STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
MAINE FOREST SERVICE
22 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0022

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

Septermber 30, 2014

Adam Cates
Dirigo Timberlands
PO Box 481
North Anson, Maine 4958

Dear Adam,

The Maine Forest Service received a Permit by Rule application from David McKenney for the installation of a permanent bridge crossing on his property in the Town of Embden on September 22, 2014. Dirigo Timberlands was named as agent for this project. The Permit by Rule application has been reviewed and was found to be complete.

As a result of our review the Maine Forest Service would like to advise you that you may proceed with the bridge installation at any time. Please make sure that the installation meets or exceeds the current Permit by Rule standards which are outlined below:

Standards

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

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(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Best Management Practices for Forestry: Protecting Maine's Water Quality. This handbook and other references are available from the Maine Forest Service.

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(2) If a perennial watercourse to be crossed is used for navigation, the crossing must consist of a bridge span or pipe arch with at least 4 feet of clearance during normal high water for boat traffic.

(3) If the stream to be crossed is a perennial watercourse and has a slope of more than 2%, a bridge or a pipe arch must be used to maintain the natural streambed.

(4) Fill sideslopes in a stream or floodplain wetland must be maintained at a slope no shallower than 3 horizontal to 1 vertical and no steeper than 1.5 horizontal to 1 vertical. Fill sideslopes must be stabilized at the completion of the activity.

NOTE: Uncompacted soils or sandy soils that are saturated at the toe of a slope will be unstable at a 1.5 to 1 slope.

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(5) A bridge or culvert must provide an opening with a cross-sectional area at least equal to 3 times the cross-sectional area of the stream channel or sufficient in size to accommodate 25-year frequency water flows.

NOTE: Stream crossings allowable under this section but located in flood hazard areas (i.e. A zones) as identified on a community's Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps (FHBM) must be designed and constructed under the stricter standards contained in that community's National Flood Insurance Program (NFIP). For example, a crossing may be required to pass a 100-year flood event.

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(6) Road surfaces must be constructed in a manner to prevent erosion of material into the river, stream or brook.

(7) Surface water on or adjacent to crossing approaches must be diverted through vegetative filter areas at least 25 feet long to avoid sedimentation of the watercourse. Roadside ditches may not extend to the resource being crossed.

NOTE: Surface water on or adjacent to crossing approaches should be diverted through vegetative filter areas to avoid sedimentation of the watercourse. Because roadside ditches may not extend to the resource being crossed, filter areas should be established in accordance with the following tables:

Average slope of land between exposed mineral soil and normal high water mark (percent)	Width of strip between ditch terminus and normal high water mark (feet along surface of the ground)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

(8) A stream ford must be lined with crushed stone, blasted ledge, washed stone, gabion blankets or geotextile material for erosion control when the natural stream bed does not consist of ledge or rock.

(9) A stream ford must allow for fish passage at all times of the year and may not impound water. The fords must also allow for maintenance of normal stream flows.

(10) Culvert crossings must:

(a) Be limited to 75 feet in length. This limit may not be exceeded within a half-mile length of the stream or within the length of stream controlled by the applicant, if less;

(b) Follow the alignment and grade of the existing stream channel where possible. On perennial streams the culvert's gradient may not exceed 1%;

(c) Have the bottom of the entire culvert installed at or below stream bed elevation, except for additional culverts at the same crossing;

(d) Where two or more culverts are installed, be offset in order to concentrate low flows into the culvert within the natural channel;

(e) Be seated on firm ground, or on geotextiles, logs or other materials used to stabilize the ground;

(f) Be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater;

(g) Have the soil compacted at least halfway up the side of the culvert; and

(h) Have the inlet and outlet ends stabilized by riprap in accordance with Section 8 Shoreline stabilization standards to avoid erosion of material around the culvert.

NOTE: For guidance on riprap installation, consult the Best Management Practices for Forestry: Protecting Maine's Water Quality page 49. This handbook is available from the Maine Forest Service.

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(11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may, where necessary, reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(12) Work below the normal high water line must be done during periods of low water level or flow.

(13) If the crossing involves trenching or disturbance of substrate in a river, stream or brook between October 2 and July 14, the activity must occur during the time period approved by the Maine Forest Service. The approved time period may be the time period proposed by the applicant or an alternative time period approved by the Maine forest Service. An alternative time period will be required where it appears an unreasonable impact on water quality or fisheries may result at the point of crossing or immediately downstream of the crossing. The applicant will be notified by the Maine Forest Service within 14 days if an alternative time period, other than the one proposed by the applicant, is required for constructing the crossing.

(14) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

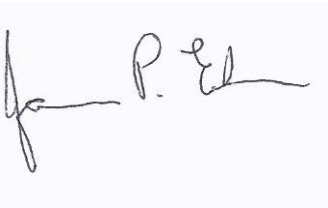
(15) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(16) All excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation.

(17) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in a way that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.

Your Permit by Rule is good for a two year period and will expire September 30, 2016. If you have any questions please feel free to contact me at 441-4308.

Sincerely,



James P. Ecker
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