Maine NRCS Practices Effects on the Federally Endangered Atlantic Salmon and Threatened Shortnose Sturgeon

Practice Effect Determination

NE – No Effect

NLAA – "May Affect", "not likely to adversely affect" species and critical habitat (***Requires consultation with the "Service"***)

LAA – May affect, "likely to adversely affect" species and\or critical habitat (***Requires consultation with the Service***)

- See glossary, page 13, for definition of effects and definitions for words in quotations.

Consultation is only required when practices are to be applied within the A. salmon or sturgeon mapped watersheds, and for conditions described below. The applicable consultation areas are located in the Federally Protected feature dataset of the Maine NRCS Customer Service Toolkit.

When Program financial assistance or other agency control is\will be involved, NRCS District Conservationists\Planners shall use this table as a guide to help make an effect determination when a practice is to be implemented within 500 feet of a perennial stream, connected pond or lake, and anywhere in a watershed for most irrigation practices. The table is based on the application of conservation practices under common planning scenarios. The planner will use this table and their knowledge of the "action area", and the practices to be applied to make decisions regarding "effects of an action" on species. In most cases, NRCS practices will have long term benefits to water quality and aquatic resources; however, there may be short-term adverse effects ("direct" or "indirect") during practice installation that need to be avoided or minimized to where "take" of species or adverse effects to designated salmon critical habitat are not likely to occur.

In the table below, numbers or symbols adjacent to Xs correspond to footnotes (starting on page 6). Some practices have a **NLAA** with additional requirements above and beyond the definition of $\mathbf{X^{Ó}}$; these practices have a specific footnote identifier ($\mathbf{X^{Óa\text{-}n}}$). If a practice has both a **NLAA** *and* **LAA** designation, the practice has been identified as one more likely to have an adverse affect.

A final effect designation is determined by site-specific conditions, whether footnoted conditions apply or can be achieved, and the extent to which site-specific minimization measures can be incorporated to avoid adverse effects to species or designated salmon "critical habitat". *Always read through all footnotes applied to a practice prior to making a final effect determination.* When there is doubt or when a determination is **LAA**, initiate informal consultation with the appropriate "Service".

When a **LAA only** designation occurs, consultation with the "Services" is necessary. Ensure that accurate maps denoting the location (1:24,000) and extent of practice(s) are clearly identified and on a **ME-ECS-1** provide detailed site-specific practice

information to allow the Services to make an informed decision on whether they concur with NRCS' effect determination, and the appropriate next step in the consultation process.

Note: *Follow Maine policy (GM120 Amendment ME 11, Part 408, Subpart C) prior to sharing any personally identifiable information for the purpose of Federal or State consultations.*

Practice	Practice	Practice Effects Designation, Rational, and Criteria		
Name	Code	NE	NLAA	LAA
Access Control	**472**	**X**		
Access Road	**560**		**X[Ó,a]**	**X**
Agrichemical Handling Facility, *Interim Standard*	**309**	**X**		
Anaerobic Digester - Controlled Temperature	**366**	**X**		
Animal Trails & Walkways	**575**		**X[Ó,a]**	**X**
Atmospheric Resource Quality Mgmt *(not cost-shared; so No Effect)*	**370**	**X**		
Brush Management	**314**		**X[Ó]**	
Channel Stabilization	**584**			**X**
Clearing and Snagging	**326**	**X[1]**		
Composting Facility	**317**		**X[Ó]**	
Conservation Cover	**327**	**X**		
Conservation Crop Rotation	**328**	**X**		
Contour Buffer Strips	**332**	**X**		
Contour Farming	**330**	**X**		
Cover Crop	**340**	**X**		
Critical Area Planting *(when a facilitating practice for streambank stabilization, the May Affect applies)*	**342**		**X[Ó]**	**X**
Dam	**402**			**X**
Dam, Diversion	**348**			**X**
Deep Tillage	**324**		**X[Ó,b]**	
Dike	**356**			**X**
Diversion	**362**		**X[Ó]**	

Practice	Practice	Practice Effects Designation, Rational, and Criteria		
Name	Code	NE	NLAA	LAA
Early Successional Habitat Development & Management	**647**		**X^{Ø}**	
Fencing *(interior and perimeter fencing not along shorelines, and fence posts pushed into the ground will have no effect)*	**382**		**X^{Ø,c}**	
Field Border	**386**	**X**		
Filter Strip	**393**		**X^{Ø}**	
Firebreak	**394**		**X^{Ø,d}**	
Fish Passage	**396**			**X**
Forage Harvest Management	**511**	**X**		
Forest Trails and Landings	**655**		**X^{Ø,a}**	
Forest Stand Improvement	**666**		**X^{Ø}**	
Grade Stabilization Structure *(see "outlet" under X^{Ø})*	**410**		**X^{Ø}**	**X**
Grassed Waterway *(see "outlet" under X^{Ø})*	**412**		**X^{Ø}**	**X**
Heavy Use Area Protection	**561**		**X^{Ø}**	
Hedgerow Planting	**422**	**X**		
Herbaceous Weed Control	**315**		**X^{Ø}**	
Irrigation Regulating Reservoir	**552**		**X^{Ø,e}**	**X**
Irrigation Storage Reservoir	**436**		**X^{Ø,e}**	**X**
Irrigation System, Micro-irrigation	**441**		**X^{Ø,f}**	
Irrigation System, Sprinkler	**442**		**X^{Ø,f}**	
Irrigation Water Conveyance, Aluminum Tubing Pipeline *(will not increase water use)*	**430AA**	**X^{2}**		
Irrigation Water Conveyance, Asbestos - Cement Pipeline *(will not increase water use)*	**430BB**	**X^{2}**		
Irrigation Water Conveyance, Non-reinforced Concrete Pipeline *(will not increase water use)*	**430CC**	**X^{2}**		
Irrigation Water Conveyance, High Pressure Underground Plastic Pipeline *(will not increase water use)*	**430DD**	**X^{2}**		
Irrigation Water Conveyance, Low Pressure Underground Plastic Pipeline *(will not increase water use)*	**430EE**	**X^{2}**		
Irrigation Water Conveyance, Steel Pipeline *(will not increase water use)*	**430FF**	**X^{2}**		

Practice	Practice	Practice Effects Designation, Rational, and Criteria		
Name	Code	NE	NLAA	LAA
Irrigation Water Conveyance, Reinforced Plastic Mortar Pipeline *(will not increase water use)*	430GG	X[2]		
Irrigation Water Management	449		X[Ø,f]	
Lined Waterway or Outlet *(see "outlet" under X[Ø])*	468		X[Ø]	X
Mulching	484	X		
Nutrient Management	590		X[Ø]	
Obstruction Removal	500		X[Ø,g]	
Pasture and Hay Planting	512		X[Ø]	
Pest Management *(IPM is NE; see herbicide under X[Ø])*	595		X[Ø]	
Pipeline	516	X		
Pond	378		X[Ø,e]	X
Pond Sealing or Lining, Bentonite Sealant	521C	X		
Pond Sealing or Lining, Flexible Membrane	521A	X		
Pond Sealing or Lining, Soil Dispersant	521B	X		
Prescribed Forestry	409	X		
Prescribed Grazing	528	X		
Pumping Plant	533		X[Ø,h]	X
Recreation Trail & Walkway	568		X[Ø,a]	
Residue and Tillage Mgmt, Mulch Till	345	X		
Residue and Tillage Mgmt, Ridge Till	346	X		
Residue Mgmt, Seasonal	344	X		
Residue and Tillage Mgmt., No-Till, Strip Till, Direct Seed *(see "herbicide" under X[Ø])*	329		X[Ø]	
Riparian Forest Buffer	391	X[3]	X[Ø]	
Roof Runoff Structure	558	X		
Row Arrangement	557	X		
Sediment Basin	350		X[Ø,i]	X

Practice Name	Practice Code	Practice Effects Designation, Rational, and Criteria		
		NE	NLAA	LAA
Solid/Liquid Waste Separation Facility	**632**		**X[Ø]**	
Spring Development	**574**	**X**		
Stream Crossing *(perennial streams only, see glossary)*	**578**			**X**
Stream Habitat Improvement & Mgmt	**395**			**X**
Streambank & Shoreline Protection	**580**			**X**
Strip-cropping	**585**	**X**		
Structure for Water Control	**587**		**X[Ø,j]**	**X**
Subsurface Drain	**606**		**X[Ø,k]**	**X**
Surface Drainage Field Ditch	**607**		**X[Ø,k]**	**X**
Surface Drainage - Main or Lateral	**608**		**X[Ø,k]**	**X**
Terrace	**600**	**X**		
Transition to Organic Farming, ***Interim Standard***	**789**	**X**		
Tree and Shrub Establishment	**612**	**X[3]**	**X[Ø]**	
Tree and Shrub Site Preparation	**490**		**X[Ø]**	
Tree and Shrub Pruning	**660**	**X**		
Underground Outlet	**620**	**X**		
Upland Wildlife Upland Habitat Mgmt	**645**	**X[4]**	**X[Ø]**	
Vegetated Treatment Area *(formerly Wastewater Treatment Strip)*	**635**		**X[Ø]**	
Waste Storage Facility	**313**		**X[Ø]**	**X**
Waste Transfer *(formerly Manure Transfer; transfer to a storage facility is a "No Effect")*	**634**	**X**		
Waste Treatment	**629**	**X**		
Waste Treatment Lagoon	**359**		**X[Ø]**	
Waste Utilization	**633**		**X[Ø]**	
Water and Sediment Control Basin	**638**		**X[Ø,i]**	
Water Well	**642**		**X[Ø,L]**	**X**
Watering Facility	**614**	**X**		

Practice	Practice	Practice Effects Designation, Rational, and Criteria		
Name	Code	NE	NLAA	LAA
Wetland Enhancement	**659**		**X[Ó,m]**	**X**
Wetland Restoration	**657**		**X[Ó,m]**	**X**
Wildlife Wetland Habitat Mgmt	**644**	**X[4]**	**X[Ó,m]**	**X**
Windbreak/Shelterbelt Establishment	**380**	**X**		
	Totals	**45**	**50**	**28**

Note: Engineered practices installed across or bordering streams\shorelines will follow NRCS' *Stream Crossing Guidelines for Critical Area Habitats*

No Effect Designations

If point and non-point pollution is likely to reach a perennial stream\river during installation of a practice identified as having "No Effect", the appropriate effect designation is "May Affect". Contact the NRCS state biologist to help minimize effects, and then initiate informal consult with the appropriate "Service".

Based on previous informal consultation with the Services the following practices have a No Effect designation; however, NRCS feels these practice are more appropriately wholly beneficial. NRCS will track these practices and report these practices to satisfy our section 7(a)(1) responsibilities under the Federal ESA. Practices are referenced by their practice codes: 472, 327, 328, 332, 330, 386, 340, 345, 346, 344, 329, 557, 585, 789, and 351.

X[1] – Clearing and Snagging, Code 326 will not affect A. salmon, shortnose sturgeon, or designated critical habitat when used on ditches, floodways or other waterways that are not connected to a perennial stream, connected pond or lake. Otherwise, consultation with the Services is required.

X[2] – Irrigation Conveyance (practices 430 AA-GG) will not affect A. salmon, shortnose sturgeon, or designated critical habitat when:

- these practices involve an existing irrigation system, which does not directly withdraw water from streams,
- there will be *no net increase in existing water use*, and
- water use is compliant with Maine's aquatic base flow law and regulations.

X[3] – Riparian Forest Buffer, code 391, and Tree and Shrub Establishment, code 612 will not affect A. salmon, shortnose sturgeon, or designated critical habitat when:

- natural regeneration is used to establish woody cover, and
- woody cover is planted within field interiors (e.g., hedgerows, windbreaks, or wildlife\habitat restoration plantings), when the plantings are not used for establishment of riparian forest buffers where currently non-existent\insufficient to provide adequate shading or filtering services for adjacent waters or for streambank stabilization.

X[4] – Upland or Wetland Wildlife Habitat Management, codes 645 and 644, respectively, will not affect A. salmon, shortnose sturgeon, or designated critical habitat when:

- nest boxes and perches, brush piles, snag trees are established, predator perches in York and Cumberland Counties are removed to benefit the New England Cottontail, and un-harvested grain in cropland is left standing.

Not Likely to Adversely Affect (NLAA) Footnotes

X[Ó] – Practice is NLAA Atlantic salmon or shortnose sturgeon or designated critical habitat when planned for *existing* "cropland", "hayland", "pastureland", "forestland", "Animal Feeding Operations" or "Confined Animal Feeding Operations", or "Headquarters" and all conditions indicated by the bullet ➢below which are applicable to a practice are met during practice installation, operation, and maintenance. For example, when doing practice Brush Management, code 314, in a field not crossed by a perennial stream, the 1st two bullets below would not be applicable; however, the 3rd is and there are other bullets that may apply depending on the land use where the brush management is being conducted and adjacent landscape features (e.g., forestland, shoreline zones, re-fueling, repairing and staging of equipment, additional erosion control measures, operation and maintenance requirements). For each bulleted condition, unless indicated by the words "except" or "or", all sub-bullets apply.

- **entering, or crossing a perennial stream** is not a "direct", "indirect", "inter-related" or "inter-dependent" result of the proposed action(s)
- **ground disturbance during construction of "significant structures"** will not occur within a setback zone, which starts at the upland edge of a perennial stream's "floodplain" (see glossary), connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
  - for slopes up to 8% at least a 100 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between the construction site and the upland edge of the floodplain, connected pond or lake, and
    - for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and
    - if adjacent upland areas are predominately comprised of hydrologic group C and D soils, setbacks discussed above are to be increased at least 20 and 30 feet, respectively,
  - OR erosion control measures (see below) will be used to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.
- **mowing of herbaceous vegetation or lowbush blueberries on existing barrens will not** occur within a setback zone, which starts at the upland edge of a perennial stream's "floodplain" (see glossary), connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
  - for slopes up to 8% at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between the construction site and the upland edge of the floodplain, connected pond or lake, and
    - for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and

    - if adjacent upland areas are predominately comprised of hydrologic group C and D soils, setbacks discussed above are to be increased a at least 20 and 30 feet, respectively,
  - OR erosion control measures (see below) will be adequate to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.
- **forest management activities** will be implemented according to Maine's current *Best Management Practices for Forestry: Protecting Maine's Water Quality*, ME NRCS conservation practice standard *Forest Stand Improvement*, code 666, 12 MRSA §8867-B - Maine Forest Practices Act, 38 MRSA §420-C. - Maine Erosion and Sediment Control Law, and 38 MRSA § 435 et seq. - Maine Shoreline Zoning Act and Town ordinances, with added protections for perennial streams not protected by existing Maine statute or rule (see cutting\removal of woody veg. in shoreline areas directly below).
- **cutting or removal of woody vegetation within shoreline areas** will be compliant with all applicable Maine Shoreline Zoning statutes, and Town ordinances (Towns may enact larger shoreline zones than those required by state law), and
  - vegetation removal will occur during winter on frozen ground to minimize soil disturbance, and
  - Windfirm trees of size classes and densities to ensure full shading of a stream during the period when the sun is at its summer zenith shall be retained in all buffers, and
  - for perennial 1st order streams (see "Stream Order" in glossary) not protected by state statute or rule, cutting will not occur within a setback zone, which starts at the upland edge of a perennial stream's "floodplain" (see glossary), connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
    - on slopes up to 8%, at least a 50 foot well-vegetated buffer capable of providing filtering and shade services will be maintained between the practice and the upland edge of the stream's floodplain., and
      - for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and
      - if adjacent upland areas are predominately comprised of hydrologic group C and D soils, setbacks discussed above are to be increased at least 20 and 30 feet, respectively,
  - OR erosion control measures (see below) will be adequate to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.
- **perennial herbaceous plantings** requiring tillage for seedbed preparation will not occur within a setback zone, which starts at the upland edge of a perennial stream's "floodplain", connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
  - for slopes up to 8% at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between the planting site and the upland edge of the "floodplain", connected pond or lake, and
    - for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and

    - if adjacent upland areas are predominately comprised of hydrologic group C and D soils, setbacks discussed above are to be increased at least 20 and 30 feet, respectively
  - OR, erosion control measures (see "additional erosion control measures" below) will be used to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.
  - when soil amendments are applied, the amount will be according to a recent (< 5 years old) soil test to meet, but not exceed nutritional needs of the species to be planted.
- **woody plantings** involving planting of bare-root stock using a dibble-bar, or balled-stock with bare ground compacted and mulched with organic material or commercial tree-mats to ensure the chance of sediment entering a stream is extremely unlikely (not expected) to occur, or is at a scale where one cannot meaningfully measure, detect or evaluate a presence.
- **water outlets** do not pass concentrated flow directly to a perennial stream, connected pond or lake, but
  - passes flows 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,
  - OR, erosion control measures (see below) will be adequate to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.
- **vehicle\equipment fueling, repair and overnight parking** will be stored, serviced, and fueled in a contained area that is at least 150 feet away from aquatic habitats or other sensitive areas.
- **additional erosion control measures** (forested or herbaceous filter areas, silt fences, hay bales, geo-textile or other erosion control fabric, practice standard mulching, turn-outs, water bars, time of application, setbacks, sediment basins, fast-growing annual cover crops, etc.) are used to control, re-direct, filter, or halt point or non-point sources of pollution so the risk of chance of pollution entering a stream is extremely unlikely (not expected) to occur, or is at a scale where one cannot meaningfully measure, detect or evaluate a presence. NRCS will provide erosion control specifications that indicate acceptable erosion control material, a design for installation, and the exact location and extent where erosion control measures are to be installed, and operation, maintenance and monitoring requirements.
- **Pre-construction meetings** will be held to discuss any needed conservation measures that must be in place prior to commencement of construction or practice installation. Examples of topics could include: needed erosion control measures and their operation, monitoring and maintenance; application setbacks (e.g., manure spreading, shoreline zones), equipment fueling, repair, and overnight parking, etc. NRCS will ensure that needed conservation measures are in place prior to commencement of construction.
- **herbicide applications** for no-till plantings, spot-spraying to control invasive plants, spot- or band-spraying for tree and shrub site preparation, the following conservation measures will be followed:
  - appropriate mitigation measures are implemented according NRCS' conservation practice standard *Pest Management,* Code 595, and are based on an aquatic habitat risk assessment using NRCS' Windows Pesticide Screening Tool (WinPST), and

- within 100 feet of a perennial stream, connected pond or lake, herbicides approved for riparian and\or aquatic application will be used, and
- label instructions will be followed, and
- chemicals will be applied by a State of Maine certified pesticide applicator using properly calibrated and maintained equipment.

➢ **application of manure and other nutrients** will be applied according to mandatory requirements of the Maine Nutrient Management Act (7 MRSA §4204; Ch 565 http://www.maine.gov/sos/cec/rules/01/chaps01.htm) when a farm: (1) confines and feeds 50 or more animal units at any one time, (2) utilizes more than 100 tons of manure per year not generated on that farm, (3) is the subject of a verified complaint of improper manure handling, or (4) stores or utilizes regulated residuals.
  - the rule requires application setbacks, and setbacks are based on NRCS conservation practice standard *Nutrient Management*, code 590, which requires a minimum setback of 100 feet (nutrient management) from drinking water wells and surface waters (e.g., wetlands, ponds and lakes, streams and rivers). Setbacks of at least 300 feet are required when an adjacent water body is used to supply public drinking water.
  - 7 MRSA §4204 requires records be maintained on nutrient test results, and nutrient applications for the 4 operations or situations described above.
  - NRCS' conservation practice standard *Waste Utilization*, code 633, is used in conjuction with Nutrient Management, code 590, when manure is to be managed and used, regardless whether 7 MRSA §4204 rules apply to the farming operation. These practices require:
    - the following risk assessment tools will be used, as needed, to determine site-specific risk and to reduce off-site transfer of nutrients: RUSLE2, Leaching Index, and Nirtrogen and Phosphorus Manure Priority Matrix,
    - soil and manure will be periodically tested for nutrient content.
    - nutrients will not be applied on frozen ground, ice, snow or saturated soils, and
    - a nutrient management plan be developed or approved by a certified nutrient management specialist to prevent over-application and to ensure rapid incorporation of nutrients by soil and plant materials.

➢ **operation and maintenance requirements** are annually monitored and enforced for the lifespan of a practice, so the risk of point or non-point sources of pollution entering a perennial stream, connected pond or lake is extremely unlikely, and not expected to occur under normal operating and weather conditions.

Below are additional conservation measures or conditions specific to individual practices that need to be in effect to achieve a NLAA determination. Unless indicated by the words "except" or "or" all bullets and sub-bullets conditions apply.

X[Ó,a] – Access Road, Code 560; Animal Trail and Walkway, Code 575; and Forest Trails and Landings, Code 655 are NLAA for A. salmon and shortnose sturgeon only if:

➢ New roads, trails, or landings will not be placed within a setback zone, which starts at the upland edge of a perennial stream's "floodplain", connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
  - for slopes up to 8% at least a 100 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between the construction site and the upland edge of the "floodplain", connected pond or lake, and

- for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and
- if adjacent upland areas are predominately comprised of hydrologic group C and D soils setbacks are to be increased at least 20 and 30 feet, respectively.

➢ Repair of existing roads are NLAA salmon or sturgeon only if
➢ Repair of existing roads within the setback zone described above, will require erosion control measures and NRCS conservation measures that are sufficient to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.

X[Ó,b] – Deep Tillage, Code 324 is NLAA A. salmon or shortnose sturgeon when used to fracture restrictive soil layers by subsoiling\ripping using a deep chisel, j-hook, or other similar tool, and does not turn-over and mix the soil profile.

X[Ó,c] – Fencing, Code 382 is NLAA A. salmon or shortnose sturgeon only if:

➢ fencing is placed 35 feet or more from the high water mark and vegetation exists between the fence and surface waters, and
➢ on steep slopes (i.e., slopes > 8%) and\or sites with excessively sandy alluvial soils, erosion control measures will be placed between the fence and water body during construction to ensure the risk of sediments reaching surface waters is negligible, and
➢ removal of trees to install a fence will:
  - only involve sub-canopy trees and full shading of a stream during the period when the sun is at its summer zenith must be maintained,
  - OR the fence will be setback from the stream a distance at least equal to the canopy height, and full shading of a stream during the period when the sun is at its summer zenith must be maintained.

X[Ó,d] – Firebreak, Code 394 is NLAA A. salmon or shortnose sturgeon only if:

➢ green or natural firebreaks are used,
➢ OR
  - firebreaks will be constructed using chainsaws, brushsaws, fire rakes, etc., to minimize disturbance of bare mineral soil, and
  - firebreaks will not be placed within a setback zone, which starts at the upland edge of a perennial stream's "floodplain", connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
    - for slopes up to 8% at least a 100 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between bare-ground firebreaks and the upland edge of the "floodplain", connected pond or lake, and
      - for each 10% increase in slope practice setbacks must be increased by at least 30 feet, and
      - if adjacent upland areas are predominately comprised of hydrologic group C and D soils setbacks are to be increased at least 20 and 30 feet, respectively,
  - OR erosion control measures (e.g., waterbars, turnouts; see "additional erosion control measures" above) will be used to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur.

X^{Ó,e} – Irrigation Regulating Reservoir, Code 552; Irrigation Storage Reservoir, Code 436; and Pond, Code 378 are NLAA A. salmon or shortnose sturgeon only if:

- these practices are planned for an existing irrigation system, and will only intercept and store surface water run-off, and
- 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, and
- the surface area of the designed storage water surface is less than 1.0 acre, and
- these practices are installed under conditions described above for ground disturbance during construction of "significant structures" under **X^{Ó}** with the following exception. If the bottom of the structure will be in contact with seasonal high ground water, the structure must be located at least 500 ft. from a perennial stream, connected pond or lake to achieve a NLAA.

Note: If any of the criteria above are not met, a detailed hydro-geologic study will be needed to ensure the planned practice will not adversely affect water levels in an adjacent perennial stream, connected pond or lake, and will require separate consultation under the ESA.

X^{Ó,f} – Irrigation, Micro-irrigation, Code 441; Irrigation, Sprinkler, Code 442; and Irrigation Water Management, Code 449, are NLAA A. salmon or shortnose sturgeon only if:

- these practices are planned for an existing irrigation system and there will be *a net reduction in water use for the entire agricultural operation*, and the source of water is not from a perennial stream and connected pond, wetland or lake. If the source of water is from a stream the following bullets must also apply.
  - the irrigation system will be designed to take no more than 1% of the 7-day, 10-year (7Q10) flow, and
  - NRCS assistance will be contingent on the client agreeing to retrofit all existing inlet pipes with screens designed according to NMFS' (1997) *Fish Screen Criteria for Anadromous Salmonids,* and
  - records are maintained to ensure water use is compliant with Maine's aquatic base flow law and regulations,
  - OR direct withdrawal from a stream is replaced by a isolated non-stream source of water.

X^{Ó,g} – Obstruction Removal, Code 500 is NLAA A. salmon or shortnose sturgeon only if:

- boulders are removed from blueberry fields to allow mowing of blueberry grounds rather than burning, and the boulder cavity will be immediately filled or mulched to ensure the risk of point or non-point sources of pollution entering a perennial stream, connected pond or lake is extremely unlikely, and not expected to occur under normal weather and operating conditions,
- OR the practice involves removal of small landscape features (e.g, rock fences, boulders, trees, buildings) on existing cropland, pastureland, hayland or at headquarters which preclude effective transition to environmentally-friendly management (e.g., contour farming, fencing cattle from riparian areas), and erosion control measures are used to ensure the risk of point or non-point sources of pollution entering a perennial stream, connected pond or lake is extremely unlikely, not expected to occur under normal weather and operating conditions.

X^{Ó,h} – Pumping Plant, Code 533 is NLAA A. salmon or shortnose sturgeon only if:

- used to transfer waste within a waste storage facility,
- OR used to supply water for livestock watering systems for operations having less than 200 animal units,
- Or a pumping plant associated with a well is not located within 500 feet of a stream, and the sustained water yield will be of equal to or less than 100 gallons per minute.

X^{Ó,i} – Sediment Basin, Code 350; and Water and Sediment Control Basin, Code 638 are NLAA A. salmon or shortnose sturgeon only if:

- they are located on upland sites and soils, and
- they are as described above for ground disturbance during construction of "significant structures" under **X^{Ó}**, and
- 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,
- Or 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.

X^{Ó,j} – Structure for Water Control , Code 587 is NLAA A. salmon or shortnose sturgeon only if:

- the structure replaces an existing water control device on an existing dam, 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 of direction of water flow, and
- structures will be installed, as needed, with erosion control measures (see "additional erosion control measures" under X^{Ó} above) to ensure the risk of sediment entering a stream is extremely unlikely (not expected) to occur, or is at a scale where one cannot meaningfully measure, detect or evaluate a presence.

X^{Ó,k} – Subsurface Drain, Code 606; Surface Drainage Field Ditch, Code 607; and, Surface Drainage – Main or Lateral, Code 608 are NLAA A. salmon or shortnose sturgeon only if:

- The practices will not be located within a setback zone, which starts at the upland edge of a perennial stream's "floodplain", connected pond or lake as described below. If there are no floodplain soils present as indicated by the floodplain_soils_a_me.shp ArcGIS layer, the setback zone starts at the top of the bank.
  - for slopes up to 8% at least a 50 foot undisturbed well-vegetated buffer capable of providing filtering services is maintained between the planting site and the upland edge of the "floodplain", connected pond or lake, and
    - for each 10% increase in slope practice setbacks will be increased by at least 30 feet, and
    - if adjacent upland areas are predominately comprised of hydrologic group C and D soils, setbacks discussed above are to be increased at least 20 and 30 feet, respectively
  - OR, erosion control measures (see "additional erosion control measures" below) will be used to ensure the risk of point or non-point sources of pollution entering adjacent waters is highly unlikely, and not expected to occur, and

- the practices are used to pass water around, from, or under structures or unstable ground, and
  - are designed to outlet unpolluted groundwater,
  - OR are designed to outlet polluted water through a well-vegetated buffer (see "water outlets" under X[Ó] above), and
- water conveyed is not used for production purposes; conveyed clean water will either infiltrate or will outlet to receiving surface waters.

X[Ó,L] – Water Well, Code 642 is NLAA A. salmon or shortnose sturgeon only if:

- the well is used to supply water for livestock watering systems for operations having less than 200 animal units, OR
- the well is planned for an existing irrigation system, and will replace equipment directly withdrawing water from a perennial stream, connected pond or lake, and
  - the well and pumping plant is not located within 500 feet of a stream, and
  - the system will have a sustained water yield of equal to or less than 100 gallons per minute, and
- 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.

Note: If any of the criteria above are not met, a detailed hydro-geologic study will be needed to ensure the planned practice will not adversely affect water levels in an adjacent perennial stream, connected pond or lake, and will require separate consultation under the ESA.

X[Ó,m] – Wetland Enhancement, Code 659; Wetland Restoration, Code 657; and Wetland Wildlife Habitat Management, Code 644 are NLAA A. salmon or shortnose sturgeon only if:

- the wetland is not connected to a perennial salmon stream or connected pond or lake,
- site specific hydrology and watershed hydrological processes are being restored, and
- wetland enhancement or management does not impound more water, in existing man-made or natural wetlands, than existed prior to listing of the species or critical habitat under the ESA.

Glossary of Terms

Action Area: All areas to be affected directly or indirectly by an agency action and not merely the immediate area involved in the action [50 CFR §402.02]. See "off-site effects".

Adverse Modification: Means direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of listed species [50 CFR §402.02].

Animal Feeding Operations: A lot or facility, together with any associated treatment works, where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period.

Concentrated Animal Feeding Operation (CAFO): An animal feeding operation that meets the EPA definition of a Concentrated Animal Feeding Operation as provided in 'Guide Manual on NPDES Regulations for Concentrated Animal Feeding Operations' US Environmental Protection Agency, December 1995.

Critical Habitat: Refers to an area designated within or outside the geographic range of the species at the time of listing under the ESA on which are found those physical and biological features that are essential for the conservation of the species and which may require special management considerations or protection.

Cropland: An area used primarily for the production of cultivated crops.

Direct Effect: The immediate effects of the project on the species or its habitat.

Effects of an Action: The "direct" and "indirect effects" of an action on the species or critical habitat, together with the effects of other activities that is "interrelated" or "interdependent" with that action.

Floodplain: The nearly level plain that borders a stream and is subject to inundation under flood-stage conditions. This geomorphic feature is represented by the floodplain_soils_a_me.shp ArcGIS layer located in the Soils Feature dataset of the Maine NRCS Customer Service Toolkit.

Forestland: Land where the current plant community was dominated by at least a 25% overstory canopy of trees, as determined by crown perimeter-vertical projection.

Harm: To include significant habitat modification or degradation that results in the death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.

Harrass: Actions that create the likelihood of injury to listed species to such and extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding or sheltering.

Hayland: An area used primarily for the production of hay.

Headquarters: Land used for dwellings, barns, pens, corrals, or other facilities used in connection with farm and ranch operations.

Incidental Take: Take of a listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency. [50 CFR §402.02]

Indirect Effects: Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. [50 CFR §402.02]

Interdependent Actions: Actions having no independent utility apart from the proposed action. For example a water control structure to be installed concurrently with a dam has no independent utility but for the presence of the dam, and is therefore interdependent and interrelated (see below) with the proposed action to build a dam.

Interrelated Actions: An action that is part of a larger action, and depends on the larger action for its justification. For example a stream crossing is often interrelated to the construction of a road or trail that leads to the stream.

Introduced Species: Plant or animal species of plant that are not part of the original natural historic flora or fauna of an area.

Likely to Adversely Affect (LAA): the appropriate finding if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not discountable, insignificant, or beneficial.

No Effect (NE): The appropriate conclusion when a proposed action will not affect (positively or negatively) a listed species or designated critical habitat.

Not Likely to Adversely Affect (NLAA): the appropriate conclusion when effects on listed species are expected to be "discountable", or "insignificant". Based on best professional judgment or science, a person would not be able to meaningfully measure, detect or evaluate insignificant effects; or expect discountable effects to occur.

Off-site Effects: Those effects which are reasonably certain to occur outside the immediate boundary of the site or property as a result of the proposed action.

Pastureland: Grazing lands comprised of introduced or domesticated forage species that are used primarily for the production of livestock.

Perennial Stream: A body of water flowing in a natural channel year-round, except during periods of drought. Generally, the water table is located above the streambed for most of the year and groundwater is the primary source for stream flow. Ponds or lakes connected to perennial streams are considered part of the stream system.

May Affect: The appropriate conclusion when a proposed action may pose an effect on listed species or critical habitat. There are three types of May affect designations: (1) Not likely to Adversely Affect; (2) Likely to adversely affect, and (3) wholly beneficial effects

Service: means the U.S. Fish and Wildlife Service (USFWS), or the National Marine Fisheries Service (NMFS). Most consultations will be with the USFWS, unless the proposed action is located coastally of the head-of-tide.

Significant Structures: heavy use areas, solid/liquid separation facility, waste storage facility, compost facility, waste treatment lagoon, and water and sediment control basin.

Stream Order: A simple method used to define stream size based on the hierarchy of tributaries. A stream of the 1st Order is a stream which does not have any other stream feeding into it. When two 1st Order streams come together, they form a 2nd Order stream. When two 2nd Order streams come together, they form a 3rd Order stream, etc.

Take: To "harass", "harm", pursue, hunt, shoot, wound, kill, trap, capture, collect or attempt to engage in any such conduct.