soil Stabilization; 2) Vegetative Treatments; 3) Wildlife Enhancement; 4) Manure and Nutrient Management; 5) Water Management (rain- or snow-fed); 6) Water Management (groundwater, seeps and springs), and 7) Other. The purposes of these practices are as follows:

1. Soil stabilization practices are intended to maintain and build soil organic matter, or to reduce soil erosion after soil quality or erosion has been identified as an existing resource concern during the planning process;
2. Vegetative treatment practices are intended to control and manage vegetation, or may involve the establishment and/or use of vegetation to minimize and buffer negative effects caused by existing land uses. Vegetative treatment practices generally occur on or adjacent to primary production fields of an operation;
3. Wildlife enhancement practices are often similar to vegetative treatments with the purpose of creating and managing habitat to benefit specific species, to restore habitats that are in some form of decline, to enhance biodiversity of native habitats; or to remove barriers to aquatic organism passage.
4. Manure and nutrient management practices are intended to minimize pollution of surface and ground water by managing agricultural byproducts from livestock operations, while budgeting and supplying science-based nutrient supplements to plants by adjusting the amount and source of amendments, and adjusting the placement, form, and time of application;
5. Water management practices for rain- or snow-fed water sources are designed to reduce or control surface water run-off. These practices can be grouped into the following three categories based on their purpose:
  - a. those that reduce the volume, velocity, and energy of overland flow;
  - b. those that collect and convey water from the soil surface or profile; and
  - c. those that control or manipulate water elevations, discharge, distribution, and/or direction of water flow;
6. Water management practices involving groundwater, seeps and springs are designed with the purpose of developing a source of water for livestock and/or crops; and,
7. NRCS practices described as “Other” include agrichemical handling facilities which are intended to provide an environmentally safe area for mixing, loading and clean-up of on-farm chemicals; firebreaks, which are intended to reduce the spread of wildfire; and, obstruction removal, which involves the removal of small landscape features (e.g., rock fences, boulders, trees, buildings) on existing cropland, pastureland, hayland or at headquarters, that preclude effective transition to environmentally-friendly management practices. In Maine, this practice is used to remove obstructions that prevent implementation of beneficial conservation practices (e.g., switching from controlled burning to control weeds on a blueberry field to mowing). The most frequent use is removal of boulders from low bush blueberry fields; however, removal of slash piles, old fences, etc., allow construction associated with structural practices or more efficient vegetation management are possible.

The activities listed in Table 3 have been determined to potentially have adverse effects on EFH; however, the adverse effects of these activities can be minimized by incorporating programmatic conservation recommendations as described in Appendix A.

**Table 3: Natural Resources Conservation Service Conservation Practices and Codes that have Potential to Adversely Effect EFH (Programmatic Conservation Recommendations Required)**

Conservation Practice	Code	Conservation Practice	Code
Access Road	560	Stream Crossing	578
Animal Trails & Walkways	575	Stream Habitat Improvement & Mgmt.	395
Aquatic Organism Passage	396	Streambank & Shoreline Protection	580
Channel Stabilization	584	Structure for Water Control	587
Clearing and Snagging	326	Subsurface Drain	606
Forest Trails and Landings	655	Surface Drainage Field Ditch	607
Grade Stabilization Structure	410	Surface Drainage – Main or Lateral	608
Grassed Waterway	412	Underground Outlet	620
Irrigation Reservoir	436	Waste Storage Facility	313
Irrigation System, Micro-irrigation	441	Waste Treatment Lagoon	359
Irrigation System, Sprinkler	442	Water and Sediment Control Basin	638
Lined Waterway or Outlet	468	Water Well	642
Pond	378	Wetland Creation	658
Pumping Plant	533	Wetland Enhancement	659
Sediment Basin	350	Wetland Restoration	657
Spring Development	574	Wetland Wildlife Habitat Mgmt.	644

In order to ensure impacts associated with NRCS conservation practices are minimal and will not require individual EFH consultation, we have reiterated best management practices described with the EFH assessment and provided EFH conservation recommendations that help to clarify some of these measures (Appendix A). The EFH assessment, in combination with our EFH conservation recommendations, provides the basis for our determination that an EFH programmatic consultation provides an appropriate mechanism to evaluate EFH impacts associated with implementation of NRCS practices.

**Individual EFH Consultation:**

Practices listed in Table 4 require an individual EFH consultation. Additionally, if any of the EFH conservation recommendations provided for practices listed in Table 3 cannot be implemented as described in Appendix A of this letter, an individual consultation will be required for that project. Conservation Practices not specifically listed in this consultation will also require an individual EFH consultation. Details regarding the conservation practices and standards in Maine can be found at [http://efotg.sc.egov.usda.gov//efotg\\_locator.aspx](http://efotg.sc.egov.usda.gov//efotg_locator.aspx).

**Table 4: Natural Resources Conservation Service Conservation Practices and Codes that Require Individual Consultation**

Conservation Practice	Code
Dam Diversion	348
Dike (New Construction)	356

### **Tracking and Reporting**

Pursuant to section 600.920(g)(2)(ii) of the EFH regulations, annual tracking and reporting is required. For the purpose of tracking and determining the effectiveness of this EFH programmatic consultation and calculating cumulative impacts, you are required to submit an annual summary of the activities allowed under this EFH programmatic consultation for the previous calendar year, by January 31 of the following year. The information may be provided electronically and should include:

- The total number of practices (actions) installed according to conservation recommendations;
- Total acreage, feet, or number involved; and,
- Confirmation that conservation recommendations were followed.

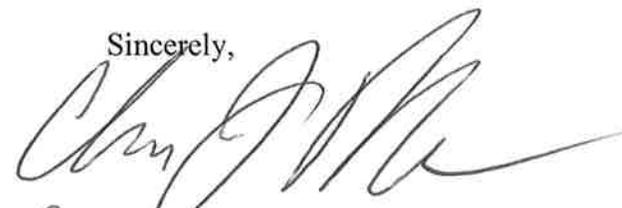
### **Supplemental Consultation**

Supplemental consultations are required if the proposed conservation practice (action) is substantially revised in a way that may adversely affect EFH, or if new information becomes available where the activity is no longer covered under this EFH programmatic consultation. Additionally, if we receive new or additional information on a practice that may adversely affect EFH for Atlantic salmon or our other trust resources, we may consider whether to require additional consultation with you and provide additional recommendations. This would be done after reviewing the required tracking and reporting results.

### **Conclusion**

Based upon our review of the activities included in this document, we have determined that programmatic EFH consultation is appropriate for your commonly permitted activities and meets the requirements of the EFH regulations at 50 CFR Subpart K, 600.920(j). The actions described above may adversely affect EFH for various federally managed fish species. However, adverse effects to EFH may be avoided, minimized or otherwise offset, by implementing the conservation recommendations provided within Appendix A as special conditions into the permits. For questions concerning this programmatic EFH consultation, please contact Carol Shé at (978) 675-2154.

Sincerely,



for Louis A. Chiarella  
Assistant Regional Administrator  
For Habitat Conservation

Attachment

cc: Christopher Boelke, HCD  
Mike Johnson, HCD  
Jeff Norment, NRCS State Biologist  
Julie Crocker, Protected Resources Division, NMFS

**Appendix A: Practices that May Adversely Affect EFH, and Conservation Recommendations for NRCS Practice Standards**

**Table A1: NRCS Conservation Practices that May Cause Adverse Effects to EFH for which Required Conservation Recommendations have been Developed**

<b>Conservation Practice</b>	<b>Code</b>	<b>Conservation Practice</b>	<b>Code</b>
Access Road	560	Stream Crossing	578
Animal Trails & Walkways	575	Stream Habitat Improvement & Mgmt.	395
Aquatic Organism Passage	396	Streambank & Shoreline Protection	580
Channel Stabilization	584	Structure for Water Control	587
Clearing and Snagging	326	Subsurface Drain	606
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Pond	378	Wetland Creation	658
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Spring Development	574	Wetland Wildlife Habitat Mgmt.	644

**GENERAL PROGRAMMATIC CONSERVATION RECOMMENDATIONS**

**A. Conservation Practices listed in Table A1 that meet the following criteria do not require further consultation:**

1. Practices planned more than 500 feet from a perennial stream capable of supporting diadromous species.
2. In-kind and in-place repair or replacement of existing damaged roads, trails, ditches, or structures (e.g., bridges; *does not apply to dams*) provided the appropriate Time of Year (TOY) restriction is observed.

**B. Conservation Practices listed in Table A1 that implement the following NMFS conservation recommendations do not require further consultation:**

**1. TOY Restrictions** – TOY restriction for non-tidal waters is from October 02 to July 14 (Construction window is from July 15 to October 1). TOY restriction for tidal waters is from March 15 to November 15 (Construction window is from November 16 to March 14). If work is to occur within these TOY restrictions, written approval by NMFS will be required.

**2. Project-Specific EFH Conservation Recommendations:** All practice-specific EFH conservation recommendations listed below must be implemented. If conservation recommendations cannot be incorporated, a project-specific consultation with the NMFS is required.

## PRACTICE SPECIFIC CONSERVATION RECOMMENDATIONS

### ***Access Road, Code 560; Animal Trails and Walkways, Code 575; Forest Trails and Landings, Code 655***

*Definition:* A travel-way for equipment, people and animals as part of a conservation plan to manage natural resources.

*Purpose:* To provide a fixed route for vehicular or animal travel for activities involving the management of timber, livestock, agriculture, wildlife habitat, and other conservation enterprises while minimizing impacts to soil, water, air, fish, wildlife, and other adjacent natural resources.

*Potential Effects to EFH:* 560 Network Diagram, 575 Network Diagram; 655 Network Diagram;  
*EFH Conservation Recommendations:*

1. Cross drainage for roads and trail systems that do not affect stream flows or lake or pond levels will not require an EFH consultation.
2. This practice will not require an EFH consultation when planned outside of existing Maine riparian and shoreline protection zones.
3. The appropriate TOY work window restrictions apply, as described above when it is reasonably likely that sediments or pollutants could reach receiving waters.
4. Prior to construction, have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
5. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.
6. On slopes water bars and turnouts will be used to direct water run-off and to minimize the chance sediments reach receiving waters.

### ***Aquatic Organism Passage, Code 396***

*Definition:* Modification or removal of barriers that restrict or impede movement of aquatic organisms.

*Purpose:* Improve or provide passage for aquatic organisms.

*Potential Effects to EFH:* 396 Network Diagram

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply.
2. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
3. Use channel spanning structures (equal to or greater than bankfull width) with open bottoms whenever possible to maintain passage for aquatic organisms.
4. For in-stream projects:
  - a. Must be conducted in the dry and effects to fish will be avoided or minimized.
  - b. The worksite will be isolated and fish removed prior to initiation of construction.
  - c. All projects will maintain downstream flows with negligible changes in water quality.

- d. Any pumps used for dewatering, will have a fish screen designed according to NOAA (2008) fish screen criteria and specifications installed.
- e. All in- or near-stream operations will cease under high flow conditions that may inundate the project area, except as necessary to avoid or minimize resource damage.
5. Where possible, NRCS will install structures aligned with the natural stream channel.
6. When possible, remove existing barriers in stages to control the release of sediments, if sediments are expected to be released downstream
7. When there are a series of barriers to be removed from one stream system with known listed fish during a construction season work will start at the most upstream barrier to minimize impacts to aquatic organisms.
8. All equipment must be fueled, maintained, and stored overnight at least 150 feet from surface waters.
9. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Channel Stabilization, Code 584***

*Definition:* Measures used to stabilize the bed or bottom of a channel.

*Purpose:* This practice may be applied as part of a conservation management system to support one or more of the following:

- Maintain or alter channel bed elevation or gradient;
- Modify sediment transport or deposition;
- Manage surface water and ground water levels in floodplains, riparian areas, and wetlands.

*Potential Effects to EFH:* 584 Network Diagram

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply.
2. Channel grade, structure, composition, and planform will be restored to the maximum extent practicable.
3. In-stream projects must be conducted in the dry and effects to fish will be avoided or minimized.
4. The worksite will be isolated and fish removed prior to initiation of construction.
5. All projects will maintain downstream flows with negligible changes in water quality.
6. Any pumps used for dewatering, will have a fish screen designed according to NOAA (2008) fish screen criteria and specifications installed.
7. All equipment must be fueled, maintained, and stored overnight at least 150 feet from surface waters.
8. All in- or near-stream operations will cease under high flow conditions that may inundate the project area, except as necessary to avoid or minimize resource damage.
9. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Clearing and Snagging, Code 326***

*Definition:* Removal of logs, boulders, drifts and other obstructions from natural or improved channels and streams.

*Purpose:* Reduce risks to agricultural resources or civil infrastructure by removing obstructions that hinder channel flow or sediment transport in order to:

- Restore flow capacity and direction;
- Prevent excessive bank erosion by eddies or redirection of flow;
- Minimize blockages by debris and ice.

*Potential Effects to EFH:* 326 Practice Network Diagram

*EFH Conservation Recommendation:*

1. The appropriate TOY work window restrictions apply.
2. Only remove structures and debris that are a safety hazard, increase the risk of structural failures, or impede the proper functioning of a natural or created channel.
3. Remove and deposit cleared or snagged materials upland of the waterway;
4. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Grade Stabilization Structure, Code 410***

*Definition:* A structure used to control the grade and head cutting in natural or artificial channels.

*Purpose:* To stabilize the grade and control erosion in natural or artificial channels, to prevent the formation or advance of gullies, and to enhance environmental quality and reduce pollution hazards.

*Potential Effects to EFH:* 410 Practice Network Diagram

*EFH Conservation Recommendations:*

1. If the structure is on uplands and the outlet will be to a stream or water body, the appropriate TOY work window restrictions apply.
2. On upland sites, prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
3. For in-stream projects the following apply:
  - a. Time of Year work window restrictions will be required.
  - b. Work will be conducted in the dry and effects to fish will be avoided or minimized.
  - c. The worksite will be isolated and fish removed prior to initiation of construction.
  - d. All projects will maintain downstream flows with negligible changes in water quality.
  - e. Any pumps used for dewatering, will have a fish screen designed according to NOAA 2008 criteria and specifications installed.
  - f. All in- or near-stream operations will cease under high flow conditions that may inundate the project area, except as necessary to avoid or minimize resource damage.

- g. Minimize encroachment into the waterway.
4. All equipment must be fueled, maintained, and stored overnight at least 150 feet from surface waters.
5. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Grassed Waterway, Code 412***

*Definition:* A natural or constructed channel that is shaped or graded to require dimensions and established with suitable vegetation.

*Purpose:* This practice may be applied as part of a conservation management system to support one or more of the following purposes:

- To convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding;
- To reduce gully erosion;
- To protect/improve water quality.

*Potential Effects to EFH:* 412 Practice Network Diagram

*EFH Conservation Recommendations:*

1. If the outlet will be to a stream or water body, the appropriate TOY work window restrictions apply.
2. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
3. Water outlets do not pass concentrated flow directly to a perennial stream, connected pond or lake, **OR**,
4. Outlet flows pass through at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services located between the outlet and adjacent waters to ensure the chance of sediments, nutrients, or other non-point pollution entering a stream is extremely unlikely, and not expected to occur.

### ***Irrigation Reservoir, Code 436 and Pond, Code 378***

*Definition:* An irrigation water storage structure made by constructing a dam, embankment, pit, or tank or a water impoundment made by constructing an embankment or by excavating a pit or dugout.

*Purpose:* This practice may be applied as part of a resource management system to achieve one or more of the following purposes:

- Store water to provide a reliable irrigation water supply or regulate available irrigation flows;
- Improve water use efficiency on irrigated land;
- Provide storage for tailwater recovery and reuse;
- Provide irrigation runoff retention time to increase breakdown of chemical contaminants;
- Provide livestock water; and,

- Reduce energy use.

*Potential Effects to EFH:* 436 Practice Network Diagram; 378 Practice Network Diagram

*EFH Conservation Recommendations:*

1. Irrigation related NRCS conservation practices will not require an EFH consultation when used on an existing irrigation system and will reduce annual water use from baseline conditions.
2. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
3. The reservoir is located outside of the flood plain on upland soils
4. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
5. A permanent reservoir is designed and maintained so that sediments delivered to the site will be contained, and will be periodically removed and deposited at stable locations at least 500 feet from a perennial stream, connected pond or lake.
6. Water outlets do not pass concentrated flow directly to a perennial stream, connected pond or lake, **OR**
7. Outlet flows pass through at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services located between the outlet and adjacent waters to ensure the chance of sediments, nutrients, or other non-point pollution entering a stream is extremely unlikely, and not expected to occur.

*Note:* If the planned water source is from a perennial stream, pond or lake, a project-specific EFH consultation with the NMFS will be required.

### ***Irrigation System, Micro-irrigation, Code 441***

*Definition:* System that distributes water directly to the plant root zone by means of surface or subsurface applicators.

*Purpose:* Efficiently and uniformly apply irrigation water and/or chemicals directly to the plant root zone to maintain soil moisture for optimum plant growth, without excessive water loss, erosion, reduction in water quality, or salt accumulation.

*Potential Effects to EFH:* 441 Practice Network Diagram

*EFH Conservation Recommendation:*

1. Irrigation related NRCS conservation practices will not require an EFH consultation when used on an existing irrigation system and will reduce annual water use from baseline conditions.
2. Use this practice to replace an existing, less efficient irrigation system
3. If the current source of water is from a stream, pond or lake, install a fish screen on the pumping plant inlet that meets criteria NOAA 2008 guidelines for fish screens
4. When possible, provide a water source that is not from or connected to a stream, pond, or lake

5. Document in a NRCS approved water management plan that there will be a water savings
6. Ensure the client is following their NRCS approved irrigation management plan to optimize use of available water by plants and to minimizing over application of water.

### ***Irrigation System, Sprinkler, Code 442***

*Definition:* An irrigation system in which all necessary equipment and facilities are installed for efficiently applying water by means of nozzles operated under pressure.

*Purpose:* Sprinkler irrigation systems are used to achieve one or more of the following purposes:

- Efficient and uniform application of irrigation water to maintain adequate soil water for plant growth and production without causing excessive water loss, erosion, or water quality impairment;
- Control of and/or modification of climate;
- Application of chemicals, nutrients and/or waste water;
- Reduction of particulate matter emissions to improve air quality.

*Potential Effects to EFH:* 442 Practice Network Diagram

*EFH Conservation Recommendations:*

1. Irrigation related NRCS conservation practices will not require an EFH consultation when used on an existing irrigation system and will reduce annual water use from baseline conditions;
2. Use this practice to replace an existing, less efficient irrigation system;
3. If the current source of water is from a stream, pond or lake, install a fish screen on the pumping plant inlet that meets criteria NOAA 2008 guidelines for fish screens;
4. When possible, provide water source that is not from or connected to a stream, pond, or lake;
5. Document in a NRCS approved water management plan that there will be a water savings;
6. Ensure the client is following their NRCS approved irrigation management plan to optimize use of available water by plants and to minimizing over application of water.

### ***Lined Waterway or Outlet, Code 468***

*Definition:* A waterway or outlet having an erosion resistant lining of stone, synthetic turf reinforcement fabrics, or other permanent material.

*Purpose:* This practice may be applied as part of a resource management system to support one or more of the following purposes:

- Provide for safe conveyance of runoff from conservation structures or other water concentrations without causing erosion or flooding;
- Stabilize existing and prevent future gully erosion;
- Protect and improve water quality.

*Potential Effects to EFH: 468 Practice Network Diagram*

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
2. As needed, have erosion control BMPs in place prior to construction to minimize the likelihood that sediments will reach receiving waters.
3. Water outlets do not pass concentrated flow directly to a perennial stream, connected pond or lake, **OR**,
4. Outlet flows pass through at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services located between the outlet and adjacent waters to ensure the chance of sediments, nutrients, or other non-point pollution entering a stream is extremely unlikely, and not expected to occur

***Pumping Plant, Code 533***

*Definition:* A facility that delivers water at a designed pressure and flow rate. Includes the required pump, associated power unit, plumbing, appurtenances, and may include on-site fuel or energy source(s), and protective structures.

*Purpose:* To achieve one or more of the following:

- Delivery of water for irrigation, watering facilities, wetlands, or fire protection;
- Transfer of animal waste as part of a manure transfer system;
- Improvement of energy use efficiency;
- Improvement of air quality.

*Potential Effects to EFH: 533 Practice Network Diagram*

*EFH Conservation Recommendations:*

1. Use this practice to replace existing, less efficient watering systems;
2. If the current source of water is from a stream, pond or lake, install a fish screen on the pumping plant inlet that meets criteria NOAA 2008 guidelines for fish screens;
3. When possible, provide water source that is not from or connected to a stream, pond, or lake;
4. No additional EFH consultation is needed when a pumping plant:
  - a. Is used on an existing irrigation system and will reduce annual water use from baseline conditions;
  - b. Is used to transfer waste within a waste transfer or waste treatment facility;
  - c. Supplies water for livestock operations having less than 200 animal units, operates at a sustained yield of 100 gallons or less per minute, and water is not being directly withdrawn from surface waters;
  - d. Is associated with a well more than 500 feet from a stream and the sustained water yield will be 100 gallons or less per minute.

### ***Sediment Basin, Code 350 and Water and Sediment Control Basin, Code 638***

*Definition:* A basin constructed with an engineered outlet, formed by an embankment or excavation or a combination of the two (Practice 350) or an earth embankment or a combination ridge and channel constructed across the slope of minor watercourses to form a sediment trap and water detention basin with a stable outlet (Practice 638).

*Purpose:* To capture and detain sediment laden runoff, or other debris for a sufficient length of time to allow it to settle out in the basin.

- To reduce watercourse and gully erosion;
- To trap sediment;
- To reduce and manage onsite and downstream runoff;
- Improve downstream water quality;
- Trap sediment originating from construction sites;
- Prevent undesirable deposition on bottom lands.

*Potential Effects to EFH:* 530 Practice Network Diagram; 638 Practice Network Diagram

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply if there is a likelihood that sediments will reach receiving waters.
2. The basin is located on upland sites and soils.
3. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
4. A permanent basin is designed and maintained so that sediments delivered to the site will be contained, and will be periodically removed and deposited at stable locations at least 500 feet from a perennial stream, connected pond or lake.
5. A temporary sediment basin will contain all sediments delivered to the basin, and the basin will be removed, and the site restored to its original stable condition once the basin's function is complete.
6. Water outlets do not pass concentrated flow directly to a perennial stream, connected pond or lake, **OR**,
7. Outlet flows pass through at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services located between the outlet and adjacent waters to ensure the chance of sediments, nutrients, or other non-point pollution entering a stream is extremely unlikely, and not expected to occur.

### ***Spring Development, Code 574***

*Definition:* Utilizing springs and seeps to provide water for conservation needs.

*Purpose:* This practice may be applied as part of a resource management system to support one or more of the following purposes:

- Improve the distribution of water;
- Increase the quantity and quality of water for livestock, wildlife, or other uses;
- Obtain water for irrigation if water is available in a suitable quantity and quality.

*Potential Effects to EFH: 574 Practice Network Diagram*

*EFH Conservation Recommendations:*

1. The spring is not the source of a perennial stream that joins a perennial stream of the same or higher order; and,
2. The sustained water yield will be equal to or less than 100 gallons per minute.

***Stream Crossing, Code 578***

*Definition:* A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles.

*Purpose:*

- Improve water quality by reducing sediment, nutrient, organic, and inorganic loading of the stream;
- Reduce stream bank and streambed erosion;
- Provide crossing for access to another land unit.

*Potential Effects to EFH: 578 Practice Network Diagram*

*EFH Conservation Recommendations:*

1. Time of Year work window restrictions apply.
2. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
3. use channel spanning structures (equal to or greater than bankfull width) with an open bottom whenever possible to maintain passage for aquatic organisms.
4. Maintain or provide aquatic organism passage at all stream crossing sites.
5. For in-stream projects:
  - a. Must be conducted in the dry and effects to fish will be avoided or minimized.
  - b. The worksite will be isolated and fish removed prior to initiation of construction.
  - c. All projects will maintain downstream flows with negligible changes in water quality.
  - d. Any pumps used for dewatering, will have a fish screen designed according to NOAA 2008 criteria and specifications installed.
  - e. All in- or near-stream operations will cease under high flow conditions that may inundate the project area, except as necessary to avoid or minimize resource damage.
6. Where possible, NRCS will install structures aligned with the stream channel.
7. All equipment must be fueled, maintained, and stored overnight at least 150 feet from surface waters.
8. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Stream Habitat Improvement and Management, Code 395***

*Definition:* Maintain, improve or restore physical, chemical and biological functions of a stream, and its associated riparian zone, necessary for meeting the life history requirements of desired aquatic species.

*Purpose:*

- Provide suitable habitat for desired fish and other aquatic species;
- Provide stream channel and associated riparian conditions that maintain stream corridor ecological processes and hydrological connections of diverse stream habitat types important to aquatic species.

*Potential Effects to EFH:* 395 Practice Network Diagram

*EFH Conservation Recommendation:*

1. Cross drainage for roads and trail systems that do not affect stream flows or lake or pond levels will not require an EFH consultation.
2. When planned outside of existing Maine riparian and shoreline protection zones.
3. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters or if work will occur within the stream channel.
4. If construction is involved (e.g., shaping stream banks, restoring natural channel elevation) have erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
5. Placement of boulders and/or large woody debris will follow guidelines in Saldi-Caromile et. al., (2004) and/or USDA-NRCS' National Engineering Handbook, Part 654 (2007).
6. All equipment must be fueled, maintained, and stored overnight at least 150 feet from surface waters.
7. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

### ***Streambank and Shoreline Protection, Code 580***

*Definition:* Treatment(s) used to stabilize and protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.

*Purpose:*

- To prevent the loss of land or damage to land uses, or facilities adjacent to the banks of streams or constructed channels, shoreline of lakes, reservoirs, or estuaries including the protection of known historical, archeological, and traditional cultural properties;
- To maintain the flow capacity of streams or channels;
- Reduce the offsite or downstream effects of sediment resulting from bank erosion;
- To improve or enhance the stream corridor for fish and wildlife habitat, aesthetics, recreation.

*Potential Effects to EFH:* 580 Practice Network Diagram

*EFH Conservation Recommendation:*

1. All construction will occur during the appropriate TOY work window.
2. Prior to construction have in place erosion control BMPs to minimize the likelihood that sediments will reach receiving waters.
3. Equipment will be positioned outside the water body or water course,
4. Bioengineered stabilization techniques will be used where technically and financially feasible for the intended purpose following guidelines in Cramer et al (2003) and/or USDA-NRCS' National Engineering Handbook, Part 654 (2007), **OR**,
5. Use of rip rap will be minimized and will not extend above the bank toe, with bioengineered stabilization techniques used to stabilize the remainder of the bank slope and top of bank. These techniques will minimize encroachment in the stream.
6. Equipment will be stored overnight, fueled and maintained at least 150 feet from the ordinary high water mark.
7. Stabilize slopes or disturbed soils with quick establishing, non-invasive species to minimize erosion and runoff.

***Structure for Water Control, Code 587***

*Definition:* A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water.

*Purpose:* The practice may be applied as a management component of a water management system to control the stage, discharge, distribution, delivery or direction of water flow.

*Potential Effects to EFH:* 587 Practice Network Diagram

Possible effects will depend upon the purpose the water control structure is being used.

*EFH Conservation Recommendation:*

1. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
2. The structure replaces an existing water control device on an existing dike, embankment pond, water storage facility or conveyance that does not increase existing water elevation or storage capacity, decrease existing discharge, or negatively change the distribution, delivery or direction of water flow.
3. Structures will be installed, as needed, with erosion control measures to ensure the risk of sediment entering a stream is extremely unlikely.

***Subsurface Drain, Code 606; Surface Drain, Field Ditch, Code 607; Surface Drain – Main or Lateral, Code 608***

*Definition:* A conduit installed beneath the ground surface to collect and/or convey excess water, or an open drainage ditches constructed to a designed cross section, alignment and grade.

*Purpose:* These practices are components of a water management system used to convey water capable of: causing sub-surface or surface soil erosion, conveying dirty water (soil, manure,

silage leachate, etc.), or undermining structural stability of existing or planned structures. In some cases water collected and conveyed may be used to irrigate crops.

*Potential Effects to EFH:* 606 Practice Network Diagram, 607 Practice Network Diagram, 608 Practice Network Diagram

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
2. As needed, have erosion control BMPs in place prior to construction to minimize the likelihood that sediments will reach receiving waters.
3. The practices are used to pass water around, from, or under structures or unstable ground.
4. Are designed to outlet unpolluted water to groundwater, **OR**,
5. Are designed to outlet contaminated water through a *Vegetated Treatment Area*, Code 635, **OR**,
6. Conveyed clean water will either infiltrate or will outlet to receiving surface waters.

### ***Underground Outlet, Code 620***

*Definition:* A conduit or system of conduits installed beneath the surface of the ground to convey surface water to a suitable outlet.

*Purpose:* To carry water to a suitable outlet from terraces, water and sediment control basins, diversions, waterways, surface drains, other similar practices or flow concentrations without causing damage by erosion or flooding.

*Potential Effects to EFH:* 620 Practice Network Diagram

*EFH Conservation Recommendations:*

1. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
2. As needed, have erosion control BMPs in place prior to construction to minimize the likelihood that sediments will reach receiving waters.
3. Water outlets do not pass concentrated flow directly to a perennial stream, connected pond or lake, **OR**,
4. Outlet flows pass through at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services located between the outlet and adjacent waters to ensure the chance of sediments, nutrients, or other non-point pollution entering a stream is extremely unlikely, and not expected to occur.

### ***Waste Storage Facility, Code 313; Waste Treatment Lagoon, Code 359***

*Definition:* A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure.

*Potential Effects to EFH:* To temporarily store or treat wastes such as manure, wastewater, and contaminated runoff as a component of an agricultural waste management system.

*EFH Issues:* 313 Practice Network Diagram; 359 Practice Network Diagram

*EFH Conservation Recommendations:*

1. Waste Storage Practices will not require an EFH consultation when:
  - a. Structures are not placed in a floodplain, or
  - b. Local topography and/or distance (i.e., >500 feet) prevents waste from entering a perennial creek, stream, river, pond or lake in the event of structure failure.
1. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
2. As needed, have erosion control BMPs in place prior to construction to minimize the likelihood that sediments will reach receiving waters.
3. Placement of the structure is furthest from surface waters as reasonably feasible given existing infrastructure of the livestock operation.
4. Potential contaminated run-off must be contained, routed through a *Vegetated Treatment Area*, Code 635, **OR**,
5. Where there is potential for significant impacts from breach or accidental release, an emergency action plan will be developed.

### ***Water Well, Code 642***

*Definition:* A hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer for water supply.

*Purpose:* Provide water for livestock, wildlife, irrigation, and other agricultural uses;

- Facilitate proper use of vegetation, such as keeping animals on rangeland and pastures and away from streams

*Potential Effects to EFH:* 642 Practice Network Diagram

*EFH Conservation Recommendation:*

1. The well is used to supply water for livestock watering systems for operations having less than 200 animal units.
2. The well will replace equipment directly withdrawing water from a perennial stream or where animals have direct access to a stream, connected pond or lake.
3. The well and associated pumping plant are not located within 500 feet of a stream, **OR**,
4. The well is planned for an existing irrigation system, and will replace equipment directly withdrawing water from a perennial stream, connected pond or lake.
5. The system will have a sustained water yield of equal to or less than 100 gallons per minute.
6. There will be a net reduction in water use for the entire agricultural operation, and, records are maintained to ensure water use is compliant with Maine's aquatic base flow law and regulations.

***Wetland Creation, Code 658; Wetland Enhancement, Code 659; Wetland Restoration, Code 657; Wetland Wildlife Management, Code 644***

*Definition:* To create, enhance, restore or manage wetlands to replace lost values and functions, restore historic values and functions, or to enhance or manage existing wetlands for a specific wildlife values.

*Purposes:* The rehabilitation and augmentation of an existing degraded wetland for specific species or wetland values (wetland enhancement), the creation of a wetland on a site that was historically non-wetland (wetland creation), the restoration of a converted or degraded wetland to wetland conditions and functions extant prior to the disturbance (wetland restoration), and to manage and maintain existing wetlands for wetland wildlife (wetland wildlife habitat management).

*Potential Effects to EFH:* 658 Practice Network Diagram, 659 Practice Network Diagram; 657 Practice Network Diagram; 644 Practice Network Diagram

*EFH Conservation Recommendation:*

1. Wetlands related practices will not require an EFH consultation when:
  - a. In all cases the wetland is not connected to a perennial stream or connected pond or lake capable of supporting EFH listed species;
  - b. Site specific hydrology and watershed hydrological processes are being restored;
  - c. Wetland enhancement or management does not impound more water, in existing man-made or natural wetlands, than existed prior to EFH listing, **OR**,
  - d. When planned outside of existing Maine riparian and shoreline protection zones.
2. This practice will not require an EFH consultation Cross drainage for roads and trail systems that do not affect stream flows or lake or pond levels.
3. The appropriate TOY work window restrictions apply if there is a chance that sediments could reach receiving waters.
4. As needed, have erosion control BMPs in place prior to construction to minimize the likelihood that sediments will reach receiving waters.
5. Site specific hydrology and wetland processes are being restored.
6. Wetland enhancement or management does not impound more water, in existing man-made or natural wetlands, than existed prior to listing of the species under EFH, **OR**,
7. Use wetland creation as compensatory mitigation on at least a 1:1 ratio for loss of wetlands due to irrigation.

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