

CHAPTER Env-Wt 900 STREAM CROSSINGS; CERTIFIED CULVERT MAINTAINER PROGRAM

Statutory Authority: RSA 482-A:11

PART Env-Wt 901 PURPOSE; APPLICABILITY; EXEMPTIONS; INCORPORATED DEFINITIONS

Env-Wt 901.01 Purpose. The purpose of this chapter is to:

- (a) Enhance public safety by establishing standards for stream crossings that are designed to lessen the risk of blockages and wash-outs of culverts and bridges, and the associated flooding, which can jeopardize property and human lives upstream and downstream of such crossings;
- (b) Preserve and enhance the functions and values of existing streams, support the restoration of impacted streams to their natural state, and improve aquatic organism passage and sediment transport, while recognizing that:
 - (1) Well-managed forest management activities, normal agricultural operations, and trail activities play important roles in New Hampshire's economy; and
 - (2) Such activities, when designed and undertaken in accordance with established BMPs, can protect and maintain water quality; and
- (c) Implement the program established by RSA 482-A:3, XVII - XIX to certify certain individuals to maintain, repair, replace, or modify certain culverts.

Env-Wt 901.02 Applicability.

- (a) All crossings of perennial streams and intermittent streams shall be subject to Env-Wt 903 and Env-Wt 904 unless the work on the crossing is:
 - (1) Exempted under Env-Wt 901.03; or
 - (2) Undertaken in accordance with the certified culvert maintainer program established by RSA 482-A:3, XVII - XIX and Env-Wt 905.
- (b) The rules in this chapter shall not apply to crossings of drainage swales or ephemeral streams.

Env-Wt 901.03 Exemptions. The following activities and crossings shall be exempt from Env-Wt 903 and Env-Wt 904, provided they are conducted in accordance with all applicable conditions:

- (a) Low impact routine roadway and railway maintenance activities conducted in accordance with Env-Wt 308.04 or Env-Wt 309.05;
- (b) Low impact projects to allow vehicular access to a piece of property for forest management activities, conducted in accordance with:
 - (1) Env-Wt ??? for roadway construction through forested wetlands; or
 - (2) Env-Wt ??? for installation of a structure and associated fill to cross wetlands, including streams;
- (c) Low impact agricultural activities conducted in accordance with Env-Wt ???;
- (d) Low impact trail activities conducted in accordance with Env-Wt ???;
- (e) Low impact stream crossings for access to a property for a single-family residential property or building lot, for noncommercial recreational purposes including conservation projects, or for normal agricultural operations, conducted in accordance with Env-Wt ???; and

NOTE: All cross-references subject to verification/correction.

(f) Temporary crossings, so long as the area in which the crossing was placed is restored to pre-installation conditions when the crossing is removed.

Env-Wt 901.04 Incorporated Definitions. Any term used in this chapter that is defined in Env-Wt 100 shall have the meaning established therein.

PART Env-Wt 902 DEFINITIONS

Env-Wt 902.01 “Aggradation” means the raising of the grade or level of the bed of a watercourse by the deposition of detritus, sediment, or other material.

Env-Wt 902.02 “Aquatic organism” means any plant or animal species that spends at least a portion of its life-cycle submerged in fresh water, salt water, or both. The term includes but is not limited to fish, amphibians, reptiles, and macroinvertebrates. The term does not include any exotic aquatic weed as defined in RSA 487:16, II, as reprinted in Appendix C, or any exotic aquatic species of wildlife as defined in RSA 487:16, I-a, as reprinted in Appendix C, that has been identified by the exotic aquatic weeds and species committee pursuant to RSA 487:30.

Env-Wt 902.03 “Bankfull depth” means the distance from the water surface to the bed of the channel during bankfull flow.

Env-Wt 902.04 “Bankfull flow” means the volume of flow in a watercourse at which water begins to overflow the top of bank.

Env-Wt 902.05 “Bankfull width” means the width of the surface water flow at bankfull flows.

Env-Wt 902.06 “Closed-bottom culvert” means a culvert that has a solid top, solid sides, and a solid bottom, such that its cross-section is continuous. A closed-bottom culvert can be any shape in cross-section, including but not limited to square, rectangular, circular, or oval.

Env-Wt 902.07 “Connectivity” means the upstream and downstream reaches of a watercourse that meet at or via a stream crossing are hydrologically uninterrupted.

Env-Wt 902.08 “Design storm” means a rainfall event of a specified duration, intensity, and return frequency that is used when determining runoff rate and volume.

Env-Wt 902.09 “Embedded” means, when referring to a stream crossing structure, buried within the stream bed to such an extent that the natural substrate material, water depths, and velocities at a variety of flows within the crossing structure are comparable to those found in the reference reach.

Env-Wt 902.10 “Entrenchment ratio” means the ratio of the flood-prone width to the bankfull width.

Env-Wt 902.11 “Existing legal crossing” means a stream crossing for which:

(a) All applicable federal, state, and local requirements were met when the crossing was originally installed; and

(b) If the crossing was modified, repaired, or reconstructed subsequent to its original installation, the work, when undertaken, met all applicable federal, state, and local requirements.

Env-Wt 902.12 “Flood-prone width” means the width of surface flow at 2 times the maximum bankfull depth.

Env-Wt 902.13 “Geomorphic compatibility” means an assessment of the long-term ability of a stream crossing to minimize potential for obstruction by sediment, wood, and debris, preserve the natural alignment of the stream, and accommodate the entrenchment ratio, bank full depth, and channel slope of the stream.

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Env-Wt 902.14 “Grade control” means an earthen, wooden, or concrete structure on the bed of a watercourse that prevents or arrests bed erosion by controlling the energy and velocity of water that passes over it.

Env-Wt 902.15 “Hydraulic capacity” means a measure of the ability of a stream, channel, or conduit to allow water to pass, which for purposes of this chapter is determined as specified in Env-Wt 904.02.

Env-Wt 902.16 “Longitudinal profile” means a graphical representation of stream gradient surveyed along the reference reach to illustrate elevation changes shown along a stream reach.

Env-Wt 902.17 “Open-bottom culvert” means a bottomless culvert that preserves the natural stream substrate and does not disturb the streambed. The term includes semicircular arch culverts, elliptical arch culverts, and 3-sided concrete box culverts.

Env-Wt 902.18 “Permanent crossing” means a crossing that is intended to remain in place for 2 years or more after installation, regardless of the purpose for its installation.

Env-Wt 902.19 “Pipe arch” means a culvert that has rounded sides, a rounded top, and a flat bottom.

Env-Wt 902.20 “Reference reach” means a section of the stream unaffected by existing infrastructure, typically the length of 7 to 10 bankfull widths, that is used to establish the baseline conditions the stream crossing should replicate to the greatest extent practicable.

Env-Wt 902.21 “Rehabilitation” as applied to a stream crossing means installation of new structural components in or on an existing legal structure to allow the structure to remain in place that does not qualify as repair or replacement. The term includes but is not limited to slip-lining and installation of wing-walls or toe walls or any combination thereof.

Env-Wt 902.22 “Repair” as applied to a stream crossing means work on an existing legal structure to allow the structure to remain in place where the necessary work does not include the installation of new structural components.

Env-Wt 902.23 “Replace in kind” as applied to a stream crossing means the removal of all or a portion of an existing legal structure and the installation of a new structure or new portion of the structure that is the same or functionally equivalent to the original structure in all material aspects, including size, dimensions, location, and configuration.

Env-Wt 902.24 “Replacement” as applied to a stream crossing means the removal of all or a portion of an existing legal structure and the installation of a new structure or new portion of the structure that does not qualify as a repair or a replacement in-kind.

Env-Wt 902.25 “Self-mitigating” as applied to stream crossings means the design of the crossing incorporates measures or features to offset the loss of the affected resource’s functions and values in an area where the new functions and values are sustainable. Examples of self-mitigating measures or features include, but are not limited to, eliminating a barrier to aquatic organism passage, improving the hydraulic capacity of an under-sized crossing, and improving geomorphic compatibility.

Env Wt 902.26 “Sinuosity” means, for a selected reach, the ratio of the length of the reach measured along the lowest elevation within the channel to the straight-line distance between the starting point of the reach and ending point of the reach.

Env-Wt 902.27 “Span structure” means a structure that crosses from the top of one bank to the top of the opposite bank, such that no portion of the structure, including but not limited to supports and buttresses, disturbs the stream channel or its banks or any other jurisdictional area.

Env-Wt 902.28 “Stream channel” means a channel that carries the bankfull flow of a watercourse.

NOTE: All cross-references subject to verification/correction.

Env-Wt 902.29 “Stream enhancement” means the manipulation of the physical, chemical, or biological characteristics of a stream, or any combination thereof, undertaken to heighten, intensify, or improve one or more specific stream functions, where the work does not qualify as total stream restoration because it does not result in a gain of natural stream reach. The term includes but is not limited to in-stream or stream bank stabilization activities that restore one or more of the natural riverine attributes such as dimension, pattern, or profile.

Env-Wt 902.30 “Stream simulation” means a method of designing and constructing a stream crossing structure in which the structure created within the channel is as similar as possible to the natural channel in both physical structure and function, and which takes into account appropriate bed forms and streambed characteristics so that water depths and velocities within the crossing structure at a variety of flows are comparable to those found in the natural channel upstream and downstream of the stream crossing.

Env-Wt 902.31 “Temporary crossing” means a crossing that will remain in place for less than 2 years after installation.

Env-Wt 902.32 “Tier 1 stream crossing” means a crossing that meets the criteria specified in Env-Wt 904.03(a).

Env-Wt 902.33 “Tier 2 stream crossing” means a crossing that meets the criteria specified in Env-Wt 904.04(a).

Env-Wt 902.34 “Tier 3 stream crossing” means a crossing that meets the criteria specified in Env-Wt 904.05(a).

Env-Wt 902.35 “Tier 4 stream crossing” means a crossing that meets the criteria specified in Env-Wt 904.06(a).

PART Env-Wt 903 STREAM CROSSINGS: CLASSIFICATIONS AND APPLICATIONS

Env-Wt 903.01 Summaries of Stream Crossing Classifications and Projects.

- (a) Stream crossings shall be classified as described in Env-Wt 903.02(a), as summarized in Table 903-1:

Table 903-1: Summary of Stream Crossing Classifications

Type of Surface Water	Size of Contributing Watershed	Other Factors	Tier	Compensatory Mitigation Required?
Non-tidal	≤ 200 acres	None	1	No
Non-tidal	> 200 acres but < 640 acres	None	2	No, unless alternative design or waiver of criteria
Non-tidal	≥ 640 acres	None	3	Yes, unless self-mitigating
Non-tidal	All	Within designated river corridor Within 100-year flood plain Within fluvial erosion zone	3	Yes, at least for impacts to resources other than stream
Tidal	All	None	4	Yes, unless self-mitigating

- (b) Stream crossing projects shall be classified as described in Env-Wt 903.02(b), as summarized in table 903-2:

NOTE: All cross-references subject to verification/correction.

Table 903-2: Summary of Stream Crossing Project Classifications

Project Classification →	Low Impact/CAT1	Minor Impact/CAT2	Major Impact/CAT3
Size of impact	< 50 linear feet (LF) EXCEPT Repair of existing legal structures with no waivers can be \geq 50 LF	Single crossing or multiple crossings with total impact of \geq 50 LF but < 200 LF	Single crossing or multiple crossings with total impact of \geq 200 LF or classified as major based on resource
Type of Project ↓			
New Crossing	Tier 1 with no waivers	Tier 1 with waivers/ alternate design; Tier 2 with no waivers	All other new crossings
Repair	Tier 1 or Tier 2 with no waivers to 904.08; Tier 3 with no waivers to 904.09	Tier 1 or Tier 2 repairs needing waiver(s) to 904.08; Tier 4 that meets 904.09	All other repairs
Replacement	Tier 1 with no waivers to 904.08	Tier 2 with no waivers to 904.08	All other replacements
Rehabilitation	none	Tier 1 or Tier 2 with no waivers to 904.08	All other rehabilitations
Temporary Crossing	Tier 1 or Tier 2 with no waivers	none	All other temporary crossings

Env-Wt 903.02 Classification of Stream Crossings and Stream Crossing Projects.

(a) Stream crossings shall be classified as tier 1, tier 2, tier 3, or tier 4 as specified in Env-Wt 904.03(a), Env-Wt 904.04(a), Env-Wt 904.05(a), or Env-Wt 904.06(a), respectively, as summarized in Env-Wt 903.01(a), Table 903-1.

(b) A stream crossing project shall be classified as low impact, minor impact, or major impact based on (e) through (g), below, as summarized in Env-Wt 903.01(b), Table 903-2, regardless of the tier classification of the stream crossing included in the project.

(c) The requirements for the design of a stream crossing and the information that must be submitted with the application shall be based on the tier classification of the crossing, regardless of whether the project is a low impact, minor impact, or major impact project, except that if a tier 3 stream crossing is downgraded to a tier 2 or tier 1 crossing pursuant to Env-Wt 904.05(b) or (c), the design and application submission requirements of the final classification shall apply.

(d) The classification of a stream crossing project as low impact, minor impact, or major impact shall be used to determine the fee that must be submitted with the application and how the application is processed.

(e) A project shall be classified as a low impact project if (f) and (g), below, do not apply, only one stream crossing is included in the project, and the sole stream crossing is:

- (1) A new tier 1 stream crossing that:
 - a. Meets the criteria of Env-Wt 904.03(b); and
 - b. Impacts less than 50 LF;
- (2) A repair of a tier 1 or tier 2 stream crossing that meets the criteria of Env-Wt 904.08, with no size limitation;

NOTE: All cross-references subject to verification/correction.

- (3) A repair of a tier 3 stream crossing that meets all criteria of Env-Wt 904.09, with no size limitation; or
- (4) A replacement tier 1 stream crossing that:
 - a. Meets the criteria of Env-Wt 904.08; and
 - b. Impacts less than 50 LF;
- (5) A tier 1 or tier 2 temporary crossing that meets all criteria of Env-Wt 904.08.
- (f) A project shall be classified as a minor impact project if (g), below, does not apply, and:
 - (1) Only one stream crossing is included in the project, and that stream crossing is:
 - a. A new tier 1 stream crossing for which a waiver or approval of an alternative design is being sought as specified in Env-Wt 904.03(c);
 - b. A new tier 2 stream crossing that meets the criteria of Env-Wt 904.04(b);
 - c. Repair of a tier 1 or tier 2 stream crossing for which one or more waivers of the criteria in Env-Wt 904.08 are being requested that impacts less than 200 LF;
 - d. Repair of a tier 4 crossing that meets all criteria of Env-Wt 904.09 and impacts less than 200 LF;
 - e. A replacement tier 2 stream crossing that meets the criteria of Env-Wt 904.08; or
 - f. Rehabilitation of a tier 1 or tier 2 stream crossing that meets the criteria of Env-Wt 904.08; or
 - (2) The crossing is part of a larger crossing that meets the criteria for a minor impact project specified in Env-Wt 400.
- (g) A stream crossing project shall be classified as a major impact project if:
 - (1) The stream crossing is a new tier 3 or tier 4 crossing;
 - (2) The project is a repair of a tier 3 crossing or a repair of a tier 4 crossing for which one or more waivers is needed;
 - (3) The project is the replacement or rehabilitation of:
 - a. A tier 1 or tier 2 stream crossing for which one or more waivers is needed; or
 - b. A tier 3 or tier 4 stream crossing;
 - (4) The stream crossing is:
 - a. A temporary tier 1 or tier 2 for which waivers are needed; or
 - b. A temporary tier 3 or tier 4; or
 - (5) The crossing is part of a larger crossing that meets the criteria for a major project specified in Env-Wt 400, regardless of the tier classification of the stream crossing that is part of the project.

Env-Wt 903.03 Application Fees.

- (a) The application fee for a stream crossing project classified as low impact shall be as specified in RSA 482-A:3, I(c) for a minimum impact project.

NOTE: All cross-references subject to verification/correction.

(b) The application fee for a stream crossing project that does not qualify as a low impact project shall be calculated as specified in RSA 482-A:3, I(c) based upon the sum of the square feet of impacts to the banks and channel bottom and other associated jurisdictional areas.

Env-Wt 903.04 Information Required for Stream Crossing SPNs, LSAs, and EXPs. In addition to the information required in Env-Wt 300, the applicant shall submit the following for any stream crossing project that is subject to an SPN, LSA, or EXP:

- (a) A USGS map on which the following are clearly delineated or otherwise noted:
 - (1) The approximate boundaries of the contributing watershed;
 - (2) The size of the contributing watershed; and
 - (3) Identification of the stream tier based on watershed size;
- (b) Plans that show the following:
 - (1) The scale of the plan and a north arrow;
 - (2) The extent of disturbance;
 - (3) Road locations, including road edges, centerline, and boundaries of the right-of-way;
 - (4) Proposed channel work including bank erosion control features, grade control, and channel linings; and
 - (5) All dimensions of the proposed structure and of the existing structure, if any, including inlet and outlet invert elevations;
- (c) The hydraulic capacity of the proposed crossing, in terms of flood frequency event, and of the existing crossing, if any;
- (d) The type of crossing, such as a culvert or span, that is proposed and that exists, if any;
- (e) The following information about the dewatering system proposed to be used:
 - (1) Estimated maximum flow anticipated during construction;
 - (2) The location, height, and width of the diversion dam;
 - (3) The location and capacity of each sump; and
 - (4) Backwater prevention method; and
- (f) The following information about erosion and pollution controls:
 - (1) The sediment treatment plan, including methods, release point(s), and extent;
 - (2) Any additional methods proposed to control erosion; and
 - (3) All methods of preventing and controlling releases from pumps, fuel stations, and storage.

Env-Wt 903.05 Information Required for All Stream Crossing Standard Permit Applications. In addition to the information required in Env-Wt 311, the applicant shall submit the following for all stream crossing projects that require a standard permit:

- (a) On the USGS map required by Env-Wt 311.06, the following:
 - (1) The approximate boundaries of the contributing watershed;

NOTE: All cross-references subject to verification/correction.

- (2) The size of the contributing watershed; and
 - (3) Identification of the stream tier based on watershed size;
- (b) Plans showing the following:
- (1) The scale, a north arrow, and at least 3 cross-sections outside of the construction disturbance area that are representative of the natural stream system;
 - (2) Clearing limits showing all proposed work areas;
 - (3) For both the existing structure, if any, and the proposed structure, the following:
 - a. Location;
 - b. Type;
 - c. Dimensions; and
 - d. Inlet and outlet invert elevations;
 - (4) The extent of channel excavation and filling;
 - (5) Road locations, including road edges, centerline, and boundaries of the right-of-way;
 - (6) Proposed channel work including bank erosion control features, grade control, and channel linings; and
 - (7) For the proposed structure, cross-sections showing the water surface elevation resulting from the applicable design storm, with bed material and backfill zones;
- (c) Existing crossing metrics, including:
- (1) Existing riparian zone, including the extent and type of existing vegetation surrounding or in the stream bank; and
 - (2) Existing tailwater control, including its location and materials, and pool configuration;
- (d) The dewatering system, as follows:
- (1) Estimates of the maximum flow anticipated during construction, including any summer storm estimates;
 - (2) The hydraulic calculation for the bypass pipe or channel size, length, and gradient;
 - (3) Location, height, and width of the diversion dam;
 - (4) Sump locations, including estimate of necessary flow and sump capacity;
 - (5) Backwater prevention method; and
 - (6) Sediment treatment plan with methods, release point, and extent;
- (e) Erosion and pollution controls, as follows:
- (1) Any additional methods of controlling erosion;
 - (2) A stormwater management plan, including but not limited to where to cover stockpiles and place straw bales;
 - (3) Pollution control methods for pumps, fuel stations, and equipment storage;

- (f) The number and location of footings, if any, and the following for each:
 - (1) Estimate of bearing capacity;
 - (2) Dimensions of each footing; and
 - (3) Footing depth;
- (g) A narrative explaining why the cross-sections identified pursuant to (b)(7), above, are representative;
- (h) The design features used to improve aquatic organism passage and the expected distance, in linear feet, of downstream and upstream improvement for aquatic organism passage or fish passage; and
- (i) The hydraulic capacity of the proposed crossing, in terms of flood frequency event, and of the existing crossing, if any; and
- (j) The following channel information at the crossing and for the reference reach:
 - (1) The classification of the stream using the Rosgen classification system as described in Applied River Morphology, D. Rosgen, 1996, available as noted in Appendix B, at the crossing and upstream and downstream of the crossing;
 - (2) Bankfull width;
 - (3) Bankfull depth;
 - (4) Entrenchment ratio;
 - (5) Sinuosity; and
 - (6) Flood-prone width.

Env-Wt 903.06 Information Required for Certain Stream Crossing Standard Permit Applications. In addition to the information required by Env-Wt 311 and Env-Wt 903.04, for new and replacement stream crossing projects that require a standard permit the applicant shall submit the following as applicable:

- (a) For tier 2 and tier 3 crossings, the following additional channel information at the crossing and for the design reference reach including:
 - (1) A longitudinal profile that is 7 to 10 bankfull widths long with grade controls, pools, and gradients shown; and
 - (2) Particle size distribution of the reference reach
- (b) For tier 2, tier 3, and tier 4 crossings, streambed details, with figures, that show the following:
 - (1) The distance from the top of the right bank to the top of the left bank;
 - (2) The streambed simulation materials and the extent, depth, and length of the streambed within the proposed crossing;
 - (3) Approximate elevations, spacing, diameters, and locations of structures for steps, bank stabilization, and other channel rocks for roughness; and
 - (4) Details for sediment retention structures, if any, within embedded structures;
- (c) For tier 2, tier 3, and tier 4 crossings, the following information on the proposed crossing:
 - (1) The openness ratio, namely the ratio of the area of a cross-section of an individual cell or barrel of a crossing structure, excluding any embedded area, to the length of the structure along the channel;

NOTE: All cross-references subject to verification/correction.

- (2) A narrative assessment of the streambed details provided pursuant to (c), above, channel information of existing crossing metrics relative to the proposed structure, as discussed in the UNH Stream Crossing Guidelines;
 - (3) Narrative assessment of the long-term erosion and stability consequences of constructing the proposed stream crossing, and methods and structures to be implemented to minimize any consequences identified;
 - (4) Narrative assessment of the bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream reaches;
 - (5) The percent of increase in the hydraulic capacity of the stream crossing; and
 - (6) A narrative analysis of how connectivity considerations were addressed focusing on stream reach, stream type, stream stability, and existing and potential for erosion in siting and modifying or replacing an existing stream crossing;
 - (7) A narrative explanation of the detrimental geomorphic consequences that have occurred as a result of the existing stream crossing, if any; and
 - (8) A narrative explanation of the crossing's contribution to flooding that damages the crossing or other human infrastructure.
- (d) For tier 3 crossings, structural details of the crossing, including the following:
- (1) Structural section, gauge or thickness, and material, minimum and maximum cover limits;
 - (2) Structures, drawn to scale, on elevation view showing bed material location relative to structure, and special backfill zones; and
 - (3) Structural excavation quantity and total excavation estimate;
- (e) For tier 2 and tier 3 crossings, a demonstration that all design and construction considerations outlined in the NH Stream Crossing Guidelines, University of New Hampshire, May 2009, have been addressed; and
- (f) For tier 4 crossings, the a narrative explanation of the effect of the crossing on the tidal hydrograph, and the corresponding effect on the upstream and downstream tidal resource.

Env-Wt 903.07 Hydraulic Capacity Report. When an application for a standard permit for a stream crossing requires plans stamped by a P.E. and the existing stream crossing structure cannot convey the design storm flow, the applicant shall submit a hydraulic capacity report that includes drainage calculations and a narrative to demonstrate that the proposed stream crossing has sufficient hydraulic capacity to meet the applicable design standard.

PART Env-Wt 904 DESIGN AND CONSTRUCTION OF STREAM CROSSINGS

Env-Wt 904.01 General Design Considerations.

- (a) All stream crossings, whether tidal or non-tidal, shall be designed and constructed so as to:
- (1) Not be a barrier to sediment transport;
 - (2) Not restrict high flows and maintain existing low flows;
 - (3) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

NOTE: All cross-references subject to verification/correction.

- (4) Not cause an increase in the frequency of flooding or overtopping of banks;
 - (5) Maintain or enhance geomorphic compatibility by:
 - a. Minimizing the potential for inlet obstruction by sediment, wood, or debris;
 - b. Preserving the natural alignment of the stream channel; and
 - c. Accommodating the entrenchment ratio, bank full depth, and channel slope of the existing stream, provided that if the primary structure does not accommodate the flood-prone area, floodplain drainage culverts may be added;
 - (6) Preserve watercourse connectivity where it currently exists;
 - (7) Restore watercourse connectivity where:
 - a. Connectivity previously was disrupted as a result of human activity(ies); and
 - b. Restoration of connectivity will benefit aquatic organisms upstream or downstream of the crossing, or both;
 - (8) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and
 - (9) Not cause water quality degradation.
- (b) For stream crossings over tidal waters, the stream crossing shall be designed to:
- (1) Match the velocity, depth, cross-sectional area, and substrate of the natural stream; and
 - (2) Be of sufficient size to not restrict bi-directional tidal flow over the natural tide range above, below, and through the crossing.

Env-Wt 904.02 Conditions Applicable to All Stream Crossing Work. All stream crossing work shall be subject to all applicable conditions in Env-Wt 307, and in particular:

- (a) In-stream work shall be done only during:
 - (1) Low flow conditions, in non-tidal areas; or
 - (2) When the tide is seaward of the work area, in tidal areas; and
- (b) Work on stream crossings that requires any work in areas that are subject to flowing water shall maintain normal flows and prevent water quality degradation during the work by using best management practices, such as temporary by-pass pipes, culverts, or cofferdams.

Env-Wt 904.03 Tier 1 Stream Crossings.

- (a) A tier 1 stream crossing shall be a crossing located on a watercourse where the contributing watershed is less than or equal to 200 acres.
- (b) Tier 1 stream crossings shall:
 - (1) Meet the general design considerations specified in Env-Wt 904.01;
 - (2) Be sized so as to convey the greater of:
 - a. The 50-year design storm; or
 - b. Applicable federal, state, or local requirements; and
 - (3) Be a span structure, pipe arch, open-bottom culvert, or closed-bottom culvert, with or without being embedded with stream simulation.

NOTE: All cross-references subject to verification/correction.

(c) An applicant may propose a design that does not meet the criteria of (b)(1) or (2)a., above, by submitting a request for approval of an alternate design as specified in Env-Wt 904.10. In accordance with Env-Wt 903.02(f)(1)a., a project that includes a request to approve an alternative design for a tier 1 stream crossing shall be a minor impact project.

(d) An existing legal crossing that would be classified as tier 1 under (a), above, may be repaired or replaced in kind as specified in Env-Wt 904.08 pursuant to:

- (1) A routine roadway maintenance registration as specified in Env-Wt 308.04 or Env-Wt 309.05; or
- (2) If the crossing is part of a trail, a registration as described in Env-Wt 308.04 or Env-Wt 309.02.

(e) Compensatory mitigation shall not be required for any tier 1 minimum impact project.

Env-Wt 904.04 Tier 2 Stream Crossings.

(a) A tier 2 stream crossing shall be a crossing located on a watercourse where the contributing watershed is greater than 200 acres and less than 640 acres.

(b) Subject to (c), below, any new tier 2 stream crossing and any replacement tier 2 stream crossing that does not meet the criteria specified for in-kind replacement in Env-Wt 904.08 shall be a span structure, pipe arch embedded with stream simulation, open-bottom culvert with stream simulation, or closed-bottom culvert embedded with stream simulation.

(c) The applicant may propose an alternative design by submitting a request as specified in Env-Wt 904.10.

(d) Compensatory mitigation shall not be required for:

- (1) Any new tier 2 stream crossing that meets the requirements of this section and Env-Wt 904.07;
- (2) Any tier 2 stream crossing that is self-mitigating; or
- (3) Any tier 2 stream crossing that is repaired, rehabilitated, or replaced in kind pursuant to Env-Wt 904.08.

(e) Plans for a tier 2 stream crossing shall be dated and bear the signature and seal of the licensed professional engineer who prepared or had responsibility for and approved them, as required by RSA 310-A:18.

Env-Wt 904.05 Tier 3 Stream Crossings.

(a) Subject to (b), below, a tier 3 stream crossing shall be a crossing located:

- (1) On a watercourse where the contributing watershed is 640 acres or greater;
- (2) Within a designated river corridor, unless:
 - a. The crossing would be a tier 1 stream based on contributing watershed size; or
 - b. The structure does not create a direct surface water connection to the designated river;
- (3) Within a 100-year flood plain;
- (4) In a jurisdictional area having any protected species or habitat; or
- (5) In a prime wetlands or within a duly-established 100 foot buffer, unless a waiver has been granted pursuant to RSA 482-A:11, IV(b) and Env-Wt 706.

- (b) The applicant for a project in which a stream crossing is categorized as tier 3 based solely on (a)(3), above, may request that the crossing be categorized as a tier 1 or tier 2 stream crossing, as applicable based on watershed size, if the impacts to the floodplain are specifically mitigated in accordance with Env-Wt 800.
- (c) The applicant for a project in which a stream crossing is categorized as tier 3 based solely on (a)(4), above, may request that the crossing be categorized as tier 1 or tier 2 based on watershed size, provided:
- (1) The applicant consults with the NHB to determine whether any protected plant species or habitat would be impacted;
 - (2) The applicant consults with the NHF&G to determine whether any protected wildlife species or habitat is impacted; and
 - (3) The NHB, NHF&G, or both, as applicable, recommend(s) such a downgrade.
- (d) A tier 3 stream crossing shall be a span structure or an open-bottomed culvert with stream simulation, not a closed-bottom culvert or pipe arch.
- (e) The applicant may propose an alternative design by submitting a request as specified in Env-Wt 904.10.
- (f) Compensatory mitigation shall not be required for:
- (1) Any new tier 3 stream crossing that:
 - a. Meets the general design criteria in Env-Wt 904.01 and the tier-specific criteria of Env-Wt 904.07;
 - b. Is self-mitigating;
 - c. Improves aquatic organism passage, connectivity, and hydraulics; and
 - d. Is not an alternative design or any design for which a waiver is needed; or
 - (2) Any replacement of a crossing that met all applicable requirements when originally installed but is in a location that results in the crossing being classified as tier 3 under these rules, provided the proposed stream crossing meets the requirements of Env-Wt 904.09.
- (g) Plans for a tier 3 stream crossing shall be dated and bear the signature and seal of the licensed professional engineer who prepared or had responsibility for and approved them, as required by RSA 310-A:18.

Env-Wt 904.06 Tier 4 Stream Crossings.

- (a) A tier 4 stream crossing shall be a crossing located on a tidal watercourse.
- (b) A tier 4 stream crossing shall be a span structure or a culvert specifically designed for the geomorphic and habitat conditions of the tidal environment.
- (c) The applicant may propose an alternative design by submitting a request as specified in Env-Wt 904.10.
- (d) Compensatory mitigation shall be required for any new tier 4 stream crossing unless the crossing:
 - (1) Meets the general design criteria in Env-Wt 904.01 and the tier-specific criteria in Env-Wt 904.07;
 - (2) Is self-mitigating;
 - (3) Improves aquatic organism passage, connectivity, and hydraulics; and
 - (4) Is not an alternative design or any design for which a waiver is needed.

(e) In addition to meeting Env-Wt 903.07(c) and (d), plans for a tier 4 stream crossing shall be dated and bear the signature and seal of the licensed professional engineer who:

- (1) Prepared or had responsibility for and approved them, as required by RSA 310-A:18; and
- (2) Has specific expertise in tidal hydraulics and tidal hydrology.

Env-Wt 904.07 Design Criteria for Tier 2, Tier 3, and Tier 4 Stream Crossings.

(a) Unless otherwise specified, all design criteria in this section shall apply to new and replacement tier 2, tier 3, and tier 4 stream crossings.

(b) Tier 2 and tier 3 stream crossings shall be designed in accordance with the NH Stream Crossing Guidelines, University of New Hampshire, May 2009, which can be downloaded for free at <http://des.nh.gov/organization/divisions/water/wetlands/documents/nh-stream-crossings.pdf>.

(c) Tier 2, tier 3, and tier 4 stream crossings shall be designed and constructed:

- (1) To meet the general design criteria in Env-Wt 904.01;
- (2) Of sufficient size to convey the greater of:
 - a. The 100-year 24-hour design storm;
 - b. Flows sufficient to:
 1. Prevent an increase in flooding on upstream and downstream properties; and
 2. Not adversely affect flows and sediment transport characteristics in a way that could adversely affect channel stability; or
 - c. Applicable federal, state, or local requirements; and
- (3) With the bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing;
- (4) To provide a vegetated bank on both sides of the watercourse or to provide a wildlife shelf of suitable substrate and access to allow for wildlife passage;
- (5) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain;
- (6) To simulate a natural stream channel; and
- (7) So as not to alter sediment transport competence.

(d) In addition to meeting the criteria specified in (c), above, new, repaired, rehabilitated, or replaced tier 4 stream crossing shall be designed and constructed:

- (1) Based on a hydraulic analysis that accounts for daily fluctuating tides, bidirectional flows, tidal inundation, and coastal storm surge;
- (2) To prevent creating a restriction on tidal flows; and
- (3) To account for tidal channel morphology and potential impacts due to sea level rise.

Env-Wt 904.08 Repair, Rehabilitation, or Replacement of Tier 1 or Tier 2 Existing Legal Stream Crossings.

- (a) Repair, rehabilitation, or replacement of a tier 1 or tier 2 stream crossing shall be limited to stream crossings where:
- (1) The contributing watershed is as specified for the tier; and
 - (2) The certification specified in (b), below is provided.
- (b) A project shall qualify under this section only if a licensed professional engineer certifies that:
- (1) The existing stream crossing does not have a history of causing or contributing to flooding that damages the crossing or other human infrastructure or protected species habitat; and
 - (2) The proposed stream crossing will:
 - a. Meet or exceed the general criteria specified in Env-Wt 904.01;
 - b. Maintain or enhance the hydraulic capacity of the crossing;
 - c. Maintain or enhance the capacity of the crossing to accommodate aquatic organism passage;
 - d. Maintain or enhance the connectivity of the stream reaches upstream and downstream of the crossing; and
 - e. Not cause an increase in the frequency of flooding or overtopping of banks upstream or downstream of the crossing.
- (c) Rehabilitation of a culvert or other closed-bottom stream crossing structure pursuant to this section may be accomplished by concrete repair, slip lining, cured-in-place lining, or concrete invert lining, or any combination thereof, except that slip lining shall not occur more than once.

Env-Wt 904.09 Repair, Rehabilitation, or Replacement of Tier 3 or Tier 4 Existing Legal Stream Crossings.

- (a) The repair, rehabilitation, or replacement of tier 3 stream crossings shall be limited to existing legal stream crossings where the tier classification is based only on the size of the contributing watershed.
- (b) Rehabilitation of a culvert or other closed-bottom stream crossing structure pursuant to this section may be accomplished by concrete repair, slip lining, cured-in place lining, or concrete invert lining, or any combination thereof, except that slip lining shall not occur more than once.
- (c) A project shall qualify under this section only if a licensed professional engineer certifies, and provides supporting analyses to show, that:
- (1) The existing crossing does not have a history of causing or contributing to flooding that damages the crossing or other human infrastructure or protected species habitat; and
 - (2) The proposed stream crossing will:
 - a. Meet the general criteria specified in Env-Wt 904.01;
 - b. Maintain or enhance the hydraulic capacity of the stream crossing;
 - c. Maintain or enhance the capacity of the crossing to accommodate aquatic organism passage;
 - d. Maintain or enhance the connectivity of the stream reaches upstream or downstream of the crossing; and

e. Not cause or contribute to the increase in the frequency of flooding or overtopping of the banks upstream or downstream of the crossing.

(d) Repair, rehabilitation, or replacement of a tier 4 stream crossing shall comply with Env-Wt 904.07(d).

Env-Wt 904.10 Alternative Designs.

(a) If the applicant can demonstrate that installing the structure specified in the applicable rule is not practicable, as that term is defined in Env-Wt 100, the applicant may propose an alternative design in accordance with this section.

(b) To request approval of an alternative design, the applicant shall submit a written request to the department, accompanied by a technical report that:

(1) Clearly explains how the proposed alternative meets the criteria for approval specified in (c) or (d), below, as applicable; and

(2) Has been prepared by:

- a. An environmental scientist or licensed professional engineer for a tier 1 stream crossing;
- b. A licensed professional engineer for a tier 2 or tier 3 stream crossing; or
- c. A licensed professional engineer who has specific expertise in tidal hydraulics and tidal hydrology for a tier 4 stream crossing.

(c) The department shall approve an alternative design for a tier 3 or tier 4 stream crossing if:

(1) The report submitted pursuant to (b), above, demonstrates that adhering to the stated requirements is not practicable by providing:

- a. A detailed financial comparison of the costs of a compliant structure, the proposed structure, and an alternate proposed structure that requires fewer waivers than the proposed structure, with a range of costs estimates for each;
- b. A detailed description of the physical limitations of the site; and
- c. A hydraulic analysis to show that the proposed stream crossing can convey the applicable design storm or that the crossing, together with the associated roadway and roadway embankment, can safely convey overtopping flows; and

(2) The proposed alternative meets:

- a. The general design criteria established in Env-Wt 904.01; and
- b. The applicable design criteria established in Env-Wt 904.07 to the maximum extent practicable.

(d) The department shall approve an alternative design for a tier 1 or tier 2 crossing if:

(1) The report submitted pursuant to (b), above, demonstrates that adhering to the rules is not practicable;

(2) The proposed alternative design meets:

- a. The general design criteria established in Env-Wt 904.01; and
- b. The applicable design criteria, established in Env-Wt 904.03(b) for tier 1 stream crossings and in Env-Wt 904.07 for tier 2 stream crossings, to the maximum extent practicable.

(3) A hydraulic analysis shows that the proposed stream crossing can convey the applicable design storm or that the crossing, together with the associated roadway and roadway embankment, can safely convey overtopping flows.

(e) The department shall notify the applicant in writing of its decision on the request. If the request is denied, the notice shall specify the reason(s) for the denial. If the request is approved, the permit issued shall include such conditions as are needed to ensure that the project's impacts are minimized.

PART Env-Wt 905 CERTIFIED CULVERT MAINTAINER PROGRAM

Env-Wt 905.01 Applicability.

(a) The rules in this part shall apply to any employee of a state or municipal public works agency who wishes to be certified to maintain, repair, replace, or modify culverts as provided in RSA 482-A:3, XVII, reprinted in Appendix D.

(b) Nothing in this part shall be construed to prevent routine roadway and railway maintenance activities from being undertaken in accordance with Env-Wt 308.04 or Env-Wt 309.05.

(c) Nothing in this part shall be construed to prevent a certified individual from undertaking culvert maintenance activities for a state or municipal public works agency other than the one by which the individual is employed, for example pursuant to an inter-municipal agreement.

Env-Wt 905.02 Definitions.

(a) "Approved provider" means an organization that has been approved by the department pursuant to Env-Wt 905.11 to offer one or more of the courses, including field work, necessary for an individual to become knowledgeable in one or more of the areas identified in Env-Wt 905.03(b).

(b) "Certificate" means the document identified in RSA 482-A:3, XVII - XIX as a certification or installer's permit, that is issued by the department to authorize a state or municipal public works employee to maintain, repair, replace, or modify culverts as provided in RSA 482-A:3, XVII - XIX.

(c) "Certified culvert maintainer program" means the program established by RSA 482-A:3, XVII - XIX to certify individuals to maintain, repair, replace, or modify culverts.

(d) "Culvert project" means a discrete endeavor undertaken to maintain, repair, replace, or modify a specific culvert.

(e) "Incidental damage" means disturbances to areas outside of the immediate work area that are corrected in the normal course of a culvert project. The term does not include any disturbance or other action that:

- (1) Causes any injury to any individual who is not working on the culvert project;
- (2) Causes injury to an individual who is working on the culvert project to the extent that the individual is hospitalized or otherwise cannot work; or
- (3) Results in harm to public or private property in an amount that triggers an insurance claim by the state or municipal public works agency undertaking the culvert project or by the owner of the property.

(f) "Public way" means a paved or unpaved area upon which travel occurs, such as a lane, alley, street, avenue, boulevard, road, turnpike, highway, or railway bed, that is maintained by a state or municipal public works agency for the benefit of the general public.

(g) "Roadway BMPs" means the publication "Routine Roadway Maintenance Activities in New Hampshire" dated 2018 and published by the New Hampshire department of transportation.

NOTE: All cross-references subject to verification/correction.

Env-Wt 905.03 Qualifications for Initial Certificate. Any state or municipal public works employee who wishes to become qualified to maintain culverts under RSA 482-A:3, XVII, as reprinted in Appendix D, shall:

- (a) Fulfill the requirements of the certification program established in this part or be a licensed professional engineer;
- (b) Be knowledgeable in the following areas:
 - (1) State rules and federal regulations governing culvert replacement and maintenance;
 - (2) Culvert purpose and function;
 - (3) Culvert design, including proper sizing, and installation;
 - (4) Culvert replacement and maintenance techniques; and
 - (5) Best management practices for culvert replacement and maintenance, including identifying those areas that are not within the scope of the BMP manual; and
- (c) Apply to the department for a certificate in accordance with Env-Wt 905.04.

Env-Wt 905.04 Application for Initial Certificate.

- (a) Any individual wishing to be certified shall complete and submit an application form to the department that:
 - (1) Provides the information and documentation specified in (b), below, on or with an application form obtained from the department; and
 - (2) Has been signed by the applicant as specified in Env-Wt 905.05.
- (b) The information and documentation required by (a)(1) shall be as follows:
 - (1) The applicant's name, mailing address, daytime telephone number, and email address;
 - (2) The name, address, and daytime telephone number of the state or municipal public works agency by which the individual is employed;
 - (3) If the applicant wishes to qualify as a professional engineer, the applicant's P.E. license number and written confirmation from the New Hampshire board of professional engineers that the applicant is a professional engineer licensed by the board and in good standing; and
 - (4) If the applicant wishes to qualify based on specific training, documentation from the approved provider(s) whose course(s) the applicant attended that demonstrate that the applicant has met the requirements for certification under this program.

Env-Wt 905.05 Signature Required.

- (a) The applicant for an initial or renewal certificate shall sign and date the application form.
- (b) The applicant's signature shall constitute certification that:
 - (1) The applicant is aware that:
 - a. The certification applies only for culverts 48 inches in diameter and smaller;
 - b. The certification does not apply to culverts that have a history of being overtopped;

NOTE: All cross-references subject to verification/correction.

- c. The certification does not apply to culverts within 100 feet of a prime wetland or within ¼ mile of a designated river; and
 - d. The BMP Manual can be found at:
http://des.nh.gov/organization/divisions/water/wetlands/documents/roadway_bmp.pdf
- (2) The applicant will:
 - a. Follow the Roadway BMPs; and
 - b. Submit the required quarterly reports to the department;
 - (3) The information provided on or with the application form, as applicable, is true, complete, and not misleading to the best of the applicant's knowledge and belief; and
 - (4) The applicant understands that:
 - a. The submission of false, incomplete, or misleading information is grounds for denying the application or revoking any certificate that is issued based on the information; and
 - b. He or she is subject to the penalties specified in RSA 641:3, as reprinted in Appendix ?, for making unsworn false statements.

Env-Wt 905.06 Issuance of Certificate.

- (a) Within 10 working days of receiving a complete application as specified in Env-Wt 905.04(a), the department shall determine whether the information submitted demonstrates that the applicant meets the requirements for becoming a certified culvert maintainer specified in RSA 482-A:3, XVII - XIX and this part.
- (b) If the department determines that the applicant meets the requirements, the department shall issue a certificate that identifies the individual as a certified culvert maintainer.
- (c) As provided in RSA 482-A:3, XIX and subject to (d) and (e), below, certificates shall be issued for a 2-year term, from January 1 of the year of issue through December 31 of the following year.
- (d) An initial certificate shall be issued for a term that begins on the date of issuance and extends through December 31 of the year following the year of issuance.
- (e) A certificate shall remain valid for its full term provided the certified individual remains employed by a state or municipal public works agency, unless sooner suspended or revoked pursuant to Env-Wt 905.11.
- (f) If the department determines that the individual does not meet the requirements for becoming a certified culvert maintainer, the department shall send a written notice to the applicant that:
 - (1) Specifies the reason(s) why the applicant was not certified; and
 - (2) Informs the individual that an appeal may be taken as provided in RSA 482-A:10 and RSA 21-O:14.

Env-Wt 905.07 Certificate Renewal; Continuing Education Required.

- (a) As provided in RSA 482-A:3, XIX, certificates shall be renewable.
- (b) To apply for renewal, a certified culvert maintainer shall submit an application for renewal as specified in (c) and (d), below, to the department no later than December 15 of the year of expiration.
- (c) An applicant for renewal shall provide the following information and documentation to the department on or with a form obtained from the department:
 - (1) The applicant's name, mailing address, daytime telephone number, and email address;

NOTE: All cross-references subject to verification/correction.

- (2) The name, address, and daytime telephone number of the state or municipal public works agency by which the applicant is employed;
 - (3) Documentation that the applicant has completed 2 hours of instruction from an approved provider in one or more of the areas identified in Env-Wt 905.03(b) within the 2-year term of the individual's current certificate; and
 - (4) A statement that the applicant currently holds a valid certificate as a culvert maintainer and has not acted or failed to act in any way that would constitute just cause to suspend, revoke, or refuse to renew the certificate.
- (d) The applicant shall sign the application for renewal in accordance with Env-Wt 905.05.
- (e) Within 10 working days of receiving a complete application for a renewal certificate as specified in (b) through (d), above, the department shall determine whether the information submitted demonstrates that the applicant:
- (1) Currently holds a valid culvert maintainer certificate;
 - (2) Is employed at the time of renewal by a state or municipal public works agency;
 - (3) Has filed all required reports; and
 - (4) Has not acted or failed to act in any way that would constitute just cause to suspend, revoke, or refuse to renew the certificate.
- (f) If the department determines that the applicant meets the requirements, the department shall issue a certificate that:
- (1) Identifies the individual as a certified culvert maintainer; and
 - (2) As provided in RSA 482-A:3, XIX, is valid from January 1 of the year of issue through December 31 of the following year.
- (g) If the department determines that the applicant does not meet the requirements for renewal, the department shall send a written notice to the applicant that:
- (1) Specifies the reason(s) why the applicant's certificate was not renewed; and
 - (2) Informs the individual that an appeal may be taken as provided in RSA 482-A:10 and RSA 21-O:14.
- Env-Wt 905.08 Obligations and Responsibilities of Certified Individuals. Each individual certified under this part shall:
- (a) Undertake or supervise work performed pursuant to RSA 482-A:3, XVII;
 - (b) Use reasonable care, judgment, and application of his or her knowledge when maintaining, repairing, replacing, or modifying a culvert;
 - (c) Not submit any information that is false, incomplete, or misleading on, in, or with any application for an initial or renewal certificate or quarterly report;
 - (d) Repair, replace, or modify each culvert in compliance with:
 - (1) RSA 482-A, exclusive of the requirement to obtain a permit;
 - (2) Env-Wt 100 et seq., exclusive of the requirements pertaining to applying for and obtaining a permit; and
 - (3) Best management practices to protect water quality; and

NOTE: All cross-references subject to verification/correction.

(e) Correct any work that is identified as defective by the department or by the state or municipal public works agency for which the work was performed.

Env-Wt 905.09 Quarterly Reporting Required.

(a) As required by RSA 482-A:3, XVIII, all individuals certified under this program shall submit a quarterly report to the department to fully identify the work performed in the prior quarter.

(b) If more than one certified individual works on or supervises the same culvert project, each individual shall identify the project in her or his quarterly report.

(c) Quarterly reporting periods and due dates for reports shall be as specified in Table 905-1, below:

Table 905-1: Quarterly Reporting Periods with Corresponding Due Date for Report

Reporting Period	Report Due
January 1 through March 31	April 15
April 1 through June 30	July 15
July 1 through September 30	October 15
October 1 through December 31	January 15

(d) Each quarterly report shall contain the following information for each culvert maintained, repaired, replaced, or modified during the reporting period:

- (1) The state or municipal public works agency for which the work was done;
- (2) The municipality in which the work was done;
- (3) The name or other identification of the public way that crosses the culvert;
- (4) The location of the culvert, as follows:
 - a. If the public way has numbered buildings along it, the numbers of the 2 closest buildings that bracket the culvert;
 - b. If the public way has utility poles along it, the identification numbers of the 2 closest utility poles that bracket the culvert;
 - c. If there are no numbered buildings or utility poles but the public way has mile markers, the numbers of the 2 closest markers that bracket the culvert; and
 - d. If none of the information identified in a. through c., above, is available, the distance from the culvert to the nearest identifiable intersection, to the nearest 0.1 mile, plus any other information that is helpful in locating the culvert.
- (5) Whether the culvert was maintained, repaired, replaced, or modified;
- (6) Whether the work was done as part of a planned routine maintenance procedure or was unexpected;
- (7) If the work was not part of a planned routine maintenance procedure, an assessment of what caused the culvert to need to be repaired, replaced, or modified;
- (8) The size, type, and condition of the culvert prior to the maintenance, repair, replacement, or modification; and
- (9) The size, type, and condition of the culvert following the maintenance, repair, replacement, or modification.

NOTE: All cross-references subject to verification/correction.

Env-Wt 905.10 Suspension, Revocation, or Refusal to Renew Certificate.

- (a) As provided in RSA 482-A:3, XIX, a certificate issued under this part may be suspended, revoked, or not renewed for just cause.
- (b) Just cause to suspend, revoke, or refuse to renew a certificate shall include the following:
- (1) Installing culverts in violation of the requirements specified in Env-Wt 905.08(d);
 - (2) Refusing to correct defective work;
 - (3) Failing to use reasonable care, judgment, and application of his/her knowledge in the performance of his/her duties;
 - (4) Failing to submit required quarterly reports;
 - (5) Submitting false or misleading information regarding any application for an initial or renewal certificate; and
 - (6) Obtaining any certificate through fraud, deceit, or intentional falsification.
- (c) If after issuing a certificate the department receives information which indicates that just cause, as specified in (b), above, exists to suspend or revoke the certificate, the department shall proceed in accordance with RSA 541-A:30 and the provisions of Env-C 200 that apply to adjudicative proceedings.
- (d) After proceeding in accordance with (c), above, the department shall revoke the certificate if the department determines that the certified individual:
- (1) Intentionally submitted false or misleading information on any application for an initial or renewal certificate or otherwise obtained a certificate through fraud, deceit, or falsification;
 - (2) Repaired, replaced, or modified a culvert in violation of the requirements specified in Env-Wt 905.08(d) more than once in any 2-year period or in such a way as to cause water quality violations;
 - (3) Refused to correct defective work;
 - (4) Failed to use reasonable care, judgment, and application of his/her knowledge when maintaining, repairing, replacing, or modifying a culvert where such failure resulted in more than incidental damage to public or private property; or
 - (5) Intentionally submitted false or misleading information on any quarterly report.
- (e) An individual whose certificate has been revoked shall not be eligible to reapply for a new certificate for 2 years.
- (f) After proceeding in accordance with (c), above, the department shall suspend the certificate if the department determines that the certified individual:
- (1) Negligently or inadvertently submitted false or misleading information regarding any application for an initial or renewal certificate;
 - (2) Repaired, replaced, or modified a culvert in violation of RSA 482-A, Env-Wt 100 et seq., and best management practices to protect water quality, but:
 - a. Did not do so more than once in any 2-year period; and
 - b. Did not cause water quality violations;

- (3) Failed to use reasonable care, judgment, and application of his/her knowledge when maintaining, repairing, replacing, or modifying a culvert, where such failure resulted in no damage or only incidental damage to public or private property;
- (4) Negligently or inadvertently submitted false or misleading information on any quarterly report; or
- (5) Failed to submit required quarterly reports.

(g) If a certificate is suspended pursuant to (f), above, or (i)(2), below, the department shall not reinstate the certificate until the certified individual:

(1) Remedies all violations, including as applicable:

- a. Providing accurate and complete information regarding an application for an initial or renewal certificate;
- b. Correcting any defective work that has not already been corrected;
- c. Providing corrected quarterly reports; and
- d. Submitting all required quarterly reports;

(2) Completes an extra 2 hours of instruction from an approved provider in the area in which the reason for the suspension occurred; and

(3) Submits a written request to the department requesting that the certificate be reinstated, together with documentation that the requirements of (1) and (2), above, have been met.

(h) If after receiving a request for renewal of a certificate the department receives information which indicates that just cause, as specified in (b), above, exists to refuse to renew the certificate, the department shall proceed in accordance with (c), above.

(i) After proceeding in accordance with (c), above, the department shall:

- (1) Refuse to renew the certificate, if the department determines that one or more of the reasons to revoke a certificate, as listed in (d), above, applies; or
- (2) Renew the certificate and suspend it, if the department determines that one or more of the reasons to suspend a certificate, as listed in (f), above, applies.

(j) An individual whose certificate has been refused renewal shall not be eligible to reapply for a new certificate for 2 years.

(k) If the department renews a certificate and suspends it as specified in (i)(2), above, the department shall not reinstate the certificate until the certified individual has complied with (g)(1)-(3), above.

Env-Wt 905.11 Approved Provider Application. An organization that wishes to become an approved provider shall submit the following information to the department in writing, with the signature and certifications specified in Env-Wt 905.13:

(a) A description of the organization, including:

- (1) The organization's name, mailing address, and daytime telephone number including area code; and
- (2) If the organization is required by RSA 292, RSA 293, RSA 293-A, or other applicable provision of New Hampshire law to register with the New Hampshire secretary of state, proof of being registered and in good standing to do business in New Hampshire;

NOTE: All cross-references subject to verification/correction.

- (b) The name, mailing address, daytime telephone number including area code, and email address of an individual at the organization who can be contacted regarding the application;
- (c) If approval is being sought for an entire curriculum, a list of the courses to be offered; and
- (d) A complete description of each course for which the organization is seeking approval, including:
 - (1) The name of the course;
 - (2) The name and qualifications of each individual who will present the course;
 - (3) The length of time attendees of the course will be under the direct supervision of the instructor;
 - (4) A syllabus for the course and the written materials to be used in the course;
 - (5) The method to be used to evaluate attendees at the conclusion of the course; and
 - (6) The format the organization will use to provide the documentation required by Env-Wt 905.04(b)(3)a. and Env-Wt 905.07(c)(3).

Env-Wt 905.12 Designation as Approved Provider.

- (a) Within 45 days of receiving a complete application to become an approved provider, the department shall:
 - (1) Determine whether the applicant has met the criteria specified in (c), below; and
 - (2) Notify the applicant in writing of its determination.
- (b) If the department determines that the applicant has not met the criteria specified in (c), below, the notice sent pursuant to (a)(2) shall specify the reason(s) for the determination.
- (c) The department shall designate an organization as an approved provider for the proposed curriculum or for one or more specific courses if the information submitted demonstrates that the curriculum or course(s), as applicable, will impart the information necessary for attendees to become knowledgeable in one or more of the areas identified in Env-Wt 905.03(b).
- (d) An organization that has received approval for less than all of the courses it offers shall be an approved provider only as to the courses that have been submitted pursuant to Env-Wt 905.11 and approved by the department.

Env-Wt 905.13 Signature and Certification.

- (a) The individual who has been authorized by the organization to submit a request under Env-Wt 905.11, Env-Wt 905.14, or Env-Wt 905.16 or to submit information under Env-Wt 905.15 shall:
 - (1) Sign and date the document containing the required information; and
 - (2) Print or type his or her name and title on the document.
- (b) The signature provided pursuant to (a), above, shall constitute certification by the signer that:
 - (1) The signer has been duly authorized by the organization to submit the request to the department;
 - (2) The information contained in or otherwise submitted with the request is true, complete, and not misleading to the best of the signer's knowledge and belief; and

- (3) The signer, on behalf of the organization, understands that:
 - a. The submission of false, incomplete, or misleading information constitutes grounds for the department to deny the request or to revoke any decision that is made based on the information; and
 - b. The signer and the organization are subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.

Env-Wt 905.14 Expiration and Renewal of Designation.

- (a) Subject to renewal as provided below, designation as an approved provider shall expire 2 years from the date of the notice issued pursuant to Env-Wt 905.12(a)(2).
- (b) An approved provider that wishes to renew its designation shall submit a written statement to the department, signed and certified in accordance with Env-Wt 905.13, attesting that:
 - (1) No changes to the information identified in Env-Wt 905.11 have occurred; or
 - (2) Changes to the information identified in Env-Wt 905.11 have occurred but are not material to the organization's compliance with the criteria specified in Env-Wt 905.12(c).
- (c) If changes to the information identified in Env-Wt 905.11 have occurred, the organization shall provide updated information with the written statement submitted pursuant to (b), above.
- (d) The department shall renew the organization's designation as an approved provider if the information submitted pursuant to (b) and (c), above, demonstrate that the organization continues to meet the criteria specified in Env-Wt 905.12(c).
- (e) A renewed designation shall be valid for 2 years from the date of the renewal and shall itself be renewable by the same process described in (b) through (d), above.

Env-Wt 905.15 Obligations of Approved Providers.

- (a) Each approved provider shall notify the department in writing of any change in any of the information identified in Env-Wt 905.11 within 7 working days of the change.
- (b) Information submitted pursuant to (a), above, shall be signed and certified as specified in Env-Wt 905.13.
- (c) If any change reported pursuant to (a), above, is material to the organization's ability to meet the criteria specified in Env-Wt 905.12(c), the written notification shall explain what the organization is doing to remedy the situation and when the organization expects to meet the criteria again.
- (d) The organization shall notify the department in writing within 7 working days of reestablishing compliance with the criteria specified in Env-Wt 905.12(c).
- (e) The organization shall not offer any course affected by the noncompliance with the criteria specified in Env-Wt 905.12(c) while the noncompliance exists.

Env-Wt 905.16 Delegation of Certain Administrative Functions to Approved Providers.

- (a) An approved provider that wishes to undertake one or more of the administrative functions of the certified culvert maintainer program specified in (c), below, shall submit a written request to the department that contains the following information:
 - (1) The name and mailing address of the approved provider;

NOTE: All cross-references subject to verification/correction.

- (2) The name, title, mailing address, daytime telephone number including area code, and email address of an individual who is authorized to represent the approved provider for purposes of the request;
- (3) The specific function(s) for which the approved provider is requesting delegation;
- (4) A complete description of the resources available to the approved provider to perform the functions, if delegated; and
- (5) The period of time for which the delegation is requested, which shall extend no later than the approval issued pursuant to Env-Wt 905.12.
- (b) A request submitted pursuant to (a), above, shall be signed and certified as specified in Env-Wt 905.13.
- (c) An approved provider may request delegation of any or all of the following:
- (1) Receiving and processing applications for initial certificates as specified in Env-Wt 905.04;
 - (2) Issuing certifications as specified in Env-Wt 905.06;
 - (3) Receiving and processing applications for renewal as specified in Env-Wt 905.07; and
 - (4) Receiving and processing the quarterly reports as specified in Env-Wt 905.10.
- (d) The department shall delegate the requested authority to the approved provider if it determines that the approved provider has sufficient resources to undertake the specified administrative functions. Such delegation shall be valid for so long as the organization is an approved provider, provided that the organization may discontinue undertaking the delegated authority by providing written notice to the department at least 30 days prior to the discontinuance.

APPENDIX A: STATUTES IMPLEMENTED

Rule Section(s)	State Statute Implemented
Env-Wt 901	RSA 482-A:1 & 3; RSA 482-A:11
Env-Wt 902	
Env-Wt 903	
Env-Wt 904	
Env-Wt 905	RSA 482-A:3, XVII - XIX

NOTE: All cross-references subject to verification/correction.

APPENDIX B: INCORPORATION BY REFERENCE INFORMATION

Rule (Env-Wt)	Publication (Date)	How to Obtain:
903.05(j)	Applied River Morphology, 2 nd Edition (1996)	Wildland Hydrology, Inc. 233 Davis Cup Dr., Unit 4102 Pagosa Springs, Colorado 81147 970-568-0002 Available for \$71.76 [as of 08-30-17] at: https://www.wildlandhydrology.com/books/

APPENDIX C: STATUTORY DEFINITIONS**RSA 483:4**

VIII. “Designated river” means that portion of a perennial river which has been specifically designated by the general court pursuant to RSA 483:15.

XVIII. “River corridor” means the river and the land area located within a distance of 1,320 feet of the normal high water mark or to the landward extent of the 100 year floodplain as designated by the Federal Emergency Management Agency, whichever distance is larger.

RSA 487:16

I-a. “Exotic aquatic species of wildlife” means wildlife, as defined in RSA 207:1, XXXV, that:

(a) Depend on a freshwater aquatic environment; and

(b) Are not naturally occurring in New Hampshire or have not become established in New Hampshire as a result of an intentional introduction program by a state agency.

II. The term “exotic aquatic weeds” includes only those species of vascular aquatic plants which were not part of New Hampshire's native aquatic flora before 1950. *Cabomba caroliniana* and *Myriophyllum heterophyllum* are examples of exotic aquatic weeds.

RSA 207:1

XXXV. Wildlife: Refers to all species of mammals, birds, fish, mollusks, crustaceans, amphibians, invertebrates, reptiles or their progeny or eggs which, whether raised in captivity or not, are normally found in a wild state.

APPENDIX D: STATUTORY PROVISIONS ESTABLISHING THE CERTIFIED CULVERT INSTALLATION PROGRAM**RSA 482-A:3:**

XVII. State and municipal public works employees who have fulfilled the requirements of a certification program developed by the department may maintain, repair, replace, or modify culverts up to a maximum diameter of 48 inches, or the hydraulic equivalent, as long as the structure can pass flows from the contributing watershed without causing damage to upstream or downstream properties, and in accordance with best management practices to protect water quality, without prior notification to the department.

XVIII. The department shall develop an installer’s certification program, in accordance with paragraph XVII, and shall determine the educational requirements for certification, including continuing education requirements. Professional engineers who are duly licensed by the New Hampshire board of professional engineers are exempt from the program requirements of this section. All certified individuals who perform such work shall submit a quarterly report to the department fully identifying work that they performed during each quarter and documentation of continuing education requirements.

XIX. The department shall issue an installer’s permit to any individual who submits an application provided by the department, and has satisfactorily completed the program in accordance with paragraphs XVII and XVIII. Permits shall be issued from January 1 and shall expire December 31 of every other year. Permits shall be renewable upon proper application, and documentation of compliance with the continuing education

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requirement of paragraph XVIII. The installer's permit may be suspended, revoked, or not renewed for just cause, including, but not limited to, the installation of culverts in violation of this chapter or the refusal by a permit holder to correct defective work. The department shall not suspend, revoke, or refuse to renew a permit except for just cause until the permit holder has had an opportunity to be heard by the department. An appeal from such decision to revoke, suspend, or not renew a permit may be taken pursuant to RSA 21-O:14.

APPENDIX E: ADDITIONAL APPLICABLE STATUTE

RSA 641:3 Unsworn Falsification. – A person is guilty of a misdemeanor if:

I. He or she makes a written or electronic false statement which he or she does not believe to be true, on or pursuant to a form bearing a notification authorized by law to the effect that false statements made therein are punishable; or

II. With a purpose to deceive a public servant in the performance of his or her official function, he or she:

- (a) Makes any written or electronic false statement which he or she does not believe to be true; or
- (b) Knowingly creates a false impression in a written application for any pecuniary or other benefit by omitting information necessary to prevent statements therein from being misleading; or
- (c) Submits or invites reliance on any writing which he or she knows to be lacking in authenticity; or
- (d) Submits or invites reliance on any sample, specimen, map, boundary mark, or other object which he or she knows to be false.

III. No person shall be guilty under this section if he or she retracts the falsification before it becomes manifest that the falsification was or would be exposed.