



APPLICATION FOR A ROAD CONSTRUCTION PERMIT

WHO NEEDS TO SUBMIT THIS APPLICATION?

Anyone constructing land management roads in the unorganized and Deorganized Areas of the State under the Maine Forest Service ("MFS") Chapter 27 rules:

- Require a permit in the applicable subdistrict (see **Definitions and Requirements by Subdistricts**); and/or
- Do not otherwise conform with Standards of MFS Rule Chapter 27 (see Standards for details).

EXCEPTION: In accordance with the Memorandum of Agreement (MOA) between LUPC and the Maine Department of Transportation (MaineDOT), signed in June of 2009, MaineDOT is to utilize the **Expedited Permit Application** attached to that MOA for all non-exempt Level A and B Road Projects, all Level C Road Projects, and other MaineDOT state transportation infrastructure projects providing a bona fide public purpose instead of this application form.

WHERE CAN I GET HELP TO COMPLETE THIS APPLICATION?

Call the MFS office that serves your area and ask to speak to one of our Regional Enforcement Coordinators (see below for office locations and contact information). Also, go to the MFS web site at www.maine.gov/dacf/mfs to browse through our rules and regulations and other valuable information.

MAILING YOUR APPLICATION

Submit your completed application and all required attachments, including the appropriate application fee, exhibits and supplements (see instructions for details) to the MFS office.

If you have any questions, or need assistance, please contact:

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

Maine Forest Service

22 State House Station

Augusta, Maine 04333-0022

Tel: (207) 287-2791

AUGUSTA OFFICE		ASHLAND OFFICE	
<i>Southern Regional Enforcement Coordinator</i>		<i>Northern Regional Enforcement Coordinator</i>	
Box 415	Tel. (207) 441-4308	45 Radar Road	Tel. (207) 557-1086
Old Town, ME 04468	FAX (207) 827-8441	Ashland, ME 04732-3600	FAX (207) 435-7184

**THIS FORM IS NOT A VALID PERMIT.
NO CONSTRUCTION ACTIVITIES MAY BEGIN PRIOR TO YOUR RECEIPT OF A PERMIT.
MFS MAY REQUIRE ADDITIONAL INFORMATION NOT ENCOMPASSED IN THIS APPLICATION.**

ADDITIONAL INFORMATION ABOUT THE APPLICATION PROCESS

PRE-APPLICATION AND POST-PERMIT SERVICES

MFS staff encourages, and are available for, meetings and site visits before you submit your application, after you receive your permit, and/or after your project is complete. Our staff can assist you with understanding the applicable requirements of submitting a proposal for MFS's review and determining how your project best fits your site and therefore help ensure your project can be permitted.

Pre-application meetings:

- Encourage information exchange about the proposed project early in the planning stages;
- Help the applicant understand the application process and responsibilities in that process;
- Help to identify any environmental or other issues that may need to be addressed as part of the permit process; and
- Provide an opportunity to identify aspects of the proposal that may make the application unique or difficult to approve.

Suggested materials to bring to the pre-application meeting:

- This application form (even if not yet completed)
- Recent photos of the property
- Plan(s) with dimensions and setbacks of existing and proposed roads, trails and other structures.

Suggested discussion points during the pre-application meeting:

- What is the propose use of the proposed road?
- Will the proposal involve any wetland or water crossings?
- Are there other questions you may have regarding this application form or process?

Pre- and post-construction site visits:

- Help highlight specific permit conditions;
- Enable the applicant and MFS staff discussion of any issues or new concerns which have arisen; and
- Assist the applicant in identifying the various physical features on the lot that are related to the MFS Chapter 27 standards.

Note: While the pre-application meeting is extremely valuable for identifying issues or concerns early on, no decisions are made at these meetings and the thoughts expressed are not binding on the MFS or the applicant. The information presented at these meetings is very general, and the review is not substantive.

HOW LONG WILL IT TAKE TO OBTAIN A PERMIT?

A permit decision will be issued within 60 days of a complete application being received and accepted by MFS Staff. In many cases a permit decision will be made sooner, particularly on smaller projects that meet all the applicable standards. The 60 day time period will not start until a complete application with all required exhibits is submitted. MFS staff will contact you if the application is not complete and let you know what is still required to make it complete. Occasionally, more information is requested by a review agency, in which case, the application may need to be placed on hold until that information is provided.

LAND MANAGEMENT ROADS and WATER CROSSINGS

A land management road is a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for agricultural or forest management activities, including associated log yards but not including skid trails, skid roads, and winter haul roads.

PERMIT REQUIRED subject to the applicable requirements in Chapter 27, Section 5.

P-AL, P-AR, P-FP, P-MA, P-RR, P-RT, P-SG, P-SL1, P-UA, P-WL, FEMA ZONES A, AE, A1-30 AND VE

NO PERMIT REQUIRED subject to standards (or in accordance with Chapter 27, Section 5).

ALL MANAGEMENT DISTRICTS, P-FW (with FONS supplement), P-GP, P-GP2, P-RR, P-SL2, P-WL1, P-WL2

For office use:

Tracking No.

RP

Permit No.

Fee Received

Road Permit Application

1. APPLICANT AND LANDOWNER INFORMATION: Print the names and contact information of all persons or companies with right, title or interest in the property associated with this application OR the persons or companies with prior legal authority to represent the landowners in land use matters. Persons with "right, title or interest" are those listed on any deed, lease or sales contract for the property. If a designated agent without prior legal authority will be representing the applicant, see Question 14.

Applicant Name(s)*		Daytime Phone	FAX (if applicable)	
Name of Representative (if applicable)			Email (if applicable)	
Address	Town	State	Zip Code	
*If the applicant(s) listed above is NOT the landowner, please complete the landowner information below and then explain on what legal authority you are able to apply for permits on the landowner's behalf: _____ Submit as part of Exhibit B , authority from the landowner to represent them in all land use matters.				
Landowner Name(s)		Daytime Phone	FAX or Email (if applicable)	
Address	Town	State	Zip Code	

2. PROPERTY LOCATION AND PROPERTY DETAILS

Township, Town or Plantation(s)	County		
Tax Information (check tax bill) Map: _____ Plan: _____ Lot: _____ Map: _____ Plan: _____ Lot: _____ Map: _____ Plan: _____ Lot: _____	Type of Ownership <input type="checkbox"/> Owned <input type="checkbox"/> Easement <input type="checkbox"/> Lease <input type="checkbox"/> Right-of-way (ROW) <input type="checkbox"/> Other _____	Lot Size (in acres, or in square feet if less than 1 acre)	
All Zoning within 500 feet of the Project Site (check LUPC map)	Zoning at Project Site		
Nearest Roadway	Nearest Waterbody		

3. ACCESS TO THE PROJECT SITE

a. Is existing access to the project site limited in any way (i.e. seasonal road closures or temporary access only) YES NO
If YES, attach any legal restrictions as part of **Exhibit B** and explain the limitations below:

b. Are you constructing a road or trail entrance or changing a current entrance in a way that will increase traffic volume, or create a safety or drainage concern regarding a State or State-Aid Highway? YES NO
If YES, you must submit **Exhibit J: Entrance Permit**. Note: If your property is located along a County or Town/Plantation Road, you should check with that office before submitting this application to see what is required.

4. PROJECT DESCRIPTION

Explain, in detail, the activity which you are proposing, the purpose of the project, and why the project is needed. *Example: Construct 2 miles of 14 ft. wide logging road with gravel travel surface to access timber harvest area within a P-RR subdistrict. (Attach additional 8 1/2" by 11" paper if necessary.)*

5. PROPOSAL DETAILS

a. Project Type - See Instructions page 1 for definitions (check all that apply)

- Land Management Road Construction Recreational Trail
 Change of Use (Explain): _____
 Other (Explain): _____

Type of Use: Public Private Otherwise Restricted (Explain) _____

Road Name (if applicable): _____ Date of Original Construction (if applicable) _____

Total Length (feet/miles)	Travel width (feet)	Right-of-way width (feet)	Average sustained grade (%)	Maximum sustained grade (%)	
Type of wearing surface	Depth of wearing surface (inches)		Type of Base Material	Depth of Base (feet/inches)	
b. Road Setbacks & Slope (for nearest, non-crossings)	Distance (feet)	Average slope(%) between road and nearest waterbody	c. Other Road Features	Number of	Average width x length
Lake or Pond			Turnouts		
River or Stream			Other Cleared Areas		
Wetland					
Ocean / Tidal Waters					

d. General Road Standards: (for all roads)

Will the road be constructed in accordance with the standards of Chapter 27, Section 5? YES NO
If NO, identify which standard(s) would not be met, briefly explain why, and explain how the road will be constructed in a manner which produces no undue adverse impact upon the resources and uses in the area.

6. WATER AND WETLAND CROSSINGS

Will the proposed road and/or trail cross any rivers, streams, brooks, wetlands or other waterbodies? YES NO


If NO, continue to Question 8; **If YES**, please answer the following questions.

- a. What type of water crossing(s) will you install? Round Culvert Box Culvert Arch Culvert Bridge
 Other (Explain) _____
- b. Will any water crossings include crossings of Atlantic salmon habitat watersheds? YES NO
If YES, you should contact the Department of Marine Resources, Bureau of Sea-Run Fisheries and Habitat by phone at (207) 287-9972 or by mail at Department of Marine Resources 172 State House Station, Augusta, ME 04333-0021 to prior to finalizing your plans for the crossing.

Question 6 is continued on the next page...

6. WATER AND WETLAND CROSSINGS (continued from previous page)

- c. Will all water and wetland crossings be constructed in accordance with the standards of Chapter 27 Section 5? YES NO
If NO, explain how the crossing will be constructed in a manner which produces no undue adverse impact upon the resources and uses in the area.

 For crossings of major flowing waters, water crossings that do not meet standards and other water crossings which require a permit in the Subdistrict (i.e. P-RR or P-FP), you should also complete a Bridge Construction Permit Application and submit it with this application. The MFS will review both as one Road Construction Permit Application. You need only submit one application fee.

7. ALTERING LAND AND WETLAND ALTERATION

- a. Will your proposal alter a total of one acre or more of land area, whether upland or wetland? YES NO
If YES, you must also complete **Exhibit G: Erosion and Sedimentation Control Plan AND LUPC Supplement S-3: Requirements for Wetland Alterations.**
- b. Will your proposal alter any amount of land that is mapped P-WL Subdistrict, or any ground below the normal high water mark of any lake, pond, river, stream, or intertidal area? YES NO
If YES, you must also complete **LUPC Supplement S-3: Requirements for Wetland Alterations.** LUPC supplement forms are available online at www.maine.gov/dacf, click on the Planning tab for the LUPC page.

8. CONSTRUCTION IN FLOOD PRONE AREAS

Is your proposed activity located within a mapped P-FP (Flood Prone Area Protection) Subdistrict, a mapped FEMA (Federal Emergency Management Agency) flood zone, or an unmapped area prone to flooding?

- FEMA Flood Zone YES NO
P-FP Subdistrict YES NO
Unmapped Area Prone to Flooding YES NO

9. SEDIMENTATION AND EROSION CONTROL

- a. What is the anticipated starting date of the project? _____ and estimated completion date _____

Question 9 is continued on the next page...

9. SEDIMENTATION AND EROSION CONTROL *(continued from previous page)*

- b. Describe any site preparation that will be required, including access for materials and equipment.

- c. Provide a detailed description of temporary and permanent sedimentation and erosion control measures you propose to protect the project site and the area surrounding your project, both during and after construction. *(Attach additional 8 1/2" by 11" paper if necessary.)*

- d. Provide a detailed description of all temporary and permanent provisions for drainage including culverts, water bars, drainage ditches, settling basins, etc., and provisions for the continued maintenance of these structures. *(Attach additional 8 1/2" by 11" paper if necessary.)*

- e. How will the roadways be designed to minimize the use of ditching, cuts and fills?

- f. What site-specific best management practices will be used to ensure that existing and proposed roadways do not create erosion or safety problems? Include a description of any measures proposed to be used if road construction will be conducted during saturated or frozen conditions.

- g. If the proposed road is anticipated to be closed out or put to bed at a later date, explain when, and how it will be closed out.

- i. What provisions will be made for continued maintenance of any proposed roadways?

10. ADDITIONAL INFORMATION

State any additional facts regarding this application that you feel may further explain your proposal or assist the MFS in its review of your application. *(Attach additional 8 1/2" by 11" paper if necessary.)*

10. ADDITIONAL INFORMATION (continued from previous page)

11. APPLICANT SIGNATURE (REQUIRED) AND AGENT AUTHORIZATION (OPTIONAL)

If you have a designated agent, print his/her legal name and contact information below. Agents are persons acting on the applicant's behalf (such as realtors, attorneys, or contractors). If you have a designated agent, provide the requested information.

Agent Name	Daytime Phone	FAX (if applicable)	
Mailing Address		Email (if applicable)	
Town	State	Zip Code	

I have personally examined and am familiar with the information submitted in this application, including the accompanying exhibits and supplements, and to the best of my knowledge and belief, this application is complete with all necessary exhibits. I understand that if the application is incomplete or without any required exhibits that it will result in delays in processing my permit decision. The information in this application is a true and adequate narrative and depiction of what currently exists on and what is proposed at the property. I certify that I will give a copy of this permit and associated conditions to any contractors working on my project. I understand that I am ultimately responsible for complying with all applicable regulations and with all conditions and limitations of any permits issued to me by MFS. If there is an Agent listed above, I hereby authorize that individual or business to act as my legal agent in all matters relating to this permit application.

Please check **one** of the boxes below: (see "Accessing the Project Site for Site Evaluation and Inspection" just prior to the application form)

I authorize staff of the Maine Forest Service to access the project site as necessary at any reasonable hour for the purpose of evaluating the site to verify the application materials I have submitted, and for the purpose of inspecting for compliance with statutory and regulatory requirements, and the terms and conditions of my permit.

I request that staff of the Maine Forest Service make reasonable efforts to contact me in advance to obtain my permission to fully access the project site for purposes of any necessary site evaluation and compliance inspection.

Caution: The person(s) signing below must demonstrate that they have a legal right to apply for this permit, either as the landowner, lease holder, or via a legal agreement or other written contract with the landowner (See Exhibit B).

Signature(s) _____ Date _____
_____ Date _____

REQUIRED FEES AND EXHIBITS

Because your Road Construction Permit Application cannot be considered complete until all necessary exhibits have been submitted and found to be complete, please read the description of what is required for each of the exhibits carefully. **Incomplete or inadequate applications and exhibits may be returned.** If you do not fully understand what is being asked in a question or exhibit, or you have questions, please contact the MFS for assistance.

Each exhibit must be clearly identified with the applicant's name and the exhibit letter and/or identification (i.e. EXHIBIT E, SITE PLANS) included on each page. **All plans must be drawn to scale and that scale clearly identified.** All exhibits must be clear and in ink. Pencil notes and drawings, very light copies of materials, and drawings and notes on onion skin paper are not acceptable and may be returned. Plans must not exceed 24 inches by 36 inches in size. If more than one sheet is required, match lines must be included on each sheet.

Any exhibits larger than 8 1/2" by 11", exclusive of Land Use Guidance Maps and deeds, must be submitted and folded to 8 1/2" by 11". In some instances, the MFS staff may request that you provide additional copies of the entire application. It may save time if you discuss your application with the staff prior to formal submission. They should be able to advise how many extra copies should be included.

APPLICATION FEE (nonrefundable). Submit a check or money order payable to "**Treasurer, State of Maine**" for the appropriate fee:

Base Fee of \$200, PLUS:

- \$0.15 per linear foot for Land Management Roads; \$1,000.00 Maximum Fee for Land Management Roads

After-the-fact Permit Fees are triple the standard fee.

EXHIBIT A: CORPORATE GOOD STANDING

If the applicant is a corporation, submit, as EXHIBIT A, a certification of corporate good standing from the Secretary of State, State of Maine. Certification of good standing can be requested at: <https://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x> or by contacting the Bureau's Reporting and Information Section at (207) 624-7752.

EXHIBIT B: RIGHT, TITLE OR INTEREST

Submit, as EXHIBIT B, a complete, signed copies of all deeds, leases, and other covenants, restrictions or easements or agreements that demonstrate the landowner's title, right or interest in all of the land addressed in this application, and any agreements authorizing the applicant (if not the land owner to apply on the landowner's behalf. **(DO NOT SEND THE ORIGINAL)** Or submit a current binding option to purchase all necessary interest in the land, or a similar contractual agreement that establishes terms for future title and provides a description of the property. If you are submitting a contractual agreement, you must also submit complete, signed copies of all deeds or leases that demonstrate the current land owner's title, right or interest in all of the land addressed in this application.

EXHIBIT C: LOCATION MAP AND DIRECTIONS TO SITE

Submit, as EXHIBIT C, a copy of a LUPC Land Use Guidance Map, a U.S.G.S. Topographic or equivalent map on which you have clearly marked the location of the project site. Mark the project site location with an X, then draw a circle around the X and then an arrow which points to your lot.

Land Use Guidance Maps are available for all towns, townships and plantations under the LUPC service area. If you did not receive one of these maps with your application, copies are available, upon request, from the Commission's offices or at LUPC web site. There is no charge for these maps when associated with an application.

You must also provide specific directions to the proposed development site. These directions should be typed or printed on a separate 8 1/2" by 11" sheet of paper and attached to the location map. The directions should provide enough detail so that someone from the MFS can locate the site.

EXHIBIT D: TECHNICAL EXPERIENCE AND ABILITY

Submit, as EXHIBIT D, information which demonstrates your technical experience and abilities and/or those of the contractor who will actually undertake and complete the proposed project. Such information should include, but not be limited to a statement of the applicant's and/or the contractor's prior experience and appropriate training relating to the nature of the proposed development and a description of professional qualifications of personnel who will be employed to design, install and oversee the proposed development, including stabilization and erosion control measures.

EXHIBIT E: SITE PLANS

Submit, as EXHIBIT E, **three** separate site plans showing what the site will look like when the project is completed. These drawings must each be drawn to the same scale, and must include an accurate overhead view of the entire project area, a typical road profile and a typical cross section of the proposed road or trail. The overhead view must also include the locations of any associated structures and facilities.

The **overhead view** (EXHIBIT E-1) should clearly show the proposed travel width of the road or trail, width of road shoulders, width of ditches, right of way width and center line of the road or trail.

The **cross section view** (EXHIBIT E-2) should show the road or trail travel surface, location and materials of original ground surface, depth and type of fill to be used, slopes, drainage ditches, and any other water control devices, and boundaries of the travel surface, shoulders and rights of ways.

The **road profile** (EXHIBIT E-3) should show the road or trail elevation, the elevation of the original ground surface, and the percent grade of slope of the final road from the center line of the entire length of road or trail.

All site plans should clearly identify the applicable scale and should include the applicant's name and mailing address. Do not use colors as they do not photocopy. If symbols are used in preparing your site plans, such plans must include a key to all symbols with such key located in the lower left corner of each plan.

EXHIBIT F: CLASS L SOIL SURVEY

Submit, as EXHIBIT F, a Class L soils survey properly conducted by a soil scientist in accordance with the Guidelines for Maine Certified Soil Scientists for Soil Identification and Mapping (Maine Association of Professional Soil Scientists, 2009) demonstrating that the proposed development will take place on soils which are suitable for all proposed road construction and associated structures and facilities.

Determination of soil suitability shall be based on the Natural Resources Conservation Service's soils potential rating for low density development. Soils with a low or very low development potential rating shall not be developed unless the MFS determines that adequate corrective measures will be used to overcome those limitations that resulted in a low or very low rating.

The MFS may waive one or more of the provisions of a Class L Soil Survey, including but not limited to the contour mapping requirement, where such provision is considered by the MFS unnecessary for its review.

EXHIBIT G: EROSION AND SEDIMENTATION CONTROL PLANS

Submit, as EXHIBIT G, a comprehensive drainage and erosion control plan which includes a construction schedule, construction methods and a sequence of construction activities, including reclamation of the project site. Such plan must also demonstrate that adequate provision will be made to control drainage, sedimentation and erosion before during and after road construction. This plan should show all existing and proposed on-site drainage and erosion control measures and sequences of installation, including any temporary facilities designed to convey water around, through or from the construction site. This comprehensive drainage and erosion control plan must incorporate soil types identified on the medium intensity mapping required as EXHIBIT F, and note any special provisions or considerations required based upon those soils types and conditions.

If you plan to install bridges, culverts or other methods of water crossings, either temporary or permanent, you must include calculations and factors used in determining the sizing of each of these facilities, and stabilization and erosion control measures to be undertaken both during and after construction. For crossings of major flowing waters or other water crossings which do not meet the Chapter 27 Standards, it may be necessary that you also complete a Bridge Construction Permit Application and submit it with this application. The MFS will review both as one application. You need only submit one application fee.

If you propose the use of temporary drainage facilities, you must provide a detailed description of those facilities, including the timing and sequence of their use, provisions for removal and stabilization and erosion control measures both during and after their use.

You must provide measures to be taken during road construction activities to assure that unreasonable sedimentation and erosion of exposed mineral soil and fill will not take place. You must also provide provisions for stabilization of cut and fill banks to avoid unreasonable slumping, washing or erosion of the banks.

You must also include a proposed program for the maintenance of all drainage, water crossing and erosion and sedimentation control facilities which will remain after road and water crossing construction has been completed and designation of a person who will be responsible for continued maintenance.

EXHIBIT H: BLASTING PLAN

If explosive devices will be used as part of the road construction project, you must submit, as EXHIBIT H, a blasting plan that meets the requirements under M.R.S.A 38, Chapter 3, Subsection 490-Z. This may include a pre-blast survey and will require that certain data be recorded for each blast.

EXHIBIT I: CONTRACT FOR ROAD OR TRAIL MAINTENANCE

If the road or trail will be dedicated to, or maintenance otherwise assumed by a government entity, you must submit, as EXHIBIT I, a letter from that entity confirming that the proposed development is designed in compliance with their standards (if applicable) and confirming the entity's capacity to provide the necessary maintenance.

EXHIBIT J: ENTRANCE PERMIT

If you are proposing to construct a road or trail entrance regarding a state or state-aid road, or if you are proposing to increase traffic volume or potentially create a safety or drainage concern, you must obtain a Driveway/Entrance Permit from the Maine Department of Transportation (MDOT) and submit it with your application. For more information, contact the regional MDOT office that serves your area or go to the Department's website at www.maine.gov/mdot. In addition, if a permit is required for new entrances off of County, Town or Plantation roads in your area, you must obtain this permit and submit it with your application. Please contact your County Commissioners' office or Town/Plantation office for information on what is required.

SUPPLEMENT S-3: REQUIREMENTS FOR WETLAND ALTERATIONS.

If you answer YES to either of the wetland questions (see question 7 of this application), you must submit this supplement with your MFS permit application. You may be required to hire a qualified professional to delineate wetlands within your project area. Contact the LUPC office that serves your area for additional information and to obtain a copy of this supplement or go to www.maine.gov/dacf.

Alteration means removing or displacing soil, sand, vegetation or other material; dredging; bulldozing; draining or dewatering; filling; or any other construction, repair or alteration of an permanent structure. P-WL Subdistricts (Wetlands) include lakes, ponds, rivers, streams, bogs, marshes, intertidal areas and other types of wetlands identified on LUPC's Land Use Guidance Map. Mapped wetlands usually show on the maps as three types: P-WL1, P-WL2, or P-WL3 subdistricts. However, small and intermittent streams are also considered P-WL subdistricts, even if they are not shown on LUPC's maps.

SUPPLEMENT S-4: REQUIREMENTS FOR DEVELOPMENT IN FLOOD PRONE AREAS.

If you answer YES to question 8 of this application, you must submit this supplement with your MFS permit application. You may be required to hire a qualified land surveyor, architect, or professional engineer to determine the elevation of your property or of a proposed or an existing structure. Contact the LUPC office that serves your area for additional information and to obtain a copy of this supplement or go to www.maine.gov/dacf.

Indicate whether your proposed activity will be located within a mapped P-FP (Flood Prone Area Protection) Subdistrict on the LURC Land Use Guidance Map, a mapped flood zone on a FEMA (Federal Emergency Management Agency) Flood Insurance Rate Map or Flood Hazard Boundary Map, or in an unmapped area prone to flooding. If you are unsure whether your property is in a mapped FEMA flood zone, first check whether your property is in one of these listed townships.

Aroostook	Benedicta Twp, Cary Plt, Connor Twp, Cross Lake Twp (T17 R5 WELS), Cyr Plt, Garfield Plt, Hamlin, Macwahoc Plt, St John Plt, Silver Ridge Twp, Sinclair Twp (T17 R4 WELS), Winterville Plt.
Franklin	Dallas Plt, Freeman Twp, Madrid Twp.
Hancock	T8 SD BPP (Fletcher's Landing).
Kennebec	Unity Twp.
Knox	Andrews Island.
Lincoln	Bristol.
Oxford	Milton Twp.
Penobscot	Argyle Twp, Carroll Plt, Greenfield Twp, Kingman Twp, Mount Chase, Prentiss Twp.
Piscataquis	Orneville Twp.
Somerset	Concord Twp, Pleasant Ridge Plt, Rockwood Strip Twp.
Washington	Baring, Brookton Twp, Edmunds Twp, Grand Lake Stream Plt, Lambert Lake Twp, Trescott Twp.

ROAD AND WATER CROSSING STANDARDS (Chapter 27, Section 5)

The following road and water crossing requirements shall apply in P-WL1, P-WL2, P-SL, P-FP, P-GP subdistricts and all development subdistricts: A permit is required to exceed these standards.

1. ROAD CONSTRUCTION AND MAINTENANCE: The following requirements shall apply to construction and maintenance of roads:

a. All cut or fill banks and areas of exposed mineral soil outside the roadbed within 75 feet of a flowing water, body of standing water, tidal water, or a wetland shall be re-vegetated or otherwise stabilized so as to prevent erosion and sedimentation of water bodies or wetlands;

b. Road banks shall have a slope no steeper than 2 horizontal to 1 vertical;

c. Drainage ditches shall be provided so as to effectively control water entering and leaving the road area. Such drainage ditches will be properly stabilized so that the potential for unreasonable erosion does not exist;

d. In order to prevent road surface drainage from directly entering water bodies or wetlands, road and their associated drainage, ditches shall be located, constructed, and maintained so as to provide an unscarified filter strip, of at least the width indicated to the right, between the exposed mineral soil of the road and the normal high water mark of a surface water body or upland edge of a wetland:

Average Slope of Land Between Exposed Mineral Soil and Normal High Water Mark (percent)	Width of Strip Between Exposed Mineral Soil and Normal High Water Mark (in feet along surface of the ground)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

Table 1. Unscarified filter strip width requirements for exposed mineral soil created by roads and their associated drainage ditches. This requirement shall not apply to road approaches to water crossings or wetlands.

e. Drainage ditches for roads approaching a water crossing or wetland shall be designed, constructed, and maintained to empty into an unscarified filter strip, of at least the width indicated in the table set forth above, between the outflow point of the ditch and the normal high water mark of the water or the upland edge of a wetland. Where such filter strip is impracticable, appropriate techniques shall be used to reasonably avoid sedimentation of the water body or wetland. Such techniques may include the installation of sump holes or settling basins, and/or the effective use of additional ditch relief culverts and ditch water turnouts placed so as to reasonably avoid sedimentation of the water body or wetland;

f. Ditch relief (cross drainage) culverts, drainage dips and water turnouts will be installed in a manner effective in getting drainage onto unscarified filter strips before the flow in the road or its drainage ditches gains sufficient volume or head to erode the road or ditch.

(1) Drainage dips may be used in place of ditch relief culverts only where the road grade is 10% or less;

(2) On roads having slopes greater than 10%, ditch relief culverts shall be placed across the road at approximately a 30 degree angle downslope from a line perpendicular to the center line of the road;

(3) Ditch relief culverts, drainage dips and water turnouts shall direct drainage onto unscarified filter strips as required in 1,d and e above;

(4) Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning, and their inlet and outlet ends shall be stabilized with appropriate materials; and

(5) Ditch relief culverts, drainage dips and associated water turnouts shall be spaced along the road at intervals no greater than indicated in the table to the right:

Road Grade (Percent)	Spacing (Feet)
0-2	500-300
3-5	250-180
6-10	167-140
11-15	136-127
16-20	125-120
21+	100

Table 2. Spacing requirements for drainage dips and associated water turnouts.

2. WATER CROSSINGS: The following requirements shall apply to water crossings when surface waters are unfrozen:

a. Bridges and culverts shall be installed and maintained to provide an opening sufficient in size and structure to accommodate 10 year frequency water flows or with a cross-sectional area at least equal to 2 ½ times the cross-sectional area of the stream channel.

b. Culvert and bridge sizes may be smaller than provided in 2,a above if techniques are employed such that in the event of culvert or bridge failure, the natural course of water flow is reasonably maintained and sedimentation of the water body is reasonably avoided; such techniques may include, but are not limited to, the effective use of any or all of the following:

(1) Removing culverts prior to the onset of frozen ground conditions;

(2) Using water bars in conjunction with culverts; or

(3) Using road dips in conjunction with culverts.

c. Culverts utilized in water crossings shall:

- (1) Be installed at or below stream bed elevation;
- (2) Be seated on firm ground;
- (3) Have soil compacted at least halfway up the side of the culvert;
- (4) Be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater; and
- (5) Have a headwall at the inlet end which is adequately stabilized by rip-rap or other suitable means to reasonably avoid erosion of material around the culvert.

3. DESIGN AND CONSTRUCTION OF LAND MANAGEMENT ROADS SYSTEM THROUGH WETLANDS

The design and construction of land management road systems through wetlands, other than those areas below the normal high water mark of standing or flowing waters, must avoid wetlands unless there are no reasonable alternatives, and must maintain the existing hydrology of wetlands. To maintain the existing hydrology of wetlands, road drainage designs shall provide cross drainage of the water on the surface and in the top 12 inches of soil in wetlands during both flooded and low water conditions so as to neither create permanent changes in wetland water levels nor alter wetland drainage patterns. This shall be accomplished through the incorporation of culverts or porous layers at appropriate levels in the road fill to pass water at its normal level through the road corridor. Where culverts or other cross-drainage structures are not used, all fills shall consist of free draining granular material. To accomplish the above, the following requirements apply:

a. Road construction on mineral soils or those with surface organic layers up to 4 feet in thickness.

- (1) Fill may be placed directly on the organic surface compressing or displacing the organic material until equilibrium is reached. With this method, culverts or other cross-drainage structures are used instead of porous layers to move surface and subsurface flows through the road fill material.
 - (a) For road construction on mineral soils or those with surface organic layers less than 16 inches in thickness, culverts or other cross-drainage structures shall be appropriately sized and placed at each end of each wetland crossing and at the lowest elevation on the road centerline with additional culverts at intermediate low points as necessary to provide adequate cross drainage. Culverts or other cross-drainage structures shall be placed at maximum intervals of 300 feet.
 - (b) For road construction on surface organic layers in excess of 16 inches but less than 4 feet in thickness, cross drainage must be provided by placing culverts at each end of each wetland crossing and at the lowest elevation on the road centerline with additional culverts at intermediate low points as necessary to provide adequate cross drainage. Culverts or other cross-drainage structures shall be placed at maximum 300-foot intervals. Culverts shall be a minimum of 24 inches in diameter, or the functional equivalent, and buried halfway below the soil surface.
 - (c) Where necessary to maintain existing water flows and levels in wetlands, ditches parallel to the road centerline shall be constructed along the toe of the fill to collect surface and subsurface water, carry it through the culvert(s) and redistribute it on the other side. Unditched breaks shall be left midway between culverts to prevent channelization.
- (2) Alternatively, a porous layer may be created to move surface and subsurface flows through the road fill materials. If a porous layer is used, geotextile fabric must be placed above and below fill material to increase the bearing strength of the road and to preserve the bearing strength of fill material by preventing contamination with fine soil particles.

b. Road construction on soils with organic layers in excess of 4 feet in thickness.

- (1) Such construction shall only take place under frozen ground conditions.
- (2) Geotextile fabric shall be placed directly on the soil surface. Road fill or log corduroy shall then be placed on the geotextile fabric.
- (3) Cross drainage shall be provided by either a continuous porous layer or appropriate placement of culverts or other cross-drainage structures and ditching as specified below:
 - (a) A continuous porous layer or layers shall be constructed by placement of one or more layers of wood corduroy and/or large stone or chunkwood separated from adjacent fill layers by geotextile fabric placed above and below the porous layer(s) such that continuous cross drainage is provided in the top 12 inches of the organic layer; or
 - (b) Cross drainage culverts or other cross-drainage structures shall be placed at points where they will receive the greatest support. Culverts or other cross drainage structures shall be a minimum of 24 inches in diameter, or the functional equivalent, and buried halfway below the soil surface. Where necessary to maintain existing water flows and levels in wetlands, ditches parallel to the roadbed on both sides shall be used to collect surface and subsurface water, carry it through the culvert(s) and redistribute it on the other side. Such ditches shall be located three times the depth of the organic layer from the edge of the road fill. Unditched breaks shall be left midway between culverts to prevent channelization.

OTHER ASSOCIATED STANDARDS

- 4. Ditches, culverts, bridges, dips, water turnouts and other water control installations associated with roads shall be maintained on a regular basis to assure effective functioning.
- 5. Maintenance of the above required water control installations shall continue until the road is discontinued and put to bed by taking the following actions:
 - a. Water bars shall:

(1) Be constructed and maintained across the road at intervals established below:

Road Grade	Distance Between Water Bars
(Percent)	(Feet)
0-2	250
3-5	200-135
6-10	100-80
11-15	80-60
16-20	60-45
21+	40

Table 3. Spacing requirements for water bars.

- (2) Be constructed at approximately 30 degrees downslope from the line perpendicular to the center line of the road;
- (3) Be constructed so as to reasonably avoid surface water flowing over or under the water bar; and
- (4) Extend sufficient distance beyond the traveled way so that water does not reenter the road surface.
- b. Any bridge or water crossing culvert in such road shall satisfy one of the following requirements:
 - (1) It shall be designed to provide an opening sufficient in size and structure to accommodate 25 year frequency water flows;
 - (2) It shall be designed to provide an opening with a cross-sectional area at least 3½ times the cross-sectional area of the stream channel; or
 - (3) It shall be dismantled and removed in a fashion so as to reasonably avoid sedimentation of the water body.
- 6. Provided they are properly applied and used for circumstances for which they are designed, methods including but not limited to the following are acceptable to the MFS as means of calculating the 10 and 25 year frequency water flows and thereby determining crossing sizes as required in Chapter 27, Section 5(E)(4) and (7):
 - a. The USDA Soil Conservation Service (SCS) Methods; specifically: "Urban Hydrology for Small Watersheds," June 1986 Soil Conservation Service Technical Release #55.
 - b. The United States Geological Survey Series; specifically: U.S.G.S. Maine Water Science Office. 1999. "Estimating the Magnitude of Peak Flows for Streams in Maine for Selected Recurrence Intervals." WRI 99-4008.
- 7. Extension, enlargement or resumption of use of presently existing roads, which are not in conformity with the Chapter 27 rules, Section 5 may be allowed upon issuance of a permit provided that such types of activities are allowed in the subdistrict involved (see Section 5,(E)(10).
- 8. Except that Chapter 27, Section 5, (9) below always applies, trail crossings of minor flowing waters shall be exempt from the standards of Section 5, provided such crossings are constructed in a manner that causes no disturbance to the stream bed, and no substantial disturbance to the banks or shoreland areas in the vicinity of the crossing, and provided such crossings do not impede the flow of water or the passage of fish. If properly undertaken, acceptable methods may include but not be limited to the laying of logs from bank to bank, or placement of bed logs and stringers with decking. This exemption shall not extend to the construction of abutments or piers. Trail crossings not so exempted shall be subject to the water crossing standards of Chapter 27.
- 9. In addition to the foregoing minimum requirements, provision shall otherwise be made in the construction and maintenance of roads and water crossings in order to reasonably avoid sedimentation of surface waters.
- 10. Written notice of all road and water crossing construction activities as provided in Chapter 27 shall be given to the MFS prior to the commencement of such activities. Such notice shall conform to the requirements of Chapter 27 and shall state the manner in which the water crossing size requirements of this section will be satisfied.