

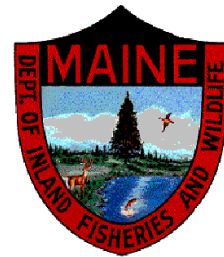


**Maine Department of Inland**

**Fisheries and Wildlife**

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John Elias Baldacci,  
Governor

Roland D. Martin,  
Commissioner

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Date: April 5, 2010  
To: Phil Carey  
From: Bethany Atkins  
Re: Towns of Pembroke and Perry Comprehensive Plan Review 2010

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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 Towns of Pembroke and Perry Comprehensive Plans 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 Maine State Planning Office's (SPO) 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**

This plan depicts most of the critical natural resource information provided by BwH completely and accurately and provides a good overview of the town's wildlife resources. Some minor edits are necessary, however. There are a few instances where the information

depicted is out of date (Inland Wading Bird and Waterfowl Habitats), missing (rare plant, Focus Area) or inconsistently depicted between the text and the habitat map (Tidal Wading Bird and Waterfowl Habitat). See below for specific comments and contact BwH for up-to-date data.

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

This plan does not identify Critical Resources Areas in the Future Land Use Plan and proposes just a few minimum strategies for the protection of critical natural resources including for example minimum shoreland zoning, cluster approaches to subdivisions and requiring use of BwH data in project review. We encourage the town to visit the BwH Toolbox ([http://www.beginningwithhabitat.org/toolbox/about\\_toolbox.html](http://www.beginningwithhabitat.org/toolbox/about_toolbox.html)) for examples of how the strategies outlined in this plan can be enhanced to better protect local natural resources, wildlife, water quality, recreation, and the industries that rely on a healthy natural resource base.

In addition, the plan proposed several floating commercial areas. Several of these are adjacent to critical natural resources including tidal wading bird and waterfowl habitats and the Cobscook Bay Focus Area as well as shellfish areas. If and when development is proposed in these areas, we encourage the towns to work closely with MDIFW Biologists to design projects in a way that will avoid and minimize impacts to local natural resources.

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

The Perry and Pembroke Comprehensive Plans are generally consistent with MDIFW and MNAP program goals. However, we encourage the town to include the following suggestions, to visit the Beginning with Habitat web-site, and to contact our office to explore the various opportunities available for local communities to address resource issues ([www.beginningwithhabitat.org](http://www.beginningwithhabitat.org)).

*Specific plan comments and recommendations are provided below and referenced in the attached checklist. Comments provided by Rich Bard, Greg Burr, and Bethany Atkins of MDIFW.*

Future Land Use Plan ( <i>cont.</i> )	✓	N/A	Page	MDIFW Review
<b>Policies</b>				
1. To coordinate the community's land use strategies with other local and regional land use planning efforts.	✓		N-12, N-13, N-14	
2. To support the locations, types, scales, and intensities of land uses the community desires as stated in its vision.	✓		N-12 to N-14	
3. To support the level of financial commitment necessary to provide needed infrastructure in growth areas.	✓		N-10, N-11, N-13	
4. To establish efficient permitting procedures, especially in growth areas.	✓		K-12	
5. To protect critical resource areas from the impacts of development.	✓		N-2, N-4, N-13	
<b>Strategies</b>				
1. Assign responsibility for implementing the Future Land Use Plan to the appropriate committee, board or municipal official.	✓		N-12	
2. Using the descriptions provided in the Future Land Use Plan narrative, enact or amend local ordinances as appropriate to: <ul style="list-style-type: none"> <li>a. Clearly define the desired scale, intensity, and location of future development;</li> <li>b. Establish fair and efficient permitting procedures and appropriate fees, and streamline permitting procedures in growth areas; and</li> <li>c. Clearly define protective measures for critical resource areas.</li> </ul>	✓		N-12 to N-14  K-12	1
3. Include in the Capital Investment Plan anticipated municipal capital investments needed to support proposed land uses.	✓		J-7	
4. Meet with neighboring communities to coordinate land use designations and regulatory and non-regulatory strategies.	✓		N-14	
5. Provide the code enforcement officer with the tools, training, and support necessary to enforce land use regulations, and ensure that the Code Enforcement Officer is certified in accordance with 30-A MRSA §4451.	✓		N-12	
6. Track new development in the community by type and location.	✓		N-12	
7. Periodically (at least every five years) evaluate implementation of the plan in accordance with Section 2.8.	✓		N-12	
<b>Comments:</b>  <b>MDIFW Comments:</b> 1) The plan does not specifically identify Critical Resource Areas in the Future Land Use Plan and proposes just a few minimum strategies to protect its critical natural resources including cluster options for larger subdivisions, minimum shoreland zoning, and some				

regional planning around shared resources for example. We encourage the town to visit the BwH Toolbox for examples of how the strategies outlined can be enhanced to better protect local natural resources, wildlife, water quality, recreation, and the industries that rely on a healthy natural resource base. Examples strategies include enhanced shoreland zoning provisions, conservation subdivision approaches and specific performance standards. Visit the BwH Toolbox for examples of these and other approaches that will enhance this plan and its ability to conserve the valuable critical resources in Perry and Pembroke: [http://www.beginningwithhabitat.org/toolbox/land\\_subdivision.html](http://www.beginningwithhabitat.org/toolbox/land_subdivision.html).

The plan proposes several floating commercial areas. Several of these are adjacent to mapped critical resources and in some instances are adjacent to conservation land. We encourage the towns to work closely with MDIFW regional biologists to identify approaches to avoid and minimize impacts to critical natural resources when development in these areas is proposed.

Transportation	✓	N/A	Page	MDIFW Review
<b>Analyses and Key Issues</b>				
<i>Roads, Bridges, Sidewalks, and Bicycle Routes</i>				
1. What are the concerns for transportation system safety and efficiency in the community and region? What, if any, plans exist to address these concerns, which can involve:: <ul style="list-style-type: none"> <li>i. Safety;</li> <li>ii. Traffic speed;</li> <li>iii. Congestion and travel delay;</li> <li>iv. Travel volume and type;</li> <li>v. Traffic problems caused by such things as road and driveway locations and design, road maintenance needs, traffic control devices, growth patterns and lack of transportation options;</li> <li>vi. Lack of transportation links between neighborhoods, schools, recreation, shopping, and public gathering areas;</li> <li>vii. Closed or posted bridges or roads;</li> <li>viii. Pedestrian and bicycling safety;</li> <li>ix. Light pollution.</li> </ul>	✓		H-8, H-9, H-10          H-11  H-12, H-13	
2. What conflicts are caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?	✓		H-9, H-10	
3. Upon review of state and regional transportation plans, what are their impacts on your current and future community plans? What actions can the community take to address identified impacts?	✓		H-5, H-6, H-13	
4. How do the community's land use regulations mesh with the MaineDOT, regional, and local objectives for transportation system facilities in the community? If growth areas are located on arterial highways, how will growth in these areas affect the ability of the arterial to safely and efficiently move traffic?	✓		K-9, K-10 M-2 N-9, N-10	
5. What is the community's schedule for regular investments in road maintenance and improvement? How are MaineDOT Urban-Rural	✓		J-5	

Initiative Program (URIP) funds used to off-set municipal road improvement costs?				
6. What concerns does your community have regarding its policies and standards for design, construction and maintenance of public and private local roads and bridges?	✓		H-9, H-10 H-11	
<i>Parking</i>				
7. What are the parking issues in the community?	✓		H-11, H-12	
8. Do local parking standards promote development in desired areas or do they drive it to outlying areas?		N/A		
9. How do local ordinances consider safety related to parking lot layout and circulation for vehicles, pedestrians and all other users?		N/A		
10. What community investments are needed to expand or improve parking?		N/A		
<b>Comments:</b>				
<b>Transportation (cont.)</b>	✓	N/A	Page	MDIFW Review
<b>Analysis and Key Issues (cont.)</b>				
<i>Other modes of transportation</i>				
11. What transit services are available to meet the current and future needs of community residents? If transit services are not adequate, how will the community address the needs?	✓		H-13, H-14	
12. If the community hosts a major transportation terminal, such as an airport, rail or ferry terminal, how does it connect to other transportation systems?		N/A		
13. If the community hosts any public airports, what coordination has been undertaken to ensure that required airspace is protected now and in the future? How does the community coordinate with the owner(s) of private airports?		N/A		
<i>Environmental and cultural considerations</i>				
14. What, if any, environmental degradation caused by state or local transportation facilities or operations (i.e. wildlife mortality, habitat fragmentation, erosion, groundwater contamination, non-point source pollution) is occurring? The problems are lack of funding for maintenance.		N/A		2
15. What are community's objectives for preserving or protecting important identified scenic, historic, or cultural resources adjacent to transportation facilities?		N/A		
16. How does the community address any transportation-related noise concerns?		N/A		
17. What steps can the community take to encourage development to occur in a manner that minimizes transportation-related environmental impacts such as habitat fragmentation and/or vehicular CO <sub>2</sub> emissions?	✓		K-9, K-10 M-2	3
<i>Land use</i>				
18. How do existing and proposed major transportation facilities complement the community's vision?	✓		H-14, H-15,	

			K-9, K-10	
<p>19. How do local land use decisions affect safety, congestion, mobility, efficiency and interconnectivity of the transportation system?</p> <p>There is very little development in either community except in three small village areas with other widely scattered establishments along Routes 1 and 214.</p>	✓	N/A		
<p>20. How do existing land uses and development trends support or inhibit cost effective passenger transportation systems and the efficient use of freight rail systems?</p>	✓		H-14, H-15, K-9, K-10	
<p>21. Does the community have in place, or does it need to put into place, access management or traffic permitting measures? How do these measures correlate with MaineDOT's access management program and regulations for traffic permitting of large development?</p>	✓		H-10	
<p>22. How do the community's local road design standards support the type of village, suburban, or rural land use patterns the town wants?</p> <p>The town does not have separate road standards for village, rural or suburban areas. There are no suburban areas; the entire town is rural. Perry cooperates with Pembroke on road maintenance and seeks any and all means of reducing costs to keep roads from falling into disrepair.</p>		N/A		
<p>23. Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter dead-ends resulting in compact and efficient subdivision designs?</p> <p>There is very little subdivision activity within the existing villages. All recent subdivision has occurred along the coast at large parcels with access from secondary roads subdivide lots with water frontage.</p>		N/A		
<p><b>Comments:</b></p> <p><b><u>MDIFW Comments:</u></b></p> <p>2) Roads can limit the natural movement of wildlife and are a major cause of habitat fragmentation for both terrestrial and aquatic species. Roads limit the movement of terrestrial species and fragment large areas a habitat. Fragmentation of aquatic habitats results from culverts or other stream crossing structures that are poorly sized, installed and/or maintained. These structures can physically block fish passage and/or result in increased flow velocities that cause excessive channel scouring, bank slumping and flows that limit fish and aquatic invertebrate passage. Fragmentation of habitat can lead to local extinctions and limit recreational opportunity. While aquatic habitat fragmentation is mentioned in the Natural Resources section of this plan, we encourage Pembroke and Perry to include a discussion of both terrestrial and aquatic habitat fragmentation in the Transportation section as well and to develop strategies to address this issue.</p> <p>3) As both towns replace existing culverts that are in poor condition and when new crossing structures are installed, we encourage Perry and Pembroke to require that public works crews restore or maintain aquatic species passage at the same time. The Maine Department of Transportation's <i>Waterway and Wildlife Crossing Policy and</i></p>				

<p><i>Design Guide</i> provides design guidelines that public works crews can follow. By following these guidelines, the towns will be able to better limit the fragmentation of aquatic habitat and maintain aquatic species passage and the high value fisheries in their many waterways.</p> <p>In addition, we encourage the towns to adopt standards requiring developers to design projects in a way that will maintain existing habitat values and minimize barriers to wildlife. See the BwH Toolbox (<a href="http://www.beginningwithhabitat.org/toolbox/about_toolbox.html">http://www.beginningwithhabitat.org/toolbox/about_toolbox.html</a>) for example standards and road ordinances.</p>				
Transportation ( <i>cont.</i> )	✓	N/A	Page	MDIFW Review
<b>Analysis and Key Issues</b> ( <i>cont.</i> )				
<i>Coastal communities only:</i>				
24. What land-side and water-side transportation facilities are needed?				
25. How does the community protect access to facilities for island travelers, currently and in the future?		N/A		
26. How do the community's land use regulations mesh with MaineDOT, regional and local objectives for marine transportation facilities?		N/A		
<b>Conditions and Trends</b>				
1. The community's Comprehensive Planning Transportation Data Set prepared and provided to the community by the Department of Transportation and the Office, or their designees.	✓		H-1 to H-8; H-11	
<i>Highways, Bridges, Sidewalks, and Bicycle Routes</i>				
2. Location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.	✓		H-1 to H-13	
3. Identify potential off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts and other activity centers.		N/A		
4. Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities etc. and related hours of operation.		N/A		
5. Identify policies and standards for the design, construction and maintenance of public and private roads. Identify the location of private roads and assess their potential to become public roads.		N/A		
<i>Perry has no interest is taking on the responsibility of additional roads.</i>				
<i>Parking</i>				
6. List and locate municipal parking areas including size, condition, and usage.	✓		H-11, H-12	
<i>Other Modes of Transportation</i>				
7. List and locate all airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances in place.		N/A		
8. Identify inter-local, fixed route, commuter and demand response	✓		H-	

bus or van services, including private or public operator information and local government involvement.			13, H-14	
<i>Environmental and Cultural Considerations</i>				
9. Location of evacuation routes identified in an emergency response plan, if applicable. The Emergency Operations Plan, completed in 2009, does not designate an evacuation route; Route 1 and 214 would be used.		N/A		
10. Identify areas with transportation related noise concerns.		N/A		
11. Identify areas where inappropriate lighting affects transportation safety.		N/A		
12. Identify and describe scenic, historic, or cultural resources within or adjacent to transportation facilities that the community wants to protect, such as street trees, covered bridges, etc.		N/A		
<b>Comments:</b>				

<b>Transportation (cont.)</b>	✓	N/A	Page	MDIFW Review
<b>Conditions and Trends (cont.)</b>				
13. Known locations with opportunities to restore habitat connections disrupted by a transportation facility owned and maintained by the community.		N/A		
14. Identify current local land use management strategies (such as access management, zoning, density, minimum lot size standards) that enhance or detract from the safety and efficiency of the transportation system (including highway, air, bus, bike, pedestrian, marine, and rail services.)		N/A		
<i>Coastal Communities only:</i>				
15. Location of current and potential seaport terminals. Identify whether seaport terminal is of local, regional, or state significance, its ownership/management and use (type and quantity/frequency of goods shipped in or out). List land-side and water-side facilities associated with port.		N/A		
16. Identify public ferry service and private boat transportation support facilities (may be covered under Marine Resources with cross reference) including related water-side (docks/piers/wharves) and land side (parking) facilities.		N/A		
<b>Comments:</b>				
<b>Policies (minimum required to address State goals)</b>				
1. To prioritize community and regional needs associated with safe, efficient, and optimal use of transportation systems	✓		K-9, K-10 N-9, N-10	
2. To safely and efficiently preserve or improve the transportation system.	✓		N-9, N-10	
3. To promote public health, protect natural and cultural resources and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize increases in	✓		N-9, N-10	

vehicle miles traveled.				
4. To meet the diverse transportation needs of residents (including children, the elderly and disabled) and through travelers by providing a safe, efficient and adequate transportation network for all types of users (motor vehicles, pedestrians, bicyclists).	✓		N-9, N-10	
5. To promote fiscal prudence by maximizing the efficiency of the state or state-aid highway network.	✓		N-9, N-10	
<b>Comments:</b>				

<b>Transportation (cont.)</b>	✓	N/A	Page	MDIFW Review
<b>Strategies</b> (minimum required to address State goals)				
1. Develop or continue to update a prioritized ten-year improvement, maintenance and repair plan for local/regional transportation system facilities that reflects community, regional and state objectives.	✓		J-8	
2. Initiate or actively participate in regional and state transportation and land use planning efforts.	✓		N-10	
3. Enact or amend local ordinances as appropriate to be consistent with local, regional and state transportation policies identified in this plan.	✓		N-10	
4. Enact or amend local ordinances as appropriate to address or avoid conflicts with: a) Policy objectives of the Sensible Transportation Policy Act (23 MRSA §73); b) State access management regulations pursuant to 23 MRSA §704; and c) State traffic permitting regulations for large developments pursuant to 23 MRSA §704-A.	✓		N-10	
5. Enact or amend ordinance standards for subdivisions and for public and private roads as appropriate to foster transportation-efficient growth patterns and provide for future street and transit connections.				
6. Work with the MaineDOT as appropriate to address deficiencies in the system or conflicts between local, regional and state priorities for the local transportation system.	✓		N-10	
<b>Comments:</b>				

<b>Recreation</b>	✓	N/A	Page	MDIFW Review
<b>Analyses and Key Issues</b>				
1. Will existing recreational facilities and programs in the community and region accommodate projected changes in age groups or growth in your community?	✓		G-1 to G-3	
2. Is there a need for certain types of services or facilities or to upgrade or enlarge present facilities to either add capacity or make them more usable?	✓		G-4; J-8	

3. Are important tracts of open space commonly used for recreation publicly owned or otherwise permanently conserved?	✓		G-5 to G-7	
4. Does the community have a mechanism, such as an open space fund or partnership with a land trust, to acquire important open spaces and access sites, either outright or through conservation easements?	✓		N-9	
5. Does the public have access to each of the community's significant water bodies? Is the type of access compatible with the protection of public drinking water sources?	✓		G-5 D-14, D-15	
6. Are recreational trails in the community adequately maintained? Are there use conflicts on these trails?	✓		G-6	
7. Is traditional access to private lands being restricted?	✓		G-7	
<b>Comments:</b>				
<b>Conditions and Trends</b>				
1. The community's Comprehensive Planning Recreation Data Set prepared and provided to the community by the Department of Conservation and the State Planning Office, or their designees. None of the data provided in the recreation data set was of any use in the preparation of the plan.		N/A		
2. A description of important public and private active recreation programs, land and water areas (including hunting and fishing areas), and facilities in the community and region, including regional recreational opportunities as appropriate, and identification of unmet needs.	✓		G-1 to G-7	4
3. An inventory of any fresh or salt water bodies in the community determined locally to have inadequate public access.	✓		G-5	5
4. A description of trail systems, trail management organizations, and conservation organizations that provide trails for all-terrain vehicles, snowmobiling, skiing, mountain biking or hiking. Include mapped information as available.	✓		G-6	
5. A map or list of important publicly-used open spaces and associated facilities, such as parking and toilet facilities.	✓		Map 2	
6. A list of local and regional land trusts in the area. If the town or a private landowner needs a Land Trust they can look them up on-line or in a phone book.		N/A		

<p><b>Comments:</b></p> <p><b><u>MDIFW Comments:</u></b></p> <p>4) pg. G-2, Local Recreational Facilities: Pennamaquan Wildlife Management Area is incorrectly listed as a Bureau of Public Lands property and incorrectly named Pennamaquan Park.</p> <p>pg. G-4: The Regional Recreation table could include Cobscook Bay Wildlife Management Area, consisting of over 2,000 acres of upland and more than 23 miles of shoreline, including the Wilbur Neck unit in Pembroke.</p> <p>5) pg G-5, Recreation, Scenic Resources, and Open Space, Public Access to Surface Water: Please add that the Maine Dept. of Inland Fisheries &amp; Wildlife owns a parking and launch site area (3.5 acres) for access to Pennamaquan Lake and River at the end of the Porter Landing Road. IF&amp;W does not own an “all purposed right of way” for the public to use the Porter Landing Road or to use the launch but the Dept. does have a verbal agreement with Mr. Vinton Cassidy, who owns the fees to the road, to allow the public to use the road and to launch at this site. The plan should include a statement by the town that they agree with the importance of this state owned parking and launch area for users to reach the lake and river.</p>	
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Recreation (cont.)	✓	N/A	Page	MDIFW Review
<b>Policies</b> (minimum required to address State goals)				
1. To maintain/upgrade existing recreational facilities as necessary to meet current and future needs.	✓		N-9	
2. To preserve open space for recreational use as appropriate.	✓		N-9	6
3. To seek to achieve or continue to maintain at least one major point of public access to major water bodies for boating, fishing, and swimming; and work with nearby property owners to address concerns.	✓		N-4, N-5 N-9	
<b>Comments:</b>				
<b>Strategies</b> (minimum required to address State goals)				
1. Create a list of recreation needs or develop a recreation plan to meet current and future needs. Assign a committee or town official to explore ways of addressing the identified needs and/or implementing the policies and strategies outlined in the plan.	✓		N-9 J-8	
2. Include any capital needs identified for recreation facilities in the Capital Investment Plan.	✓		J-8	
3. Work with public and private partners to extend and maintain a network of trails for motorized and non-motorized uses. Connect with regional trail systems where possible.	✓		G-6	
4. Work with a local land trust or other preservation organization to pursue opportunities to protect important open space or recreational land.	✓		N-5, N-9	

5. Provide education regarding the benefits and protections for landowners allowing public recreational access on their property.	✓		N-4, N-5 N-9	
<p><b>Comments:</b></p> <p><b><u>MDIFW Comments:</u></b></p> <p>6) pg. N-9, Open Space Strategies: The towns outline a strategy to consider including provisions to require that major new residential developments reviewed by the Planning Board present recreational and open space areas in their plans. In this effort, we encourage the towns to consider adopting conservation subdivision ordinances, a cluster approach to subdivision design. Conservation subdivision designs require developers to set aside protected open space in a way that addresses community identified priorities in turn for reduced minimum lot sizes. In addition to setting aside land for recreational purposes as part of these subdivisions, wildlife habitats can be strategically conserved at the same time. For more information on this approach and for example standards, visit the conservation subdivisions page of the BwH Toolbox, <a href="http://www.beginningwithhabitat.org/toolbox/land_subdivision.html">http://www.beginningwithhabitat.org/toolbox/land_subdivision.html</a>.</p>				

<b>Water Resources</b>	✓	N/A	Page	MDIFW Review
<b>Analyses and Key Issues</b>				
1. Are there point sources (direct discharges) of pollution in the community? If so, is the community taking steps to eliminate them?		N/A		
2. Are there non-point sources of pollution related to development, agriculture, forestry or other uses that are affecting surface water resources and riparian areas? If so, are existing regulations sufficient to protect these resources?	✓		D-6 to D-8	
3. Are point and/or non-point sources of pollution threatening groundwater supplies?	✓		D-11 to D-14	
4. Are public groundwater supplies and surface water supplies and their recharge areas adequately protected? Are any public water supply expansions anticipated? If so, have suitable sources been identified and protected?	✓		D-12 D-14	
6. What non-regulatory measures can the community take to protect or enhance water quality? Are there opportunities to partner with local or regional advocacy groups that promote water resource protection?	✓		D-14	
7. Do local road construction and maintenance practices and standards adequately protect water resources? Do public works crews and contractors use best management practices in daily operations (e.g. salt/sand pile maintenance, culvert replacement street sweeping, public works garage operations)?	✓		N-2	
8. Are floodplains adequately identified and protected? Does the community participate in the National Flood Insurance Program? If not, should it? If so, is the floodplain management ordinance up to date and consistently enforced?	✓		D-8	
<b>Conditions and Trends</b>				

1. The community's Comprehensive Planning Water Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, the Department of Environmental Protection, and the Office, or their designees.	✓		D-12 to D-14	
2. A description of each lake, pond, river and stream including: a. Ecological, economic, and recreational values; b. Current watershed land uses; c. Threats to water quality or quantity; d. Documented water quality and/or invasive species problems.	✓		D-5 to D16	
3. A list of water resource advocacy groups active in the community. They are in the phone book.		N/A		
4. A summary of past and present activities to monitor, assess and/or improve water quality, mitigate sources of pollution, and control or prevent the spread of invasive species. This is fully documented by reference to the Sourcewater Protection Plan for the Boyden Lake Public Water Supply	✓		D-15	
5. A description of the location and nature of significant threats to drinking water supplies.	✓		D-12 D-14	
6. A summary of existing lake, pond, river, stream and drinking water protection and preservation measures, including local ordinances.	✓		D-28	
<b>Comments:</b>				

<b>Water Resources (cont.)</b>	✓	N/A	Page	SPO Review
<b>Policies (minimum required to address State goals)</b>				
1. To protect current and potential drinking water sources.	✓		N-3	
2. To protect significant surface water resources from pollution and improve water quality where needed.	✓		N-2, N-3	
3. To protect water resources in growth areas while promoting more intensive development in those areas.	✓		N-2, N-3	
4. To minimize pollution discharges through the upgrade of existing public sewer systems and wastewater treatment facilities.	✓		N-2, N-3	
5. To cooperate with neighboring communities and regional/local advocacy groups to protect water resources.	✓		N-3	
<b>Comments:</b>				
<b>Strategies (minimum required to address State goals)</b>				
1. Amend local land use ordinances as applicable to incorporate stormwater runoff performance standards consistent with: a. The Maine Stormwater Management Law and Stormwater Rules (Title 38 MRSA Section 420-D and 06-096 CMR 500 and 502). b. DEP's allocations for allowable levels of phosphorus in lake/pond watersheds. c. The Maine Pollution Discharge Elimination System Stormwater Program	✓		N-2	

2. Update the floodplain management ordinance to be consistent with state and federal standards.	✓		N-2	
3. Consider amending local land use ordinances, as applicable, to incorporate low impact development standards.		N/A		
4. Where applicable, develop an urban impaired stream watershed management or mitigation plan that will promote continued development or redevelopment without further stream degradation.		N/A		
5. Enact public wellhead and aquifer recharge area protection mechanisms, as necessary.	✓		N-3	
6. Provide water quality "best management practices" information to farmers and loggers.	✓		N-4	
7. Adopt water quality protection practices and standards for construction and maintenance of public roads and properties and require their implementation by the community's officials, employees and contractors.	✓		N-2	
8. Participate in local and regional efforts to monitor, protect and, where warranted, improve water quality.	✓		N-2 to N-4	
9. Provide educational materials at appropriate locations regarding invasive species.		N/A		7
<b>Comments:</b> <b>MDIFW Comments:</b> 7) Information about invasive species is available through the Maine Natural Areas Program at: <a href="http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm">http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm</a> .				

Critical Natural Resources	✓	N/A	Page	MDIFW Review
<b>Analysis and Key Issues</b>				
1. Are existing regulations sufficient to protect the community's critical natural resources threatened by development, overuse, or other activities?	✓		D-24, D-26 to D- 28	
2. Are local shoreland zone standards consistent with state guidelines and with the standards on adjacent shorelands in neighboring towns?	✓		D-8 Map 11	
3. What non-regulatory measures can the community take to protect critical natural resources? Are there opportunities to partner with local or regional advocacy groups?	✓		D-24, D-27	
4. Is there current regional cooperation or planning underway to protect shared critical natural resources?		N/A		8
5. In what other areas will protection of critical natural resources advance comprehensive plan policies (e.g. water resources, economy, recreation, agriculture and forestry, etc.)?		N/A		
<b>Comments:</b> There are very few shared critical natural resources – see Map 8. The only shared habitat is Inland Wading Bird and Waterfowl Habitat which is protected by the Resource Protection designation of the shoreland zoning regulations.  <b>MDIFW Comments:</b>				

<p><b>8) Pembroke and Perry share several resources (wading bird and waterfowl habitats, Pennamaquan River, Boyden Lake, large blocks of undeveloped habitat, several bays, and the Cobscook Bay Focus Area, for example) with each other and with neighboring communities. Shared resources benefit from shared management strategies. Maintaining communications with neighboring towns is an effective way to ensure that consistent approaches are taken to protect shared resources along town borders, and helps to lay the foundation for more formal regional partnerships.</b></p> <p>The plan mentions several regional planning and cooperation efforts to protect shared resources, including the Cobscook Bay Resource Center.</p>				
<b>Conditions and Trends</b>				
1. The community's Comprehensive Planning Critical Natural Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, Department of Environmental Protection, and the Office or their designees.	✓		D-24, D-25	9
2. A map or description of significant scenic areas and scenic views of local importance, and regional or statewide importance if available.	✓		Map 8	
<p><b>Comments:</b></p> <p><b><u>MDIFW Comments:</u></b></p> <p><b>9) The plan accurately represents most of the critical natural resources currently mapped in Pembroke and Perry, however, a few corrections/clarifications should be made:</b></p> <p>a) pg D-9, Wetlands- The plan presents an excellent discussion of vernal pools, but it is worth noting that the classification of Significant Vernal Pools is based on the <i>abundance</i> of indicator species, not their presence alone (except fairy shrimp and Threatened or Endangered species).</p> <p>b) pg. D-10, Table D-4- A better title for this table would be "Freshwater and Anadromous Fisheries and Habitat Values". The table should be updated to include:</p> <ul style="list-style-type: none"> <li>• high value fisheries and habitats for wild Smallmouth Bass, wild Eastern Brook Trout and Anadromous Alewives for Boyden Stream/Little River.</li> <li>• high value fisheries and habitats for wild Eastern Brook Trout for Perry Brook.</li> <li>• high value fisheries and habitats for wild Eastern Brook Trout, stocked and wild Brown Trout, and anadromous alewives under the Pennamaquan River.</li> </ul> <p>c) pg. D-24, Essential Habitats- The language seems to have been confused during editing drafts and should read that there are <i>no</i> Essential Habitats mapped in the towns (not eight).</p> <p>d) pg. D-24, Rare Animals- It would be helpful to reword the last sentence to something like: "Documented Bald Eagle nesting territories are shown on Map 8- Habitat." The current wording makes it sound like eagles are only found in the mapped circles.</p> <p>e) pg. D-24, Maine Natural Areas Program- There is, in fact, one rare plant that has been documented in Pembroke. Gaspé arrow-grass (<i>Triclochin gaspensis</i>) has been mapped on Mahan Point near Cobscook Falls. The plan text and natural resource map should be updated.</p> <p>f) pg. D-24, Significant Wildlife Habitats- In addition to the Significant Wildlife Habitats mentioned, Tidal Wading Bird and Waterfowl Habitat has been mapped along extensive areas of the shoreline of both communities and Shorebird Areas have been mapped on</p>				

<p>Gleason Cove and Pleasant Point. Significant Vernal Pools and Deer Wintering Areas should also be mentioned as Significant Wildlife Habitat types, although neither have been documented in either town at this time. For up-to-date data, contact BwH.</p> <p>g) Cobscook Bay Focus Area, a focus area of statewide ecological significance has been identified in Pembroke and Perry primarily along the shoreline of Cobscook Bay. This focus area was delineated around the rich concentration of coastal resources including bald eagle nests, shorebird areas and marine resources. Focus areas are areas of unique concentrations of at-risk species and their supporting habitat. They are non-regulatory. Focus areas are intended to draw attention to these unique areas and build awareness and momentum for strategic approaches to conservation. A map of the focus area is attached and description is available at:  <a href="http://www.maine.gov/doc/nrimc/mnap/focusarea/cobscook_bay.pdf">http://www.maine.gov/doc/nrimc/mnap/focusarea/cobscook_bay.pdf</a> . We encourage both towns to consider this information in their comprehensive planning.</p> <p>h) pg. D-25, State Parks and Public Reserved Lands: This section mostly discusses Federal lands and IF&amp;W Wildlife Management Areas, neither of which are managed by BPL. A better heading may be “Publicly Owned Conservation Land” or something similar. Also:</p> <ul style="list-style-type: none"> <li>• Pennamaquan WMA consists of 41 acres of upland and 1495 acres of water. About 200 acres of the water surface and all 41 acres of land is in Pembroke.</li> <li>• The Wilbur Neck Unit of Cobscook Bay Wildlife Management Area is also in Pembroke. The Wilbur Neck unit consists of 297 acres and about 2.75 miles of shoreline, including several islands.</li> <li>• IF&amp;W also manages several other parcels and islands in the 2 towns that do not have improved public access points, but that do allow public recreation, including 26 acres on Patangal Cove in Perry.</li> </ul> <p>i) Map 8: Habitat- The map should also show Shorebird Areas. The Inland Waterfowl and Wading Bird Habitat (IWWH) layer used for this map has been updated. The new data likely results in less IWWH acreage in both towns. Contact BwH for up-to-date data.</p>				
<b>Policies</b> (minimum required to address State goals)				
1. To conserve critical natural resources in the community.	✓		N-2	
2. To coordinate with neighboring communities and regional and state resource agencies to protect shared critical natural resources.	✓		N-2	
<b>Comments:</b>				

<b>Critical Natural Resources</b> ( <i>cont.</i> )	✓	N/A	Page	MDIFW Review
<b>Strategies</b> (minimum required to address State goals)				
1. Amend local shoreland zone standards to meet current state guidelines.	✓		N-2	10
2. Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.		N/A		11
3. Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical	✓		N-2	12

natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.				
4. Through local land use ordinances, require the planning board (or other designated review authority) to incorporate maps and information provided by the Maine Beginning with Habitat program into their review process.	✓		N-2	13
5. Adopt natural resource protection practices and standards for construction and maintenance of public roads and properties and require their implementation by the community's officials, employees, and contractors.	✓		N-2	2-3 (see above)
6. Initiate and/or participate in interlocal and/or regional planning, management and/or regulatory efforts around shared critical natural resources.		N/A		
7. Pursue public/private partnerships to protect critical natural resources such as through purchase of land or easements from willing sellers.	✓		N-3	
8. Distribute or make available information to those living in or near critical natural areas about applicable local, state or federal regulations.	✓		N-2	
<p><b>Comments:</b></p> <p><b>MDIFW Comments:</b></p> <p>10) While amending local shoreland zoning standards, we encourage Pembroke and Perry to consider increased setbacks, additional resource protection designations or other approaches that are above and beyond state minimum shoreland zoning standards to better protect the town's high value habitats as well as water quality and recreation values. Headwater streams, smaller wetlands and forested wetlands are not protected by state minimum shoreland zoning standards, for example. These resources provide habitat and are important for water quality protection. Many of the town's Critical Natural Resources are located in the shoreland zone and can be better protected under shoreland zoning standards as well. See the BwH Toolbox (<a href="http://www.beginningwithhabitat.org/toolbox/wetland_intro.html">http://www.beginningwithhabitat.org/toolbox/wetland_intro.html</a>) for example ordinances that include increased shoreland protections.</p> <p>11) While the plan identifies critical natural resources, it does not specifically identify Critical Resource Areas in the Future Land Use Plan and proposes few strategies beyond minimum standards to protect critical natural resources.</p> <p>12) In addition to when development is proposed near Essential and Significant Habitats (pg N-2), we encourage both towns to ensure early consultation with Maine Department of Inland Fisheries and Wildlife biologists when development is proposed near rare animal habitat and with Maine Natural Areas Program ecologists when development is proposed near rare plants and rare/exemplary ecosystems.</p> <p>13) Beginning with Habitat (BwH) maps are intended for planning purposes only, but they are a good tool for flagging potential resource issues early in the development review process. BwH maps and data are updated regularly, so the planning board is encouraged to make sure they have the most up to date information. To request updated BwH maps and/or digital data, visit <a href="http://www.beginningwithhabitat.org">www.beginningwithhabitat.org</a>.</p>				

**Additional Comments:**

Also important to consider in municipal land use plans is the future effect of climate change. Current projections suggest sea level will rise at least 2 feet in the next century due to warming temperatures. As sea levels rise, coastal habitats will begin to migrate inland. In areas where this inland migration is blocked by development these habitats will be lost. Conservation of low-lying, undeveloped uplands where coastal marshes, beaches, and other intertidal natural communities can migrate inland with sea level rise should be promoted in Pembroke and Perry.

### Cobscook Bay Focus Area

