



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY

PAUL R. LEPAGE
GOVERNOR

22 STATE HOUSE STATION
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WALTER E. WHITCOMB
COMMISSIONER

Teresa S. Pierce, Chair, Town Council
Samuel Rudman, Chair, Long Range Planning Advisory Committee
Town of Falmouth
271 Falmouth Road
Falmouth, ME 04105

February 7, 2014

Dear Ms. Pierce and Mr. Rudman;

Congratulations! We are happy to inform you that the Department of Agriculture, Conservation & Forestry finds the 2013 Falmouth Comprehensive Plan, revised 2/7/2014, to be **complete** and **consistent** with Maine's Growth Management Act. Thanks to the hard work of the Long Range Planning Advisory Committee, its Town Council liaisons, the Director of Long Range Planning, other municipal officials and involved citizens, this excellent plan will provide important guidance to the Town's decision-makers for years to come.

Upon accepting your plan for review, we solicited comments from relevant state agencies, neighboring towns and your regional planning organization. We subsequently received comments from the Department of Environmental Protection, Department of Inland Fisheries & Wildlife, Department of Agriculture, Conservation & Forestry (Maine Forest Service), and Department of Transportation. Those written comments are attached to this letter.

Much to their credit, Long Range Planning Director, Theo Holtwijk, and others involved in the review process have treated each agency comment and suggestion as an opportunity to improve and clarify the Plan. In our consistency findings, we often urge towns to consider amending their plans to reflect suggestions offered in the agency comments. In this case, however, there is no need for such encouragement. The proposed revisions submitted in response to the comments effectively address not only the substantive issues, but the agency suggestions, as well.

Again, please accept our congratulations and don't hesitate to contact me with any questions you may have going forward.

Sincere Best Wishes,

Phil Carey
Senior Planner
Municipal Planning Assistance Program

Cc (via email): Elizabeth Hertz, Director, DACF Municipal Planning Assistance Program
Nathan Poore, Falmouth Town Manager
Theo Holtwijk, Falmouth Director of Long Range Planning
Rebecca Schaffner, Greater Portland Council of Governments



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

To: Phil Carey, Maine Department of Agriculture, Conservation and Forestry
From: Wendy Garland, Division of Environmental Assessment, Maine DEP
Re: Falmouth Comprehensive Plan
Date: December 27, 2013

As requested, I have reviewed the Natural Resources and Marine Resources sections of Falmouth's Comprehensive Plan. Comments and findings are presented below. Please feel free to contact me directly at 615-2451 or wendy.garland@maine.gov if you have additional questions or would like more information.

Appropriate use of data provided by the DEP Division of Environmental Assessment

- The Town's Comprehensive Plan includes lake, river and stream identification and descriptions. This information is used appropriately for the most part. However, there were several inaccuracies in Appendix 4. The correct information is provided below and should be incorporated in the plan.
- DEP (not EPA) conducts water quality monitoring in Falmouth. Note that DEP monitoring has not been conducted on all surface waters. Monitoring that has been conducted is only done so periodically. The plan's wording might lead readers to believe that DEP has a much stronger presence than resources currently permit.
- In addition to DEP monitoring, water quality monitoring is also conducted by the Highland Lake Association (HLA) and Presumpscot River Watch (PRW). Both groups should be mentioned in the plan. HLA conducts bi-weekly water quality monitoring on Highland Lake from May through September. PRW is a volunteer organization that was formed in 1989 to conduct monitoring along the Presumpscot River and its tributaries. PRW currently monitors three stations in Falmouth including one on the Presumpscot River, one on the East Branch Piscataqua River and one on the Piscataqua River. FMI:
www.maine.gov/dep/water/monitoring/rivers_and_streams/vrmp/reports/2012/PRW_2012_Report.pdf
- There are some inaccuracies associated with the description of Highland Lake's past impairment and restoration. Highland Lake was removed from the 'impaired' list, not the 'at risk' list. Also, the Highland Lake Conservation Corps is no longer active in the watershed. The following edits might clarify the opening sentence of this paragraph: *"In the 1980s and 1990s, Highland Lake's water quality ~~has been had steadily decreased~~ due to nonpoint source pollution from roads, driveways, and lawns. In 1990, the DEP listed Highland Lake as impaired (Category 5) due to the ~~se-increased phosphorous and sediment levels,~~ reduced water clarity trend and dissolved oxygen levels are threatening the water quality".*

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How the plan's policies and implementation strategies promote the State goals relating to DEP's principal objectives and directives

- The Town's Comprehensive Plan's policies and implementation strategies appear to promote the State goals relating to DEP's principal objectives and directives.
- The Plan includes a strategy to review and strengthen ordinances to protect wetlands. The town might also consider extending Shoreland Zoning to provide at least minimal protection of 1st order streams. Forested riparian areas provide many benefits including providing shade to keep streams cool, bank stability, food sources and filtering stormwater runoff. Shoreland zoning typically provides protection for 2nd order and higher streams. This added protection for first order streams would be especially important in the areas zoned for high-density or commercial development.

Consistency of plan with DEP's programs and policies; Measures DEP recommends the Town take to ensure its plan addresses and identifies deficiencies and inconsistencies

Falmouth's Comprehensive Plan is consistent with the DEP Division of Environmental Assessment's programs and policies. The main deficiencies are noted above.

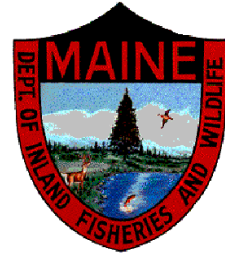


Maine Department of Inland

Fisheries and Wildlife

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Paul LePage, Governor

Chandler Woodcock,
Commissioner

Date: December 2013
To: Phil Carey
From: Bethany Atkins
Re: Towns of Falmouth Comprehensive Plan Review

On behalf of the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Beginning with Habitat program (BwH), and the Maine Natural Areas Program (MNAP), we have reviewed the Town of the Falmouth's Comprehensive Plan and have provided the following comments.

As you are aware, MDIFW's mission is focused on the protection and enhancement of the State's freshwater fisheries and wildlife. MNAP has a commitment to conserving lands in Maine that support rare, threatened, and endangered plants and animals, and rare or exemplary natural communities. The BwH program provides objective and comprehensive habitat information to equip local decision-makers with the necessary tools to make informed and responsible land use decisions that mesh wildlife habitat conservation with future town growth needs. The comments submitted below are based on the Dept. of Agriculture, Conservation, and Forestry instructions for agency commentors.

Please feel free to contact me should you have any questions regarding this information.

- **Appropriate use of data provided by MDIFW & MNAP**

The wildlife inventory and analysis included in this document could better reflect the diverse and unique assemblage of plants and wildlife found in Falmouth. Although some MDIFW and MNAP data has been incorporated within the Natural Resources inventory, the plan lacks a comprehensive inventory of rare plants and animals, significant fisheries, and Significant and Essential Habitats. We recommend that the Natural Resources inventory be revised to better reflect the very rich complement of plant and wildlife resources. Specific comments regarding opportunities to improve the plant and wildlife data are provided below.

Data depicting high value plant and wildlife habitats and critical natural resources is available to all Maine towns through the Beginning with Habitat program. Data is regularly updated and we encourage the town of Falmouth to request information often in the future to ensure that land use decisions are based on the best available.

Relation of plan's policies and implementation strategies to MDIFW & MNAP principal objectives and directives

As mentioned below, Falmouth has developed and implemented a good program for natural resource conservation within their community and this plan proposes several improvements as well as additional strategies that will further natural resource conservation efforts. In some cases, however, proposed growth areas intersect with significant natural resource features. With the lack of information included within the Natural Resource inventory it is difficult to determine if these features were considered while delineating the boundaries of the growth zones. We recommend the town assess these zones and clearly address how they intend to protect the significant natural features present. Additionally, we recommend that the town of Falmouth better address public access to surface water needs within the community. Please see below for specific recommendations.

- **Consistency of plan with MDIFW & MNAP programs and policies**

With the below recommendations addressed, we feel the proposed policies and strategies and Future Land Use Plan are consistent with MDIFW and MNAP programs and policies.

Specific plan comments and recommendations are provided below. Comments provided by Jim Pellerin, and Bethany Atkins, MDIFW and Don Cameron, MNAP.

Volume I: The Plan

Falmouth has developed and implemented a good program for natural resource conservation within their community and this plan proposes several improvements as well as additional strategies, to further natural resource conservation efforts within the community. Information related to fisheries, rare plant and wildlife species, and Significant Wildlife Habitats, however, was not thoroughly included within the plan inventory nor depicted on maps. In some cases, proposed growth areas intersect with these features. We recommend the town obtain current information related to important wildlife habitats (available through Beginning with Habitat), potentially reassess the locations of growth areas based on available information, and clearly address how these species and habitats will be maintained within the growth zones.

Volume II: Inventory, Appendix 4

Transportation p. 41-49

In the Transportation section of the plan, we encourage the Town of Falmouth to include information on how roads and transportation facilities can affect wildlife and to identify local strategies for maintaining habitat connections. Roads can be a hazard and barrier for terrestrial wildlife species moving across the land and to aquatic species traveling up and down streams. Wildlife need to be able to freely move across the landscape and through the waterways to find food, find a mate, access different habitats, and to adapt to range shifts as a result of a changing climate. Town road maintenance and construction projects (ie. culverts) often inadvertently impede fish (beyond just the diadromous species noted in the Marine Resources section) and wildlife passage. For more information on the effects of roads on wildlife visit: http://www.maine.gov/doc/mfs/fpm/water/docs/stream_crossing_2008/MaineStreamCrossingsPoster.pdf and http://www.beginningwithhabitat.org/pdf/Conserving_Wildlife_in_MDL.pdf and for additional recommendations on culvert design, see the attached comments provided by Jim Pellerin, MDIFW Regional Fisheries Biologist.

Natural Resources p. 71-85

Falmouth supports a rich assemblage of plants and wildlife, including important fisheries, several rare species, rare/exemplary natural communities, and Significant and Essential Wildlife Habitats. The town has implemented, and this plan also proposes, several successful and appropriate strategies for conserving these species and habitats.

We feel, however, that the wildlife inventory and analysis included in this document could better reflect the diverse and unique assemblage of plants and wildlife found in Falmouth. Clearly identifying some of the species and habitats found within the town, describing their importance to the community, and defining protection strategies can help to bring awareness to town citizens and support the land use strategies proposed. We suggest the town revise the natural resources section of their plan to better document the rare plants and animals, the Significant and Essential habitats, and the important fisheries documented within Falmouth. For example:

- Endangered, Threatened, and Special Concern Species documented in Falmouth include: Eastern box turtle (Endangered), New England cottontail (Endangered), wood turtle (Special Concern), least bittern (Endangered), bald eagle (Special Concern), spotted turtle (Threatened), and roseate tern (Endangered). Endangered and Threatened species are protected from Take and Harassment under the Maine Endangered Species Act (MESA).

Additionally, because it supports nesting roseate terns, Clapboard Island Ledge is designated as Essential Habitat. For more information about these species or about the MESA and Essential Habitat, visit:

http://www.maine.gov/ifw/wildlife/endangered/listed_species_me.htm.

- The town supports Deer Wintering Areas, Inland and Tidal Wading Bird and Waterfowl Habitat, Shorebird Areas, Seabird Nesting Islands, and Significant Vernal Pools, all habitats designated as Significant Wildlife Habitat under the Natural Resources Protection Act (NRPA). For more information about these habitats and NRPA, visit: <http://www.maine.gov/dep/land/nrpa/index.html>.
- Eight rare plant species have been documented in Falmouth as well as two rare/exemplary natural community types. The below table provides an up-to-date list of significant plant features:

Common Name	Scientific Name	EO Rank(s)	S-Rank	State Status
Calystegia spithamea	Upright bindweed	E	S2	Threatened
Carex polymorpha	Variable sedge	B / C / CD	S1	Endangered
Eupatorium fistulosum ¹	Hollow Joe-pye weed	B	S2	Species of Concern
Enriched northern hardwood forest ¹	Maple - basswood - ash forest natural community	CD	S3	N/A
Ilex laevigata	Smooth winterberry	D	S3	Species of Concern
Lonicera dioica ¹	Mountain honeysuckle	CD / E	S2	Endangered
Lycopodiella alopecuroides	Foxtail bog-clubmoss	C	S1	Endangered
Phegopteris hexagonoptera ¹	Broad beech-fern	B	S2	Species of Concern
Potamogeton pulcher	Spotted pondweed	E	S1	Threatened
Upper floodplain hardwood forest ¹	Hardwood river terrace forest natural community	C	S3	N/A

*source Maine Natural Areas Program, for rank and state status explanations go to

<http://www.maine.gov/dacf/mnap/features/rank.htm>

¹Features are wholly or mostly on conserved lands

- The plan provides some discussion of surface waters, however, should also include additional information about the town's inland fishery resources as well as public access to these resources. Please see the attached letter from Jim Pellerin, MDIFW Regional Fisheries Biologist, regarding fisheries data and suggestions for plan improvement.

Information regarding the locations of rare species and important habitats is available through Beginning with Habitat.

Recreation and Open Space p 85-93

Please see attached comments provided by Jim Pellerin regarding suggestions for addressing public access to surface waters in Falmouth.

Additionally, the town should be aware that the Presumpscot Region Watershed Coalition recently completed a regional vision for land conservation that includes Falmouth. There is potential opportunity for partnership on conservation projects within Falmouth that fit into the regional conservation vision as well.

Volume II: Maps

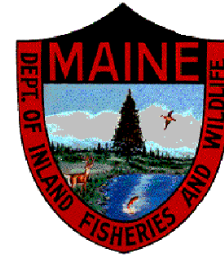
Natural Resources Map:

The Natural Resources Map appears to show wetlands, Significant Wildlife Habitats, and undeveloped blocks. For a more complete view of natural resources in the community, this map should also depict locations of rare plant and wildlife species and rare/exemplary natural communities. Additionally, it would be helpful to distinguish between Significant Wildlife Habitats (wading bird/waterfowl habitats, deer wintering areas, shorebird areas, significant vernal pools, etc.).



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Paul LePage, Governor

Chandler Woodcock,
Commissioner

November 19, 2013

TO: Bethany Atkins - MDIFW

FROM: James Pellerin - MDIFW Fisheries

SUBJ: Falmouth Comprehensive Plan – MDIFW Fisheries Review

Bethany,

The Fisheries Division of MDIFW has completed its review of Falmouth's comprehensive town growth plan and we offer the following comments. The comments provided below identify key issues of importance with regard to ensuring consistency with MDIFW fisheries management programs.

I. Protection and Enhancement of Fisheries and Fisheries Habitat

The plan appears to adequately address many fishery and fishery habitat protection issues; however, some additional focus is needed in a few areas. Although not all the streams in Falmouth have been inventoried by MDIFW, several still support wild brook trout populations. Additional protection should be considered to protect these significant natural resources when reviewing proposed "development" projects. Brook trout habitat is vulnerable to a host of land-based activities, which often leads to a loss of riparian habitat. We typically request 100 foot undisturbed buffers along both sides of any stream or stream-associated wetlands. Buffers should be measured from the upland wetland edge of stream-associated wetlands, and if the natural vegetation has been previously altered then restoration may be warranted¹. Protection of riparian areas diminishes erosion/sedimentation problems; reduces thermal impacts; maintains water quality; and supplies leaf litter/woody debris (energy & habitat) for the system. Protection of these important riparian functions insures that the overall health of the stream habitat is maintained. In addition, smaller headwater and lower order streams are often effected the greatest by development and these systems benefit the most from adequately sized, vegetated buffers.

Based on MDIFW surveys around the region, many Town road maintenance and construction projects also often inadvertently impede passage at stream crossings. The plan should identify the need for and adopt stream-crossing practices (i.e., culvert installation/maintenance), which do not impede fish passage as required by the Natural Resources Protection Act². Falmouth's 2013 Plan is one of the first that has specifically recognized this issue (see pg 64 and elsewhere). Refer to guidelines attached to this document. In addition, the Army Corp of Engineers has

adopted regulations regarding stream crossings that potentially affect municipal road maintenance programs.

II. Public Access:

The Town of Falmouth contains a portion of only one Great Pond, Highland Lake. In addition, the Town contains two larger streams (Presumpscot River, Piscatiqua River), as well as, several smaller water bodies that support wild trout fisheries. The Town's plan should certainly cover existing and planned public access initiatives regarding Highland Lake, the Presumpscot River, and the Piscatiqua. Public access to these water resources and their associated fisheries is an important State and Department goal^{3,4,5}.

The plan currently fails to identify and describe existing public access opportunities to the primary surface waters noted above, lacks a discussion of any deficiencies, and does not provide an adequate strategy for improvements and/or the development of new access opportunities. A few comments and additional information: (1) the plan should better describe the public access opportunities to Highland Lake including ownership, facilities, and type of launch (i.e. gravel, carry-in), as well as, any deficiencies. For example, public access to Highland Lake via Falmouth was recently deemed inequitable by MDIFW, which by policy had to cancel its longstanding and popular coldwater stocking programs for the lake. (2) Describe available carry-on access to Presumpscot R such as the one located at the Portland/Westbrook and Portland/Falmouth lines, and others or the need for others to access the lower river segment. (3) To our knowledge most access to the Piscatiqua are via Town/State road crossings and permissive trespass. (4) The plan states, "Maintain existing access points to water bodies for boating, fishing, and swimming, balancing access with the concerns of neighbors." The statement suggests no access deficiencies or improvement needs exist for surface waters within the Town.

There is a public need to provide safe angler access to all Town waters that support recreational and commercial fisheries, as well as, other recreational uses. The Town plan should adopt language that reflects State and MDIFW goals^{3,4,5}, and access development needs to be consistent with those goals. For example, public access to public waters must never be limited to Town residents only, as such action would jeopardize existing MDIFW stocking and management programs⁶, and is inconsistent with MDIFW and State public access goals. The plan states, "Promote and protect the availability of outdoor recreation opportunities for all Falmouth citizens, including access to surface waters." This is inconsistent with State and Department goals.

Open space is being used more and more by Towns to provide recreational opportunities and access. This is a good idea, particularly when public resources (i.e. lakes, rivers, and streams) are located within or adjacent to the designated open space areas. However, the Town should be sure that such areas are open to all Maine citizens and not just residents of the development. The plan includes numerous statements regarding, the use of open space areas and/or Town lands; however, the language usually includes the wording for Falmouth residents or Falmouth citizens.

In adopting measures to address land use and development issues, it is imperative that language and measures not be adopted, which could preclude efforts by the Town, MDIFW, or other State agencies from developing public access to public waters of the State, which would be inconsistent with State and MDIFW goals^{3,4,5}. For example, in discussing allowable uses/structures within the various use districts, including protection/conservation districts, it is important no restrictions be imposed that would prevent reasonable attainment of Town and MDIFW public access goals. Also, land use zoning ordinances and practices designed to protect water quality should not be so strict so as to impede the development of public access opportunities. These measures could severely limit or eliminate good access prospects on

heavily developed lakes and ponds. An “exemption” for public access projects should be adopted for projects, which are consistent with Town, State, and MDIFW public access goals. This measure will ensure consistency while foregoing the need to undertake a very detailed and comprehensive review of all plan provisions, including their implications.

III. Significant Habitats and Fisheries

Although the plan provides some discussion of surface waters, it appears to lack any specific information/discussion of freshwater fishery resources (Inventory/Analysis Section under Natural Resources) as required by the MSPO⁷, which is presumably due to a lack of data availability.

I have provided additional fishery resource data that may be useful for prioritizing public access needs/improvements, identifying significant fisheries habitats for protection, and for addressing other Town planning needs. For example:

- See lake information (attached) for a more thorough description of fishery resources present in the Town, which could be incorporated into the plan where appropriate. Note that coldwater fishery resources for landlocked salmon, brown trout, and/or brook trout will no longer exist within Highland Lake due to the recent cancellation of the State stocking program.
- Streams that support wild brook trout populations (see attached list) should be included as high value or critical fish/wildlife habitat for the map provided on page 6-9 of the plan.

IV. Other miscellaneous Items

- On page 92, the plan states, “Preserve natural open space and allow for passive recreational uses.” The wording passive recreation precludes traditional outdoor activities like hunting and fishing and I do not believe this was the intent as the term active/ passive and hunting/fishing are used elsewhere in the plan.
- On page 10 the plan states, Revise the Town's subdivision and site plan review regulations to establish standards for the quality of stormwater runoff especially in areas that are directly tributary to marine habitats. Inland water resources as just as important, and potentially exhibit a greater from stormwater than marine habitats?
- On page 65 the plan covers the issue of invasive plants; however, the plan should probably include a broader focus of invasives than just plants. For example, invasive aquatic organisms such as fish, mollusks, etc. have proven to be quite devastating and costly.

Please call me if I can be of any further assistance (657-2345, ext. 111).

Sincerely,

James Pellerin
Fishery Biologist, MDIFW

Attachments: References/Supportive Documentation, Stream Crossing Guidelines, Map of Trout Streams, Stream Miles, and Lake Fisheries Data

References/Supportive Documentation

¹ MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE, FISHERIES MANAGEMENT REGION “A”, DRAFT STANDARD ENVIRONMENTAL REVIEW RECOMMENDATIONS, (July 28, 2004)

Riparian Buffers Along Steams

Streams are vulnerable to environmental impacts associated with increased development and encroachment. Any planned development should be sensitive to this resource issue by including provisions for riparian buffers and minimizing any other potential stream impacts. One-hundred-foot undisturbed, naturally vegetated buffers should be established along both sides of any stream or stream-associated wetlands. Buffers should be measured from the upland wetland edge of stream-associated wetlands, and if the natural vegetation has been previously altered then restoration may be warranted. In some cases where large, extensive forested wetlands are associated with streams 100 foot buffers may be adequate, particularly if a functional analysis reveals that the wetlands are not likely to perform an important groundwater discharge role in maintaining the quality and quantity of stream flows. The requested 100 foot vegetated buffer reduces erosion/sedimentation problems; reduces thermal impacts; maintains water quality; supplies leaf litter and woody debris for the system; and provides valuable wildlife habitat and travel corridors.

Protection of these important riparian functions insures that the overall health of the stream habitat is maintained. One-hundred-foot buffers should be established along all streams regardless of the fisheries present, although the presence of wild brook trout within the watershed certainly increases the potential extent of fisheries impacts. In addition, generally it is the smaller headwater and lower order streams that are effected the greatest by development and these systems benefit the most from vegetated buffers.

Region A Fisheries will rely on MDEP to review project applications for the adequacy of wetland functional assessments and the adequacy of proposed stream buffers, which should be reviewed based upon the aforementioned guidance.

² MDEP, Natural Resources Protection Act, 38 M.R.S.A SS.480-A to 480-Z, Statute, revised 4/3/2002

SS. 480-Q. Activities for which a permit is not required... 2. Maintenance and repair... “B. Crossings do not block fish passages in water courses;”

2-A. Existing road culverts...”and that the crossing does not block fish passage in the water course.”

³ MSPO, Comprehensive Planning: A manual for Maine’s communities.

“State Goal: To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

⁴ Strategic Plan for Providing Public Access to Maine Waters for Boating and Fishing, MDOC & MDIFW, March 1995.

“Boating and Fishing Access Goal – The primary, long term goal of state fishing and boating access programs is to ensure legal, appropriate, adequate, and equitable means of public access to waters where recreational opportunities exist.”

⁵ MDIFW, Administrative Policy Regarding Fisheries Management, 12/2002

“The purpose of the Department’s Access Program is to ensure that the public is able to gain access to Maine’s public waters and to the fisheries within them. By law, all great ponds belong

to the people of Maine. Private land ownership may limit access to great ponds. Fishing opportunity is directly linked to the public's ability to get to the waters to fish, so acquiring publicly-owned private points of access is critical, especially in areas where heavy development or restrictive private access already limits legal access by the public to the lake or pond.

It is also important to provide legal public access to flowing waters, although there is no parallel legal right to use flowing waters. Such acquisitions must, therefore, include enough land to allow access to stretches of the river or stream.”

⁶ MDIFW, Administrative Policy Regarding Fisheries Management, 12/2002

“ The Department will not stock waters without reasonable, legal public access, since stocking programs are to benefit the general fishing public, and not only the people that own land around a lake, pond, river or stream.”

⁷ MSPO, Comprehensive Planning: A manual for Maine's communities.

“Legislative requirement: The act requires that each comprehensive plan include an inventory and analysis of: Significant or critical natural resources, such as wetlands, wildlife and fisheries habitats...”

Stream Crossing Guidelines

A good reference for information on fish passage at stream crossings may be found in the Maine Department of Transportation Fish Passage Policy and Design Guide. The following recommendations reduce the potential for culvert installations to create impediments to fish passage for most resident stream fish typically found in Fisheries Management Region A. These recommendations apply to circular culverts installed in streams.

- Do not install hanging culverts.
- Install the largest culvert possible, preferably at least 1.2x the bankfull width. 1.2x the bankfull is now required in certain circumstances.
- Culvert installation should occur between July 1 and October 1.
- Culvert invert (downstream bottom end of the culvert) should be installed below streambed elevation; 6 inches deep for culverts less than 48 inches in diameter and 12 inches deep for larger culverts.
- Installation should not exceed the existing natural gradient.
- Use corrugated steel/aluminum culverts with the largest available corrugations. Smooth concrete and corrugated plastic culverts should only be used in very low gradient areas where water backs up the entire length of the pipe. In addition, polyethylene slip liners and smooth bore plastic culverts are becoming more popular for new or replacement installations due their longevity and low cost; however, they are creating serious fish passage problems around the State. A review of flow capacity specifications for Snap-Tite, a local distributor of slip liner technology, reveals that in all applications where smaller diameter Snap-Tite Solid liners are installed in existing corrugated metal pipes (CMP) flow capacities are increased, even though effective pipe size is decreased. For example, when a 28-inch (26 inch inside diameter) solid liner is installed in a 30 inch (inside diameter) CMP the new liner provides 187% of the original capacity provided by the metal pipe. The increase in capacity results from the smooth walls and nonwetting characteristic of polyethylene, which reduce friction within the pipe. The increased velocities that result from slip liner and smooth bore polyethylene culverts usually far exceed that which can be negotiated by most fish typically occurring in Maine streams, which typically ranges between 1 and 2 feet per second. Furthermore slip liner projects effectively increase the invert elevation, creating a hydraulic drop at the outlet, which creates an additional obstacle to fish passage. Increased flow velocities within the pipe also increase downstream scour, which can lead to degradation of the outlet plunge pool, important staging habitat for fish attempting to pass through culverts. Resulting erosion can also create "head cuts" or nick points that cause additional scouring of the stream channel and associated habitat degradation. Impediments and barriers to fish passage will generally be created using slip liners and smooth bore culverts, except under the following conditions:

- 1) In drainage ditches or similar circumstances where water is not being conveyed in a jurisdictional stream channel;
- 2) In streams where there are no fish present and where the presence of natural/artificial barriers prevent seasonal use by fish species lower in the drainage;
- 3) In very low gradient settings where water backs up the entire length of the pipe, and where the water depth at the inlet end of the liner/culvert is at least 4-6 inches deep at low flows.
- 4) Where a permanent, natural barrier is located upstream/downstream within 150 feet of the stream crossing. A permanent/natural barrier is defined as a vertical drop of at least

4 feet over a rock/ledge substrate, as measured during summer low flows. Beaver dams would not be considered a permanent impassable barrier.

- Culverts should be installed so as to provide a minimum water depth of 4-inches within the culvert during critical, seasonal movement/migration periods (spawning, summer refugia, etc.), which will vary by species. This minimum water depth is needed to provide passage opportunities for smaller fish that dominate the streams in Region A. MDOT's Fish Passage Policy and Design Guide provides information on movement periods.
- Flow velocities within the culvert should not exceed 1 and 2 feet per second during critical, seasonal movement/migration periods (spawning, summer refugia, etc.), which will vary by species. These low flows velocities are needed to provide passage opportunities for smaller fish that dominate the streams in Region A. The aforementioned flows should not be exceeded more than 50% of the time during periods of movement. MDOT's Fish Passage Policy and Design Guide provides information on movement periods and how to evaluate this standard.
- Two offset culverts may be used, such that one pipe provides passage conditions during low flow periods and the other is installed to pass design peak flows. An experienced engineer should design multiple culvert installations.
- Efforts to mitigate for fish passage problems (e.g., fish ladder, tailwater control, baffles, etc.) should always be coordinated through MDIFW.

----- TOWN NAME=FALMOUTH -----

STREAM	MILES OF STREAM IN TOWN	
PRESUMPCOT R	3.80000	Stocked BNT/BKT/LLS in upstream Towns; occasional wild salmonids
UNNAMED B	0.50000	
SCITTERYGUSSET C	1.30000	
PISCATAQUA R	6.10000	Stocked BKT/BNT; wild BKT in headwaters/tribs
PISCATAQUA R (EAST BRANCH)	3.80000	Possibly wild BKT in headwaters
MILL B	0.00000	
UNNAMED B	1.50000	
HOBBS BROOK	0.50000	Wild BKT
UNNAMED P OUTLET	0.40000	Wild BKT
MEADER B	2.00000	Wild BKT
MINNOW B	0.10000	Wild BKT reported
MILL B	0.00000	
MILL C	2.70000	
UNNAMED B	0.80000	
NORTON B	1.00000	Wild BKT reported
CHENERY B	1.20000	

COMPREHENSIVE PLANNING DOCUMENT

FOR THE TOWN OF: FALMOUTH

LAKE NAME: HIGHLAND (DUCK) L

ACRES: 634

FISHERIES INFORMATION:

PRINCIPAL FISHERIES =====	TYPE =====	STOCKING HISTORY =====	MANAGEMENT CATEGORY =====	FISHERIES COMMENTS =====
LANDLOCKED SALMON	COLDWATER	ACTIVE-Canceled		
BROWN TROUT	COLDWATER	ACTIVE-Canceled		
WHITE PERCH	WARMWATER	NO RECORD		
CHAIN PICKEREL	WARMWATER	NO RECORD		
LARGEMOUTH BASS	WARMWATER	LEGAL TRANSFER		
SMALLMOUTH BASS	WARMWATER	NO RECORD		

ACCESS INFORMATION:

RIGHT OF WAY =====	FEE ACCESS =====	NUMBER OF LAUNCH SITES =====	ACCESS TYPE =====	OWNER =====	ACCESS COMMENTS =====
YES		.			

UNIQUE OR OUTSTANDING RESOURCES:

COMMENTS: Stockings canceled 2012 due to inequitable access.

From: Atkins, Bethany
Sent: Tuesday, February 04, 2014 10:27 AM
To: Carey, Phil
Subject: RE: Falmouth Comprehensive Plan Revisions

Hi Phil-

Thanks for the opportunity. The town did a great job of incorporating our concerns. We really appreciate their taking the time. Just a few additional comments to offer that shouldn't effect a finding of completeness or consistency:

- On Pg. 27 of Volume 1_ComprehensivePlan_20140121_Revisions, approximate percentages of the combined critical natural resources located within rural, residential and commercial areas and within publically owned lands are provided. We are not entirely sure how these percentages were calculated, but, depending on the data used, they may not provide an adequate representation. For example, polygons depicted for some of the rare animal species provided in data distributed by BwH reflect a habitat consultation zone, rather than an accurate extent of habitat.
- From Jim Pellerin: On page 79 Volume II... "Coldwater fishery resources within Highland Lake for landlocked salmon, brown trout, and/or brook trout, which have been popular and longstanding, are expected to be reduced (and may not exist in the future) due to a recent cancellation of the State's stocking program. This cancellation followed a finding by IFW, per its policy, that public access to Highland Lake via Falmouth was deemed "inequitable." The Town had a concern that boat access ramp improvements proposed by the State would increase the number and size of boats using Highland Lake beyond the carrying capacity of the lake." This section discusses the fish and wildlife resources of the lake and should include principal warmwater fisheries, as well as, coldwater. Additionally, while the last statement may reflect the Town's opinion, it contradicts State and Department public access goals and management of this public resource falls under Department jurisdiction.

Thanks and let me know if you have any questions.
Bethany

From: Carey, Phil
Sent: Monday, February 03, 2014 11:45 AM
To: Atkins, Bethany; Santerre, Jan; Pellerin, James; Garland, Wendy
Subject: Falmouth Comprehensive Plan Revisions

Thanks, again, for your comments on the draft Falmouth Comprehensive Plan. In response to your comments, the Town has submitted proposed revisions to the draft plan. The revised draft plan (Volumes I and II) and two revised maps are attached, along with a memo summarizing the changes.

It is my sense that the changes successfully address the requirements of the Comp Plan Review Criteria Rule, however the Town and I both want you to have an opportunity to review the changes and provide any additional comments, if warranted.

I hope to issue a "finding of completeness" for the plan in the next day or two, so please let me know if you think you would like to review the changes and offer additional comments.

Thanks,



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

Comprehensive Plan Review
Town of Falmouth
 Maine Forest Service
 12 December 2013

One goal of the Maine Forest Service (MFS) is to ensure that Maine’s forests, both urban and rural, will continue to provide benefits for present and future generations of Maine citizens. We do this by:

- a) developing, advocating for, and promoting activities that encourage sound, long-term management of forest resources;
- b) protecting forest resources from the effects of fire, insects, disease, and misuse; and,
- c) Providing accurate, relevant, and timely information about forest resources.

MFS respectfully submits these comments and observations for consideration.

Agricultural and Forest Resources	✓	Page
Analyses		
How important is agriculture and/or forestry and are these activities growing, stable, or declining?	✓	Appendix 4, pg. 94
Is the community currently taking regulatory and/or non-regulatory steps to protect productive farming and forestry lands? Are there local or regional land trusts actively working to protect farms or forest lands in the community?	✓	98
Are farm and forest land owners taking advantage of the state's current use tax laws?	✓	101
Has proximity of new homes or other incompatible uses affected the normal farming and logging operations?	✓	94
Are there large tracts of agricultural or industrial forest land that have been or may be sold for development in the foreseeable future? If so, what impact would this have on the community?	✓	98
Does the community support community forestry or agriculture (i.e. small woodlots, community forests, tree farms, community gardens, farmers’ markets, or community-supported agriculture)? If so, how?	✓	98
Does the community have town or public woodlands under management, or that would benefit from forest management?		98

Condition and Trends		
The community's Comprehensive Planning Agriculture and Forestry Data Set prepared and provided to the community by the Department of Agriculture, Conservation and Forestry or their designees.	✓	101, harvest dataset missing
A map and/or description of the community's farms, farmland, and managed forest lands and a brief description of any that are under threat.	✓	Map O
Information on the number of parcels and acres of farmland, tree growth, and open space enrolled in the state's farm, tree growth, and open space law taxation programs, including changes in enrollment over the past 10 years.	✓	101
A description of any community farming and forestry activities (e.g. community garden, farmer's market, or community forest).	✓	97, 101
Policies		
To safeguard lands identified as prime farmland or capable of supporting commercial forestry.	✓	102
To support farming and forestry and encourage their economic viability.	✓	102
Strategies		
Consult with the Maine Forest Service district forester when developing any land use regulations pertaining to forest management practices as required by 12 M.R.S.A. §8869.		MFS not referred to
Consult with Soil and Water Conservation District staff when developing any land use regulations pertaining to agricultural management practices.	✓	SWCD not referenced in regard to agriculture
Amend land use ordinances to require commercial or subdivision developments in critical rural areas, if applicable, maintain areas with prime farmland soils as open space to the greatest extent practicable.	✓	102
Limit non-residential development in critical rural areas (if the town designates critical rural areas) to natural resource-based businesses and services, nature tourism/outdoor recreation businesses, farmers' markets, and home occupations.	✓	102
Encourage owners of productive farm and forest land to enroll in the current use taxation programs.	✓	102
Permit land use activities that support productive agriculture and forestry operations, such as roadside stands, greenhouses, firewood operations, sawmills, log buying yards, and pick-your-own operations.	✓	102
Include agriculture, commercial forestry operations, and land conservation that supports them in local or regional economic development plans.	✓	102
<p>Comments: MFS appreciates the town's attention to the retention of working forests and open space, and their contributions to the local economy, as well as providing water quality protection in the plan. For landowners who choose to be long-term stewards of forest land, well-planned and managed timber harvesting can be economically rewarding to landowner and logger alike. Providing a policy and regulatory environment that rewards the beneficial outcomes of forest management will help with stated goals concerning open space and rural character.</p> <p>MFS also administers the WoodsWISE program, directed toward family forest landowners with ownerships of less than 1000 acres. District Foresters are available to walk and talk with these</p>		

landowners, to get them started on a path of stewardship and responsible forest management. MFS will help landowners secure consulting services from a licensed forester. Cost-share assistance is available to help with obtaining a Forest Management Plan, prepared by consultants. When harvesting is recommended, further advice and referral to trained and certified logging companies is available.

The plan does not directly refer to Best Management Practices for forestry. MFS's "[Best Management Practices for Forestry: Protecting Maine's Water Quality](#)" is an appropriate reference manual for forestry and road, trail and driveway construction in and around Falmouth's waters.

Copies are available from MFS at

http://www.maine.gov/dacf/mfs/publications/handbooks_guides/bmp_manual.html.

Public Facilities and Services	✓	Page
Analyses		
Does the community have a street tree program?	✓	52
Condition and Trends		
<p>the following information related to each of these public facilities and services:</p> <ul style="list-style-type: none"> a. Sewerage and/or Water Supply – Identify number and types of users, and percent of households served b. Septage – Identify any community policies or regulations regarding septage collection and disposal. c. Solid Waste – Describe the community's solid waste management system. Identify types and amounts of municipal solid waste and recycled materials for the past five (5) years. d. Stormwater Management – Identify combined sewer overflows. For Municipal Separate Stormwater System (MS4) communities, describe plan and status of the major goals of the MS4 requirements. e. Power and Communications – Availability of 3-phase power, Internet (including broadband), and cable within the community. f. Emergency Response System –Average call response times for fire, police, and emergency/rescue. g. Education – Identify school administrative unit. Include primary/secondary school system enrollment for the most recent year information is available and for the ten (10) years after the anticipated adoption of plan. h. Health Care - Describe major health care facilities (hospitals, clinics) and other providers serving the community. Identify public health and social services supported by the community through municipal subsidy. i. Municipal Government Facilities and Services – Describe facilities and staffing for municipal administrative, enforcement, and public works operations. j. Street Tree Program - Describe the community's street tree program. 	✓	52
<p>Comments: Street trees are only mentioned in passing, as the responsibility of the Public Works. MFS encourages towns to consider street and shade trees in reference to community character and beautification. Strong municipal street tree programs and street trees support a number of state goals for comprehensive planning. Street trees are part of the public infrastructure supported by comprehensive planning. Numerous studies have demonstrated the value of street trees beyond shade and beauty. Street trees play an important role in air filtration, stormwater interception, and increasing both property values and business. All of these values support the state's goals of</p>		

encouraging orderly growth and development, making efficient use of public services, planning for, financing and developing an efficient system of public facilities, and promoting an economic climate that increases overall economic well-being. Falmouth has done an exemplary job of developing town forest resources, and recognizes the benefits environmentally and economically from active management of their forest resources.

MFS administers several programs that have and can continue to benefit both the town and its residents. **Project Canopy**, MFS's community forestry assistance program, is available to all Maine towns and cities. Project Canopy can assist financially with street tree planting and maintenance and continued forest management planning of town-owned parcels. MFS encourages planners to recognize street trees and shade trees as part of the infrastructure, particularly in village and historical districts. Tree planting and maintenance is a viable way to improve downtown appearance, reduce pollution, and mitigate storm water runoff. Project Canopy provides cost share assistance for management planning on parcels such as these. Cost-share grants are available on a limited, competitive basis. Grant applications typically are available annually. For more information, go to: www.projectcanopy.me or contact Jan Santerre at 207-287-4987.

Use of inventory information:

MFS's Forest Policy and Management Unit supports sustainable forest management by providing technical assistance, information and educational services to the public, forest landowners, forest products processors and marketers, municipalities, and others.

MFS has ten District Foresters who provide technical assistance, conduct educational workshops, field demonstrations, media presentations, and can provide one-on-one contact with individual landowners. Ken Canfield is the District Forester who assists landowners in Falmouth. He can be contacted by phone at 207-441-3712; or by e-mail at ken.canfield@maine.gov.

Please direct questions or comments to:

Jan Ames Santerre

Project Canopy Coordinator

Department of Conservation - Maine Forest Service

22 State House Station

Augusta, ME 04333

Office: (207) 287-4987

Fax: (207) 287-8422

email: jan.santerre@maine.gov



Paul R. LePage,
Governor

**Maine Department of
Transportation**

**16 State House Station
Augusta, Maine 04333-0016**

Telephone: 207-624-3309
Fax: 207-624-3099
Email: dan.stewart@maine.gov

David Bernhardt,
Commissioner

Date: December 13, 2013
To: Phil Carey
From: Dan Stewart
Re: Town of Falmouth Comprehensive Plan Review

On behalf of the Maine Department of Transportation, I reviewed the Town of Falmouth's Comprehensive Plan and find it to be consistent and meeting the requirements of the requirements for the Transportation Section.

- **Appropriate use of data provided by MaineDOT:** The Town of Falmouth has met the minimum requirements for appropriate use of transportation data for comprehensive planning purposes
- **Relation of Plan's policies and implementation strategies to MaineDOT principal objectives and directives:** The Town of Falmouth's Comprehensive Plan includes several policies and related strategies that, if successfully implemented, will effectively utilize transportation facilities and resources in line with MaineDOT policies and Strategic Plan.
- **Consistency of Plan with MaineDOT programs and policies:** Pursuant to the goals, guidelines and policies of the Growth Management Act (30-A M.R.S.A. §4312 et seq.) and the Sensible Transportation Policy Act (23 M.R.S.A. §73) the Town of Falmouth's Comprehensive Plan is consistent with MaineDOT programs and policies in carrying out the goals of these Acts. Please feel free to contact me should you have any questions regarding this information.

cc: Duane Scott, MaineDOT

Theo Holtwijk

From: Carey, Phil <Phil.Carey@maine.gov>
Sent: Friday, January 10, 2014 4:46 PM
To: Theo Holtwijk
Subject: Preliminary Review

Hi Theo,

I've re-familiarized myself with the notes from my preliminary review of Falmouth's Future Land Use Plan and your memo with the Town's responses to my comments. I still need to review the changes you'll be proposing in response to the state agency comments, but as it stands now, I still see nothing in the current (10/28/13) Future Land Use Plan that would cause a finding of inconsistency.

I did notice one small item: the current zoning map shows Mackworth Island as being zoned "Farm and Forest", but the plan's "Areas for Potential Zoning Review" map includes it in the Designated Residential Growth Area. I mention it only because Mackworth Island is not shown as an area for a possible zone change. This is not something that poses a problem as far as our finding is concerned, but I didn't know if it might matter locally.

Thanks for being so responsive to our comments.

Phil