

# **Optional Shoreland Zoning Standards For Areas Adjacent to Great Ponds**

Background, authority, and general policy regarding these optional standards are discussed at the end of the document.

Below are optional standards that a municipality may adopt into its local ordinance. The bolded text describes the applicable section, as referenced in the Guidelines for Municipal Shoreland Zoning Ordinances, Chapter 1000 (Guidelines), in which the standard may best be incorporated into existing and new provisions applicable to the shoreland zone and/or watershed of a great pond. A municipality's ordinance may reference the applicable section differently.

1. For all lots or portions thereof that have not been previously developed, a minimum 100 foot wide undeveloped buffer area along the shoreline shall be maintained with only a maximum 6 foot wide winding pathway for access to the water. Only dead trees and branches (dying of natural causes) in a buffer that pose a safety hazard, can be removed with approval of the Code Enforcement Officer (CEO). Trees that have died due to actions of the landowner or his agent (filling over root system, girdling etc.) shall be considered live trees for the purposes of this standard and cannot be removed unless they pose a safety hazard and a removal and restoration plan is approved by the CEO. Pruning of live trees is prohibited. **Include in section 15(P)**
2. Design of all new development on lots located in the shoreland zone or in great pond watersheds (may require a separate ordinance see Appendix A for example) shall utilize Chapter 6 of Volume II of The Stormwater Best Management Practices for Maine: Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development, (See Appendix B) to minimize phosphorus loading to the great pond. **Include in section 15(J)**
3. Beyond 100 feet from the shoreline of a great pond, woody vegetation may be removed within 30 feet from the newly constructed structure to allow for excavation and back fill and connection of utilities. If a septic system or well is required, only the area necessary to install the system or well shall be disturbed and re-stabilized. All other areas except approved driveway and parking areas shall remain in an undeveloped state. Clearing of vegetation shall only be allowed for a maximum 6 foot wide winding pathway to the great pond. No timber harvesting or other clearing of vegetation shall be allowed and removal of the ground cover is prohibited over the remainder of the lot. **Include in sections 15 (K), 15(O) and 15(P)**

4. Structures, roads and timber harvesting shall be prohibited in the Resource Protection District abutting a great pond. Dead trees and branches that pose a safety hazard may be removed only with approval of the CEO. Pruning of trees is prohibited. **Include in sections 14 (Table 1), 15(B)(1), 15(H)(4), 15(O)(1), and 16(E)**
5. All new or existing gravel roads in the shoreland zone must be maintained and repaired so as not to cause a direct or indirect discharge of eroded materials into a great pond or its tributary streams. The road must achieve a minimum total score of 14 points in Section 1, 12 points in Section 2 and 14 points in Section 3 using the Department of Environmental Protection's gravel road evaluation score sheet (See Appendix C). **Include in sections 15(H)**
6. All filling or earth moving activity requiring the use of equipment, other than hand tools, in excess of 2 cubic yards in the shoreland zone shall be supervised by an individual certified in erosion and sediment control practices by the Maine Department of Environmental Protection. **Include in section 15(Q)**
7. Provisions shall be made to assure that roof runoff will not cause erosion of soil or that polluted runoff does not reach the great pond or its tributary streams as overland or concentrated flow. **Include in section 15(J)(1)**
8. Construction activities within the shoreland zone will have the boundaries of the activity clearly marked with tape or stakes by the landowner, and approved by the CEO prior to the start of any action, to prevent clearing or earthmoving going beyond the permitted boundaries. The CEO shall also inspect the site during construction, as well as after construction is completed, to ensure compliance with ordinance provisions and permit requirements. **Include in sections 15(P) and 15(Q)**
9. All newly constructed roads and driveways shall maintain the natural hydrology and shall be designed to shed water into a nearby unscarified buffer so as to minimize runoff from directly entering a great pond or its tributary streams. If drainage culverts are needed, they shall be sized to accommodate drainage from the portion of the watershed that flows to the culvert. Culverts needed for streams or tributary streams flowing into a great pond, shall be sized at least 1.2 times the bank full width of the stream or tributary stream and shall not block passage of aquatic organisms. **Include in section 15(H)**
10. For all newly developed lots only one seasonal dock and water access area is allowed per lot. The dock and access area shall be designed so as not to compromise the effects of the shoreland undeveloped buffer by limiting

cutting and encroachment into the buffer to only that of the size of the permitted footpath, access area or dock. **Include in section 15(C)**

11. All footpaths shall be stabilized with non erodible materials such as erosion control mulch, crushed stone or gravel. (Wood chips and pea stone are considered to be erodible.) Whenever steps are necessary, they shall be designed to infiltrate stormwater runoff to the extent practicable. **Include in sections 15(B)(6) and 15(P)(2)**
12. All residential parking areas shall only be the minimum size required for motor vehicles registered to the landowner(s)/renter(s) but in no case shall be larger than that required for three parking spaces, and shall be designed so as to infiltrate stormwater runoff and/or direct it to an unscarified buffer before it reaches a great pond. **Include in sections 15(G)(2) and (3)**
13. All eroding shorelines shall be stabilized with native vegetation whenever possible or if necessary with native vegetation and rock riprap with approval from the Department of Environmental Protection under the Natural Resources Protection Act. **Include in section 15(Q)**
14. Only non-phosphorus lawn fertilizer shall be used in the shoreland zone unless a soil test has been conducted to determine that phosphorus is lacking in the soil. If such a test indicates that phosphorus is lacking, only the amount of fertilizer necessary to increase the level to allow for plant growth shall be applied. Use of lawn/turf products that contain both fertilizer and herbicide (“Weed and Feed”) is prohibited. **Include in sections 15(N), 15(Q) and 15 (S)**
15. The use of pesticides in the shoreland zone is prohibited unless applied by an applicator licensed by the Maine Pesticides Control Board who employs the principles of Integrated Pest Management. **Include in sections 15(N) and 15(S)**
16. Livestock such as cows, horses, pigs, goats or sheep shall not be kept on lots or portions thereof, located in the shoreland zone of a great pond or rivers and streams flowing into a great pond, unless appropriate Best Management Practices are installed to prevent polluted runoff from the areas where they are kept from entering these resources. **Include in section 15(N)(5)**
17. Runoff shall be directed away from septic leach fields in the shoreland zone. In order to maintain proper function, leach fields shall be kept free of woody vegetation and septic tanks shall be pumped at least every 5 years if the property is used less than 4 months per year and at least every 3 years if the property is used more often than that. Pumping records shall

be provided by the property owner to the CEO upon request. **Include in section 15(K)**

18. Photographic or video graphic documentation of lots with shore frontage on great ponds shall be maintained by the CEO to ascertain if violations have occurred over time. **Include in section 16(I)**
19. Unless otherwise required by ordinance to maintain a larger undeveloped buffer area, on previously-developed lots with shore frontage, an undeveloped buffer area within at least 25 feet from the shoreline of the great pond shall be maintained to the greatest extent practicable. **Include in section 15(P)**

**Background:** As a result of recommendations from a 2008 report submitted to the Maine Legislature entitled: *An Evaluation of Ways to Protect and Improve Lake Water Quality by Addressing Development Impacts*, these optional standards were developed. The standards seek to provide greater protection to the water quality of the state's great ponds since current standards only represent basic protection.

**Authority:** The Mandatory Shoreland Zoning Act, 38 M.R.S.A. 435-449, (Act) allows a municipality to adopt a local ordinance that is more stringent than the Guidelines. The Act requires that the local ordinance be consistent with the Guidelines. The Department determines that these optional standards are consistent with the Guidelines.

**Policy:** The Department is encouraging municipalities to consider adopting provisions that incorporate these optional standards, to further ensure the protection of the water quality of their great ponds.

**Bronze Municipality: incorporates standards 1 thru 6 and four other standards (total 10)**

**Silver Municipality: incorporates an additional 3 other standards (total 13)**

**Gold Municipality: incorporates an additional 6 standards (total 16)**

## APPENDIX A

### Town of Raymond Phosphorus Control Ordinance

Adopted May, 2005

#### 6. Phosphorus Control

The introduction of excessive amounts of phosphorus into lakes and ponds has been identified as a significant threat to water quality. With the exception of lots approved after the effective date of this ordinance by the Planning Board under the provisions of the Raymond Subdivision Regulations and which are in conformance with Section VIII-15 of the Subdivision Regulations, the following provisions are applicable to all lots that are within 600 feet of a great pond or 600 feet of a perennial stream as identified on a USGS map.

a. Expansions of existing single family structures and duplexes; new accessory structures associated with single family structures and duplexes; extensions of less than 150' of existing driveways:

1. Demonstrate to the satisfaction of the CEO that, by utilizing permanent vegetated buffers, limiting the clearing of vegetation and the size of the development area and directing runoff away from the affected water body, the potential for phosphorus export has been minimized.

b. New or replacement single family structures and duplexes:

1. Multiply the area of the lot by the per-acre phosphorus allocation in "Phosphorus Allocations for Raymond Lake watersheds" to determine maximum permissible phosphorus export.

2. Use the Cumberland County Soil Survey in the CEO office to determine the predominant soil type on the portion of the lot to be cleared.

3. Use the Hydrologic Soils Chart to determine the hydrologic group (A, B, C or D) of the soil identified in #2.

4. Use Table A to calculate phosphorus export from the developed lot.

5. Use Table B to calculate phosphorus export from that portion of a new or extended driveway that exceeds 150' in length.

6. Add the calculated phosphorus export from the developed lot (#4) and from that portion of a new driveway or extended driveway that exceeds 150' (#5) to determine total phosphorus export.

7. Multiply #6 by 0.5 to determine actual phosphorus availability to aquatic plants.
8. If #1 is greater than or equal to #7, no treatment is required.
9. If #7 is greater than #1, treatment is required to reduce phosphorus export from the lot. See "Phosphorus Control in Lake Watersheds" for treatment alternatives.

Note: Septic systems within 250' of a perennial stream and in sandy gravelly or shallow-to-bedrock soils must include a loam liner.

c. New multi-family and non-residential structures and uses; expansions to existing multifamily and non-residential structures and uses; new or extended driveways, roads or parking areas serving multi-family and non-residential structures and uses:

1. Complete calculations as described in "Phosphorus Control in Lake Watersheds".

d. For all developments that require a building permit, the applicant shall demonstrate to the satisfaction of the Local Plumbing Inspector that the existing septic system is functioning properly.

e. If, due to existing site conditions, such as slope, soils or setback from the water body, it is not possible to reduce phosphorus export to no more than the maximum permissible phosphorus export, the CEO may approve the project if he/she determines that the proposed treatment alternatives will reduce phosphorus export to the greatest practical extent. In making this determination, the CEO is authorized to request the review and endorsement of the Cumberland County Soil and Water Conservation District. The cost of such assistance shall be borne by the applicant.

## APPENDIX B

# Chapter 6

## Performance Standards for Smaller Projects

Alternative performance standards may be used for certain smaller, residential projects. These generally include specific development restrictions on the use of Low Impact Development (LID) practices.

### 6.1 Single Family Residences and Small Subdivisions with No New Road

#### Chapter Contents:

6.1 Single Family Residences & Small Subdivisions with No New Road 6-1

### 6.2 LID Practices 6-3

Smaller residential development projects can use alternative performance standards to meet their phosphorus control obligations. These generally involve restrictions on disturbance, buffers and impervious area or the incorporation of Low Impact Development (LID) techniques. There are some kinds of relatively low impact, residential development where the level of analysis applied in the previous sections may be inappropriate or unreasonable. This section prescribes comparatively simple, alternative performance standards which may be applied to:

(1) new single family residences or duplexes on existing lots which are not part of a subdivision that has already incorporated appropriate phosphorus controls; and (2) subdivisions of five or fewer lots that do not involve the construction of a new road or expansion of an existing road. New residential developments which fall into either of these categories may meet their phosphorus control obligations by incorporating the phosphorus control measures listed either under Basic Single Family Residential Lot Standards or Alternative Single Family Residential Lot Standards below; and by maintaining these measures over the long term.

## Basic Single Family Residential (SFR) Lot Standards

The following basic Single Family Residence Lot Standard is the preferred way of addressing new development of individual residential lots or small residential subdivisions that do not include a new road. A project must meet all provisions of the standard. The standards for appropriate buffer design and maintenance is presented in section 6.2.

### **Page 6-2**

### ***Alternative Single Family Residential Lot Standards***

A property owner or developer may choose not to meet the Basic Single Family Residential Lot Standard due to site constraints or design preference. In situations where the Basic Standard is not met on a project, the project must meet the following Alternative Single Family Residential Lot Standards.

### ***Basic SFR Lot Standard***

#### **Requirements for New Single Family Lot Development:**

- Disturbance on an individual lot must be less than 15,000 square feet (including building, driveway, walkways, lawn area, construction access, grading).
- A minimum natural vegetated buffer must be maintained downgradient of all developed area on the lot. This buffer shall be 35 feet deep if naturally forested or 50 feet deep if maintained as a natural meadow.\*
- No more than 7,500 square feet of impervious cover is located on the property.
- A minimum of 25 percent of the lot area must be maintained as undisturbed natural area.\* \*Note: If the lot or a portion of the lot is located within a watershed to a Lake Most at Risk from New Development, Urban Impaired Stream, or other impaired or sensitive waterbodies as designated by the municipality for the purposes of this standard, a minimum buffer of 50 feet if naturally forested or 75 feet if maintained as a meadow must be maintained downgradient of all developed area on the lot, and a minimum of 40 percent of the lot area must be maintained as undisturbed natural area. If the existing land has been disturbed by prior activities, a natural vegetated buffer and/or undisturbed natural area may be proposed through restoration and revegetation.

### ***Alternative SFR Lot Standards***

#### **Requirements for New Single Family Residential Lot Development**

- Use Low Impact Development (LID) practices from those listed in Section 6.2 and described in the Maine LID Guidance Manual (September 2007) prepared for the DEP by the Horsley Whitten Group, Inc. These measures should be sized to treat 0.5



inches of runoff from all impervious surfaces on the site, and 0.2 inches of runoff from all disturbed pervious areas of the site (lawn).\*

- The LID practices installed on the site must be maintained in perpetuity. If necessary, LID practices may be replaced with new LID practices as long as the overall site treatment standard above is met.
- Note: If the lot or a portion of the lot is located within watersheds to Lakes Most at Risk from New Development or other impaired or sensitive waterbodies as designated by the municipality for the purposes of this standard, the project must treat one inch of runoff from impervious surfaces and 0.4 inch from disturbed pervious surfaces.

### **Page 6-3**

Meeting this standard may require the use of more than one LID practice on the site, due to existing site topography and the layout of the property. For example, half of the roof may drain to the front of a building while the other half drains to the back of the building, and the lawn and driveway/parking area drain off to one side of the property. Drainage in each of these directions must be captured and treated using an LID practice. The selection, size and location of the LID practices used on a given site will depend on the size of the area draining to each practice and the impervious area versus lawn area. While this may not always be feasible, applicants are encouraged to maintain natural buffers to the extent possible as a primary LID technique, which can then be augmented by other practices on the site. Guidance on how to size each LID practice is found in section 6.2 below.

## **6.2 LID Practices**

LID practices can be used to capture and treat runoff from residential rooftops, non-rooftop impervious areas such as paved driveways, patios and walkways, and maintained lawn areas. While there are a number of practices considered to be LID practices, this section lists just those that are appropriate for single family residential lots. These include:

- Buffers;
- Underdrain soil filters (rain gardens and swales);
- Infiltration practices (dry wells and infiltration trench); and
- Pervious pavements.

The design and maintenance standard for Buffer are presented below, and should be applied to projects meeting the Basic SFR Lot Standard.

Design and maintenance standards for the other measures are described in detail in the Maine LID Guidance Manual (September 2007) prepared for the DEP by the Horsley Whitten Group, Inc., and these should be applied to projects meeting the Alternative SFR Lot Standards.

### **Vegetative Buffers**

Vegetative buffers are areas of dense forest or meadow vegetation located adjacent and downgradient of developed areas that provide storage and treatment for stormwater

that enters them in diffuse overland flow. They should be designed, implemented and maintained in accordance with the following:

a. Discharge of stormwater to the buffer - It is essential that the stormwater entering the buffer not be channelized prior to discharge into the buffer. Grading of developed areas upgradient of the buffer must be done in a way that maintains diffuse overland flow and avoids concentration of the runoff.

b. *Topography* - The topography of a buffer area must maintain well-distributed stormwater runoff and can not allow stormwater runoff to concentrate as it flows across the buffer. Flow paths of runoff through a buffer must not converge, but must be essentially parallel or diverging.

c. *Vegetative cover* - The vegetative cover of a buffer must be either forest or meadow. In most instances the sizing of a buffer varies depending on vegetative cover type.

i. Forest buffer - A forest buffer must have a well distributed stand of trees with essentially complete canopy cover, and must be maintained as such. A forested buffer must also have an undisturbed layer of duff covering the mineral soil. Activities that may result in disturbance of the duff layer are prohibited in a buffer.

## ***Page 6-4***

ii. Meadow buffer - A meadow buffer must have a dense cover of grasses, or a combination of grasses and shrubs or trees. A buffer must be maintained as a meadow with a generally tall stand of grass, not as a lawn. It must not be mown more than twice per calendar year. If a buffer is not located on natural soils, but is constructed on fill or reshaped slopes, a buffer surface must either be isolated from stormwater discharge until a dense sod is established, or must be protected by a three inch layer of erosion control mix or other wood waste material approved by the department before stormwater is directed to it, with vegetation established using an appropriate seed mix.

iii. Mixed meadow and forest buffer - If a buffer is part meadow and part forest, the required sizing of the buffer must be determined as a weighted average, based on the percent of the buffer in meadow and the percent in forest.

d. Deed restrictions and covenants – Areas designated as vegetated buffers must be clearly identified on site plans and protected from disturbance by deed restrictions and covenants.

APPENDIX C

**Score Sheet Evaluating Gravel Roads For Drivability, Stability And Maintenance of Water Quality**

Road Name or Fire Lane Number: \_\_\_\_\_

Municipality: \_\_\_\_\_

Book and Page number of deed for road: Book: \_\_\_\_\_ Page: \_\_\_\_\_

Road is seasonal \_\_\_\_\_ Road is year round \_\_\_\_\_

If year round, is it plowed in the winter? \_\_\_\_\_

Are winter and/or "mud season" use prohibited by owners or the Road Association? \_\_\_\_\_

Right of way width if known: \_\_\_\_\_

Approximate Road Length: \_\_\_\_\_

Number of culvert crossings: \_\_\_\_\_

What Lake Watershed is the road located in: \_\_\_\_\_

Is the road in the Shoreland Zone? \_\_\_\_\_

If yes, be sure to follow Shoreland Zoning and NRPA regulations  
(Refer to page 71 of the Gravel Road Maintenance Manual for more  
information)

Is there an active Road Association for the road? \_\_\_\_\_

If yes, Contact Person: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Name of Evaluator: \_\_\_\_\_

Date of Evaluation: \_\_\_\_\_

Weather conditions: \_\_\_\_\_

**The procedure developed to evaluate roads includes the following 7 steps:**

**NOTE: It is strongly recommended that a road be evaluated during a rain event (especially if soils contain a lot of silts and clays) so that you can observe the quality of the runoff and where it is discharged in addition to water flow on the road surface in culverts and in ditches.**

- 1) Walk or drive entire length of road to determine location of culverts, ditch turnouts and steep slopes. Locate any potential erosion sites, seepage from road cut banks or ditch slopes and any ponded water in back of upslope side of road. Also locate discharge points for culverts and ditches along lakes or streams. Note length and width of road.
- 2) Evaluate using Section 1 and 2, establish a sample station at every other telephone or power pole on the road. If few or no poles are present, establish sample stations at approximately 10%, 20%, 40%, 60%, and 80% of road length. Use the small boxes on the score sheet to record ratings at each station.
- 3) When evaluating for Section 1, at each sample station, measure crown, and evaluate the road surface within 25 feet of either side of the pole or sample location. For Section 2, rate shoulders and ditches in these areas.
- 4) Evaluate using Section 3, locate each culvert crossing and rate each culvert. Note if there are locations that culverts need to be installed. Use the small boxes on the score sheet to record ratings at each culvert location.
- 5) Average ratings for each criterion and assign score. (Round up to the highest score if .5 or greater)
- 6) Add all scores and come up with the final score for each section evaluated. Each section's score must meet or exceed score indicated "to qualify" to meet standards for that section.
- 7) If a section or sections do not meet or exceed the score indicated "to qualify", use the lowest scores for the criteria to develop a repair plan for the road component (surface/base; ditches/shoulders; culverts/bridges). Obtain quotes for the repair work from local contractors and develop a timeline for completing the work.

**Section 1. Road Base and Surface Areas**

					SCORE	
					Stations	Average
1. Road constructed <u>above</u> original ground level to facilitate drainage/structural integrity of road base materials.	0	1	2	3		
	None	Some	Most	All		
2. Gravel road surface is at least 4 to 6 inches, is compacted, and is composed of a firmly packed aggregate. <i>(Refer to page 21 of the Gravel Road Maintenance Manual for road material information)</i>	0	1	2	3		
	None	Some	Most	All		
3. Gravel road surface provides good traction and is not highly erodible and dusty (too many fines).	0	1	2	3		
	None	Some	Most	All		
4. Level or low slope road surfaces are crowned to shed water at ½ inch of rise per foot of road width, or contain alternative drainage structures, such as waterbars, or are otherwise designed to direct stormwater as sheet flow off of the road surface (insloped /outsloped). <i>(Refer to page 30 of the Gravel Road Maintenance Manual for information on road crowning)</i>	0	1	2	3		
	None	Some	Most	All		
5. Steep sloped road surfaces are crowned to shed water at ¾ inch of rise per foot of road width, or contain alternative drainage structures or are otherwise designed to direct stormwater as sheet flow off of the road surface or are paved. <i>(Refer to page 30 of the Gravel Road Maintenance Manual for information on road crowning)</i>	0	1	2	3		
	None	Some	Most	All or N/A		

<p>6. Stormwater flow from the road surface is directed to stable ditches, a vegetated buffer or stable vegetated areas (that are not wetlands) of at least 50 feet in width between the road and a waterbody.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>7. <i>Dust from the road surface is effectively controlled using materials to keep road surface intact.</i></p>	<p>0            1            2            3 Never        Control led only in response to complaints        Occasional ly        Regularly</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p><i>Total Available Points = 21</i></p>	<p><b>14 to qualify</b> <b><u>If score is 14 or better, road base and surface meets these standards, and other than regular maintenance, no significant repair is currently needed.</u></b></p>	<p><b>Total = _____</b></p>																															

**Section 2. Road Shoulders and Ditches**

		<b>SCORE</b>																															
		<b>Stations</b>	<b>Average</b>																														
<p>1. Road shoulders are stabilized with vegetation or have a firmly packed gravel surface.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>2. Road shoulders are sloped to promote surface drainage away from the road and into adjacent ditches or buffer areas. A “false ditch” or berm of road material is <u>not</u> present which might prevent runoff from draining off the road surface.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>3. Ditches are stabilized with vegetation and/or rock riprap that is shaded with vegetation, and have no signs of excessive erosion.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															

<p>4. Ditches are U shaped (versus V-shaped) with side slopes less than 2 to 1 (50% slope) that are properly sized. <i>(Refer to page 39 of the Gravel Road Maintenance Manual for information on ditches)</i></p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>5. Ditches do not discharge directly into the lake or tributary streams but discharge from a stable outlet into a vegetated buffer (that is not a wetland) of at least 50 feet in width between the outlet and receiving waterbody.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>6. Ditches have appropriately located and spaced turnouts that direct water into stable vegetated buffer areas (that are not wetlands) of at least 50 feet in width between the turnout outlet and any waterbody.</p>	<p>0            1            2            3 None        Some        Most        All</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p><i>Total Available Points = 18</i></p>	<p><b>12 to qualify</b> <b><u>If score is 12 or better, road shoulders and ditches meet these standards, and other than regular maintenance, no significant repair is currently needed.</u></b></p>	<p><b>Total = _____</b></p>																															

**Section 3. Culverts and Bridges**

		<b>SCORE</b>																															
		Stations	Average																														
<p>1. Culverts are large enough to accommodate flow, properly installed, and covered with at least one foot of fill or half the culvert diameter (if over 24 inches). <i>(Refer to page 52 of the Gravel Road Maintenance Manual for information on culverts)</i></p>	<p>0            1            2            3 None        Some        Most        All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															
<p>2. Culvert inlets are stable with properly installed rock riprap or vegetation.</p>	<p>0            1            2            3 None        Some        Most        All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																															

<p>3. Culvert outlets are stable with properly installed rock riprap or vegetation.</p>	<p>0 None</p>	<p>1 Some</p>	<p>2 Most</p>	<p>3 All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			
<p>4. Culvert bore shows no signs of crushing, bowing or obstructions that could impair water flow.</p>	<p>0 None</p>	<p>1 Some</p>	<p>2 Most</p>	<p>3 All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			
<p>5. Appropriate number of culverts installed and located to accommodate flow and there is no sign of road topping, and/or erosion occurring.</p>	<p>0 None installed but needed</p>	<p>1 Some</p>	<p>2 Most</p>	<p>3 All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			
<p>6. Evidence indicates that culverts are working to maximum capacity and are not plugged and in need of cleaning or subject to ice jams in winter.</p>	<p>0 None</p>	<p>1 Some</p>	<p>2 Most</p>	<p>3 All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			
<p>7. Bridge abutments and wing walls are stable with no visible signs of erosion occurring.</p>	<p>0 None</p>	<p>1 Some</p>	<p>2 Most</p>	<p>3 All or N/A</p>	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																			
<p><i>Total Available Points = 21</i></p>	<p style="text-align: center;"><b>14 to qualify</b> <b><u>If score is 14 or better, culverts and bridges meet these standards, and other than regular maintenance, no significant repair is currently needed.</u></b></p>				<p><b>Total = _____</b></p>																																																			