



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

OFFICE OF THE
REGIONAL ADMINISTRATOR

September 7, 2006

Jonathan McDade
Division Administrator
Federal Highway Administration
Room 614, Federal Building
Augusta, Maine 04330

RE: Aroostook County Transportation Study, Aroostook County, Maine, Supplemental Draft Environmental Impact Statement (CEQ# 20060285)

Dear Mr. McDade:

The Environmental Protection Agency-New England Region (EPA) has reviewed the Federal Highway Administration's (FHWA)/Maine Department of Transportation's (MDOT) Supplemental Draft Environmental Impact Statement (SDEIS) for the consideration of various transportation corridor improvements intended to improve mobility and efficiency within northeastern Aroostook County and to support regional economic growth. We submit the following comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The SDEIS is consistent with the DEIS and characterizes the 2760 square mile study area in Aroostook County (population in 2000 70,576) with an inadequate transportation system limiting access, mobility, and economic opportunity. The SDEIS highlights elements of need for transportation improvements that include: the long term loss of population in the county; a higher than average unemployment rate combined with a low rate of job growth; a lack of diverse jobs to attract and retain workers; and the desire to reduce travel times and distances and improve access to jobs. Specific transportation objectives identified in the SDEIS for the region include reducing travel time in the county, enhancing reliability of the transportation system, reducing crashes, and improving traffic flow in the localized areas of Houlton, Mars Hill, Presque Isle and Caribou.

The SDEIS was developed as a tiered NEPA document to address the extended period of time likely (due to funding constraints and statewide priorities) between consideration in the NEPA process of various transportation improvements throughout the county and actual construction. The DEIS described four major north-south corridors connecting I-95 to the St. John Valley. The SDEIS maintains the four corridor approach but divides them into 11 segments that are presented as tier 2 projects that could be funded and constructed in a reasonable time if funding was realized. The SDEIS explains that the selection of a north-south corridor has been deferred by

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FHWA and MDOT because it is not likely that the corridor can be funded and constructed in a relatively short time frame. As a result, the proposed action evaluated in the SDEIS focuses on three of the 11 segments (segments 2, 4 and 7). Segment 2 is a two lane upgrade to Route 161 beginning in Caribou and ending 25.9 miles north in Cross Lake Township. Segment 4 is a new 5.5 mile east-west highway that would connect Route 161 with Route 1 in Caribou (the Caribou Connector). Segment 7 is a new 10 mile bypass highway around Presque Isle. The SDEIS explains that the remaining eight segments will be addressed in future NEPA analyses at the time when conditions warrant construction and sufficient funding is available. As we stated in our comments on the DEIS, we believe it is clear that the remaining eight segments have great potential individually and cumulatively for significant impacts and could affect the environment and residents of Aroostook County in many ways. We continue to believe that future analyses under NEPA and the Clean Water Act will be critical to determine whether any of the work within the alternative corridors and within the eight segments is viable in an environmental, social and regulatory context.

The SDEIS contains more specific tier 2 information for the Route 161 upgrade, the Caribou Connector and the Presque Isle bypass segments which MDOT believes can reasonably be funded in the near-term (in the next 20 years). We focused our review and comments exclusively on these three segments and will comment on the other eight segments in response to future NEPA analysis for those segments. Based on our review of the SDEIS we have no major concerns with the upgrade of Route 161 (Segment 2) and will continue to coordinate with federal and state agencies through the permit process for that portion of the project. Our review of the discussion of Segments 4 and 7 in the SDEIS resulted in numerous questions and concerns about the preferred alternatives presented for both the Caribou Connector and the Presque Isle Bypass. In both instances we believe that practicable and less environmentally damaging alternatives may exist to implement each of the proposed actions and recommend that these alternatives be more fully considered. For example, the SDEIS did not include the analysis of other potentially less environmentally damaging options including smaller scale upgrades, shorter bypass/partial bypass alternatives in combination with upgrades and TSM methods. As a result, additional analysis is necessary to support informed decision-making during the Clean Water Act Section 404 permit process for the Caribou Connector and Presque Isle Bypass projects.

The deficiencies in the SDEIS may be due in part to the sequential rather than concurrent process being followed with respect to NEPA and Clean Water Act Section 404 review. As you know, for more than a decade, large highway projects in New England have routinely undergone combined NEPA review and wetlands permitting through the Corps of Engineers Highway Methodology. The Highway Methodology establishes a step-wise approach and process for, among other things, the framing of the project purpose, and the determination of the range of alternatives to be discussed in the EIS and the 404 process. Normally EPA would participate in meetings and discussions to help define/confirm the Corps' project purpose and would participate in one or more so-called 'Phase 1' interagency meetings to help determine an appropriate range of alternatives to be incorporated into the NEPA/404 process for detailed evaluation. That process was not followed for the SDEIS.

As we indicated during the August 30, 2006 interagency meeting to discuss NEPA/404 issues related to the project, we look forward to working with MDOT/FHWA and the other federal agencies to suggest ways to bring the NEPA and 404 processes into better alignment as part of the effort to address agency comments on the SDEIS and to increase the overall efficiency of the entire review process. The attachment to this letter describes our concerns and provides comments related to the range of alternatives discussed in the SDEIS, and impacts related to wetlands and other waters, water quality, air quality, and secondary development.

Our NEPA responsibilities require us to review and rate all federal agency EISs according to a national system to promote national consistency in federal environmental reviews. As indicated above, we have no major concerns with the proposal to upgrade Route 161 (Segment 2) and rate that portion of the SDEIS LO-1 "Lack of Objections-Adequate" (see attached rating sheet for a full explanation of this rating). The SDEIS analysis, as written, either identifies impacts associated with Segments 4 and 7 that are likely to violate environmental standards of Section 404 of the Clean Water Act (especially potential aquatic resources impacts from the preferred alignments for Segments 4 and 7), or requires more information to fully present the effects of the project, other reasonable alternatives, and the selection of the proposed corridors. Because of the projected magnitude of the aquatic resources impacts associated with the preferred alignments for Segments 4 and 7--direct loss of 106 acres of wetlands and indirect/cumulative impacts to 276 acres of wetlands--and the likelihood that those impacts could be substantially reduced or avoided, we are rating those two segments "Environmental Concerns-Insufficient Information." We look forward to coordinating with MDOT/FHWA to resolve these issues and to better align the NEPA and section 404 reviews as the projects advance.

Please feel free to contact Timothy Timmermann of EPA New England's Office of Environmental Review (617-918-1025) if you have any questions about this letter.

Sincerely,



Robert W. Varney
Regional Administrator

Attachment

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

**Additional Detailed Comments
Aroostook County Transportation Study
Supplemental Draft Environmental Impact Statement
Aroostook County, Maine**

Wetland Issues

The SDEIS presents Tier 1 information for 8 of the 11 segments and Tier 2 alignment-specific information regarding three segments that comprise the proposed action. These segments total 15.5 miles of new highway and 26.5 miles of upgrades to existing highways. The 3 segments are: 1) the Route 161 Improvements (Segment 2), 2) Construction of a Caribou Connector (Segment 4) and 3) the construction of a Presque Isle Bypass (Segment 7). MDOT has also prepared two US Army Corps of Engineers (Corps) Highway Methodology Phase I Avoidance documents for the Presque Isle Bypass and the Route 1-161 Connector, Caribou. These documents were not part of the SDEIS but we included them as part of our review of the SDEIS as they provide information particularly relevant to the NEPA process and the review of the project under Section 404 of the Clean Water Act.

Based on the information presented in the SDEIS and Section 404 Phase I documents we believe that there are viable and less environmentally damaging alternatives for Segments 4 & 7 that should be more fully considered in the EIS. As we stated during our recent interagency meeting to discuss the Phase I documents for the Caribou Connector and Presque Isle bypass and the SDEIS in general, extensive work remains to be done to consider and analyze alternative alignments for both segments before any informed decision-making can occur regarding the alternatives considered for the Caribou and Presque Isle projects. Some of the outstanding issues which remain include the range of alternatives considered in the SDEIS for Segments 4 and 7, whether or not the use of a four-lane cross section unnecessarily constrains the alternatives analysis, and the degree to which corridor selection should be based on the avoidance of farmland and/or impacts to aquatic resources.

Environmental Setting

As stated in Chapter 3 of the SDEIS, the majority (73 percent; 2,015 square miles, approximately 1.3 million acres) of the study area consists of forest typical of northern New England. Wetland areas comprise approximately 19 percent, or 523 square miles, of the total study area (2,760 square miles). Forests dominate the study area with shrub and upland herbaceous communities interspersed throughout. These large forested areas provide habitat for species that prefer interior forest habitat, while the interspersion of forest, shrub, and open habitats provide niches for species that prefer edge and early-successional habitats. Numerous, and in some cases extensive, wetland communities within each of the cover type enhances the ecosystem diversity. Approximately 321 square miles of the study area consists of forested wetland. Shrub wetland systems include shrub bogs and shrub swamps. Approximately 92 square miles of the study area consists of shrub system wetlands. Emergent freshwater wetlands (herbaceous fens, and marshes

and wet meadows) comprise approximately 21 square miles of the study area.

These wetlands provide a multitude of ecological functions including wildlife habitat, water storage, flood conveyance, groundwater discharge, erosion control and water quality improvement. Mammal species likely to use the forested wetland habitat include moose, white-tailed deer, snowshoe hare, mink, black bear, raccoon, bobcat, beaver, and woodland jumping mouse. In addition, herpetiles such as the wood frog, spotted salamander, blue-spotted salamander, northern spring peeper, American toad, and eastern garter snake use forested wetland habitat for breeding, cover, and/or foraging. Bird species known to utilize forested wetland habitat include wood duck, pileated woodpecker, northern waterthrush, northern parula warbler, and Canada warbler.

Generally, for the Presque Isle and Caribou bypass projects, the wetlands within the study area provide valuable wildlife habitat and function to maintain water quality. These undeveloped areas are particularly important because of their increasing scarcity in the region. This region has experienced habitat loss and fragmentation mostly from agricultural activities. Forested wetlands and riparian corridors help maintain viable wildlife populations by adding to the natural connectivity of habitats already fragmented by development. Far ranging aquatic mammals as well as upland species commonly use riparian habitats for hunting and travel.

Alternatives

EPA reviewed the SDEIS and the US Army Corps of Engineers Highway Methodology Phase I Avoidance documents for the Route 1-161 Connector in Caribou and the Presque Isle Bypass which MDOT proposes to move forward through the NEPA process and into Phase II of the Corps of Engineers Highway Methodology process. The Phase I Avoidance documents provide the basis for the first iteration of interagency discussions regarding potential upgrade options and alternative alignments against a series of constraint map overlays and a test of practicability. The results of the Phase I coordination are used to develop a range of alternatives to be evaluated in the EIS that are appropriate for both NEPA and 404 purposes. In this case, based on our review of the SDEIS we have no major concerns with the proposed upgrade of Route 161 (Segment 2) because the direct and indirect environmental impacts of the project would be modest. The upgrade of Route 161 is not expected to result in significant wetland impacts, estimated at 6 acres, a total based upon the maximum amount of widening considered over the full 26-mile upgrade.

The balance of our comments focus on the SDEIS assessment of the alternatives and other related environmental issues considered for Segments 4 and 7. In particular, the comments provided below are generally organized by alternative type (e.g. upgrade, new bypass/road on new alignment, TSM/TDM measures, etc.). The following sections explain that we believe the SDEIS should not have dismissed upgrade alternatives along Segments 4 and 7, should have more fully considered shorter bypass options for Segment 7, and should have incorporated TSM

measures with all upgrade/bypass proposals. Our comments also identify the need for more information to more fully describe the selection process for the preferred alignment options for Segments 4 and 7 and how those preferred alignments are consistent with the requirements of the Clean Water Act.

Upgrade Alternatives

According to the SDEIS, the proposed action involves new roadway construction for Segments 4 and 7 that would result in the direct loss of over 106 acres of wetland and associated wetland habitat; approximately 60 acres of the loss is to forested wetland habitat. As stated in our previous comments on the DEIS, based upon our experience with highway projects throughout New England, upgrade alternatives which meet the project purpose and are practicable typically result in less adverse impact to wetland and other aquatic ecosystems than new location highways which affect undisturbed areas. Given the potential for such extensive adverse impacts, we believe it is critical to consider upgrade alternatives to a 4-lane divided highway. The traffic analysis does not appear to support the need for a 4-lane divided highway and the SDEIS indicates that Segments 4 and 7 could initially be built as a 2-lane highway and widened in the future as conditions warrant (SDEIS pages 2-20, 2-38).

Typically, smaller scale upgrades promote avoidance of environmental resources and greater flexibility to avoid structures and other cultural elements. The SDEIS does not clearly demonstrate that new roads with associated increased environmental and social impact are warranted to achieve the intended outcome. For Segment 7, for example, the upgrade of Route 1 through the downtown was dismissed in part because it would be inconsistent with the City's vision for the downtown. With respect to Clean Water Act permitting, we are in agreement with the Corps of Engineers' position on this point that community planning objectives have "no real bearing on determining practicability or meeting the basic project purpose." Moreover, mitigative measures (for parking and building use) can be undertaken to minimize the impacts of this alternative to the community. We understand the City of Presque Isle's desire for a vibrant downtown that is characterized by low vehicular speeds, reduced congestion, reduced noise, and that provides a walkable, bikable environment. We believe that upgrade solutions that provide these benefits as well as reduce environmental impacts should be explored more thoroughly. Much could be learned from other areas of the country that have faced these issues and pursued community-sensitive upgrades to existing roads instead of bypasses. Maryland DOT, for example, has worked with several communities to develop alternatives to bypasses in situations similar to those in Presque Isle. Consultations with them or with planners trained in smart growth design could lead to viable solutions that would be far less costly, economically and environmentally, than a bypass.

Shorter Bypass Alternatives

The SDEIS discusses 6 eastern alignments and 2 western alignments for the Presque Isle Bypass. All the eastern bypass routes are approximately 10 miles in length and start on Route 1

approximately 7 miles south of the city and end on Route 1 approximately 3 miles north of the city. All eastern alternatives originate from the same southern location, well south of Presque Isle. The scope of the alternatives analyzed in the SDEIS should be expanded to examine other potentially less environmentally damaging options including shorter (partial) bypass alternatives for the Presque Isle bypass, perhaps in combination with upgrades and TSM methods. It is unclear whether other starting locations closer to downtown Presque Isle were examined. We believe shorter bypass alternatives that originate closer to the downtown area should be more fully considered. For example, if the bypass began several miles further north, perhaps in the area of where MM&A railroad tracks cross Route 1, the road could be several miles shorter and still serve the same bypass function. Such a design would presumably result in much less wetland loss as well as less fragmentation of existing aquatic systems. There do not appear to be any other constraints, such as home takings, that would render such choices infeasible. Part of the shorter bypass could also be placed next to an existing road (Route 10) further reducing fragmentation to the aquatic landscape.

Some reductions in direct aquatic impacts (and aquatic habitat fragmentation) may also be possible for Segment 4, the Caribou Connector, if shorter alignments were adopted. For example, the 3 alignment options in the SDEIS do not include an alignment that closely follows the existing road network. We recommend that the FEIS consider an alignment that uses the existing Route 1 alignment (as a partial upgrade) as it extends north-south before it extends west to join Route 161. These measures would appear to reduce the aquatic impacts and should be fully considered in future NEPA/404 analyses.

TSM/TDM Alternatives

TSM and TDM actions were dismissed as stand alone alternatives in the SDEIS even though the analysis indicates that TSM measures might reduce travel time through downtown Presque Isle by improving intersection performance/traffic flow. According to the SDEIS the primary reason TSM/TDM measures were eliminated is because they would not reduce the "high level of through truck traffic in the downtown and their associated noise and air impacts." The proposed Segment 4 connector is expected to reduce downtown traffic in Caribou by 41 to 48 percent (measured in vehicles per day) resulting in a reduction of 20 to 35 trucks daily depending on the corridor selected. Segment 7 bypasses of Presque Isle to the east are expected to reduce overall traffic in downtown Presque Isle by 52 percent including 870 trucks (a reduction of 870 trucks from a no action projection of 1000 trucks daily) (see SDEIS page 4-4 and 4-5). While we agree that TSM/TDM measures alone may not be likely to meet the purpose and need for either Segment 4 or 7, we continue to believe that they should be considered in combination with any alternative considered for both segments.

Route 1-161 Connector, Caribou (Segment 4)

Segment 4 is common to all four SDEIS Corridors. It is a project that involves the construction of a new 5.5-mile east-west highway (according to the SDEIS to be built as a 2-lane facility initially with provisions to expand to 4-lanes as the need warrants) that would connect the Route 1/Bennett Drive intersection with Route 161 in Caribou. The SDEIS explains that the primary impacts from the alignments considered are to agricultural lands and wetlands. Direct wetland impacts (for the four lane cross-section with a 300-foot right-of-way) along the three Segment 4 build alignment options are substantial: approximately 24 acres for Alignment Option 1; 51 acres for Alignment Option 2; and 65 acres for Alignment Option 3. Impacts to agricultural lands can be classified by impact to active farmland (Option 1--81 acres of impact; Option 2-59 acres of impact; Option 3-49 acres of impact); impact to prime farmland soil (Option 1--71 acres of impact; Option 2-107 acres of impact; Option 3-119 acres of impact); and farmland of statewide importance (Option 1--55 acres of impact; Option 2-51 acres of impact; Option 3-48 acres of impact). While the SDEIS explains that disruptions to farming operations are minimized by the north-south configuration of Alignment Option 2 (avoiding/reducing the subdivision of fields), the SDEIS concludes that the impacts to agricultural land are "considered minor when compared to the available agricultural land in the Study Area." (SDEIS pages 2-33 and 4-18). Option 2 for Segment 4 was identified as the preferred alternative in the SDEIS (SDEIS page 2-49) based on reduced impacts to wetlands and Section 4 (f) resources as well as an improved ability to connect to Route 1 and Segments 3 and 5 in the future. We found that the criteria for the selection of Alignment Option 2 do not appear to be supported by information presented in the SDEIS. For example, both Alignment Options 1 and 2 have identical impacts to 4(f) resources (the National Register boundary for the Banked Dairy Barn, New Sweden Road, Woodland and the Aroostook Valley Trail-see SDEIS pages 5-17 through 5-19). Also, according to the SDEIS analysis, Alignment Option 2 will impact twice as much wetland area as Alignment Option 1 (51 acres vs. 24 acres, respectively) and the impacts are to forested wetlands. Of the 3 build alternatives, it would appear that Option 1 has the least amount of direct and indirect aquatic impacts. We understand the challenge MDOT faces in trying to minimize impacts to both farmland and aquatic resources. We also note that it may be difficult for MDOT to demonstrate that Option 2 can meet the alternatives test during the eventual Clean Water Act permitting process.

Presque Isle Bypass (Segment 7)

Segment 7 is a proposed new highway that would bypass the Presque Isle downtown and is intended to reduce overall traffic in Presque Isle, especially truck traffic. The new bypass would begin at Route 1 near the Presque Isle/Westfield town line and extend north, east of downtown Presque Isle, approximately 10 miles to rejoin Route 1 in the vicinity of Route 210. Six potential alignment options were considered in the SDEIS. Direct impacts to wetlands among the Segment 7 alignment options vary from approximately 20 acres for Alignment Option 4 to 126 acres for Alignment Option 5. According to the SDEIS all of the build alternatives are expected to have large impacts to forested wetland systems and total impacts (direct and indirect) that will

be moderate to severe. Briefly described, the wetland impacts are as follows:

Alignment Option 1 would impact approximately 64 acres in 32 wetlands in 15 systems (approximately 3,000 acres). The majority of the impacts would be to forested wetland (approximately 49 acres).

Alignment Option 2 (the preferred option) would cause the loss of approximately 55 acres of wetland in 36 wetlands in 15 systems more than half of which would occur to forested wetland (approximately 38 acres). Impacts to one wetland system are expected to be severe because the alignment bisects a large wetland that is not near any roads, and the impact location is in a wide portion of the wetland.

Alignment Option 3 would affect approximately 53 acres of wetland in 11 systems. The majority of losses would be to forested wetland (approximately 50 acres), with fewer impacts to scrub-shrub wetland (approximately two acres) and emergent marsh (< 1 acre).

Alignment Option 4 would result in the loss of approximately 20 acres of vegetated wetland among 22 wetlands of which most (approximately 15 acres) are forested. Smaller amounts of shrub (approximately three acres) and emergent wetlands (approximately two acres) would be affected.

Alignment Option 5 would result in the loss of approximately 126 acres of wetland across 13 wetland systems. Most of this loss (approximately 119 acres) would be of forested wetlands, with small amounts of emergent marsh (approximately five acres) and scrub-shrub wetland (approximately two acres).

Alignment Option 6 would result in the loss of 24 acres of wetland in 15 wetlands. Most of this loss (approximately 22 acres) would be of forested wetlands, with very small amounts (approximately one acre) each of scrub-shrub wetland and emergent marsh losses.

Farmland impacts from the options considered for Segment 7 range from 168 acres of active farmland impacted by Alignment Option 5 to 296 acres of active farmland with Alignment Option 6. Impacts to areas designated as farmland of statewide importance range from 5 acres to 85 acres (although information was only available for Options 1-3). (SDEIS page 4-18) Alignment Option 2 was designed based on coordination with farmers to develop the "least disruptive farmland alignment for the Presque Isle Bypass." (SDEIS page 4-19) Option 5 was designed to minimize farmland impacts "without regard to other resources" while Option 6 was designed to minimize wetland impacts "without regard to farmland impacts." (SDEIS page 4-19) Options 5 and 6 were developed in response to a Corps of Engineers request to provide a characterization of the low end (minimum) impacts to wetlands and farmland.

As stated above, we believe the potential for significant impacts to wetlands and aquatic habitat warrants the reconsideration of less damaging upgrades, shorter and partial bypass options, and

2-lane alternatives to reduce the potential for direct and indirect wetland impacts and property takings. The SDEIS explains that Alignment Option 2 was selected as the preferred alternative alignment because "it offers the best balance between wetland and farmland impacts." (SDEIS page 2-49). EPA generally supports the presentation of alternatives that characterize the maximum impacts to both wetland and farmland resources (with impacts to one reduced at the expense of another) for purposes of bracketing the potential for impacts in the NEPA analysis. While attempting to balance wetland and farmland impacts is one possible strategy for selecting a preferred alternative, it would not likely be consistent with the alternatives test during the eventual Clean Water Act permitting process.

Vernal Pools

For the SDEIS, a more detailed analysis of wetlands in the study area was undertaken to facilitate a greater understanding of potential wetland impacts along each of the corridor segments. The document states that "wetland boundaries within the SDEIS Corridors were refined from the DEIS by stereoscopic interpretation of aerial photos flown in May 2003." Chapter 3 of the SDEIS-Affected Environment, Section 3.4.3-evaluates significant vernal pools. However, the analysis is limited and does not map or attempt to identify their location relative to the new bypasses proposed. It is not clear why vernal pools were not mapped and identified as part of the analysis for the SDEIS. We note the pledge in the SDEIS to include mapping information for vernal pools in the FEIS. We support the inclusion of this mapping information and believe it should be accompanied by a discussion of appropriate measures to avoid and minimize impacts to these sensitive aquatic resources and adjacent upland areas that provide critical habitat for many vernal pool-dependent species.

Invasive Species

The SDEIS does not address invasive species and methods to control their spread as a result of the proposed actions. Generally, invasive species thrive in disturbed areas because they lack predators and other natural controls, and they can tolerate and adapt to a variety of environmental conditions. Invasive species threaten the diversity or abundance of native species and the ecological stability of the whole habitat. The disturbance to wetland habitats as a result of the project can increase the potential for invasive species to take hold and significantly alter the larger aquatic systems within and adjacent to the proposed project.

Mitigation

The preferred bypass options will directly impact approximately 106 acres of wetland with potential indirect and cumulative impacts to 278 acres of wetland in the corridor (SDEIS page 4-118). The SDEIS proposes using a 2:1 ratio to determine the appropriate size of a given mitigation site. Pending a more thorough evaluation of alternatives and more accurate information on the extent and severity of direct, secondary and cumulative adverse impacts to aquatic resources, a decision on compensatory mitigation is premature. For eventual Clean

Water Act permitting, we note that MDOT should focus on the loss of wetland function in the landscape, then consider areas most suitable for restoration, creation and/or preservation.

Secondary & Cumulative Impacts

The assessment of secondary and cumulative impacts is an improvement over that contained in the DEIS. Nevertheless, we believe it falls short on the following issues that should be addressed in the FEIS. First, the SDEIS concludes that it is difficult to predict the effect of Segments 4 and 7 on existing businesses in Presque Isle and Caribou. We believe, however, that some effort should be made to predict such effects. We understand that it may be difficult and time-consuming to collect data and information from existing businesses concerning the potential economic impacts of traffic diverted to a bypass. This is not the only manner in which this question may be addressed, however. One alternative approach is to examine one or more similar communities in which similar transportation projects were constructed. The development patterns that followed construction of the transportation improvements in these communities could be used to forecast reasonably foreseeable patterns in Aroostook County. Not only would this approach enable an assessment of the likely impacts on existing businesses, but it also would help validate the projections made in the SDEIS concerning new highway-related businesses in Presque Isle and Caribou. Second, we note that the assessment of secondary impacts relies on current zoning to project future growth. Zoning can change, and as development pressure grows at new interchanges, the pressure to rezone or grant variances may increase. Some assessment of the potential for such changes should be made.

Given that economic development is part of the project purpose, we believe there needs to be a broader discussion of factors other than transportation improvements that influence the overall economy of the region, as we noted in our comments in the DEIS. This is particularly important since, according to the SDEIS, Segments 2, 4, and 7 will produce only modest economic benefits for the region, particularly post-construction, and these three actions are not likely to meet one of the two stated purposes of the overall transportation project. Segment 7, for example, will produce 11 additional jobs in 2020, 24 in 2030, and 27 in 2035, which as the SDEIS acknowledges, will have relatively small effects on the economy. Given that funding for additional segments may or may not be available in the future, the document should describe ongoing and planned activities that will achieve the stated goal of helping to maintain and expand Aroostook County's economy.

Water Quality

Surface Water Resources

Under Public Drinking Water Supplies (Chapter 3.4.2.1 Water Resources, Table 3-30) please include a list of the public drinking water sources in the study area (as noted below) that have also been identified as impaired under the Clean Water Act (Section 303(d)) or watersheds of concern to the state of Maine.

<u>Waterbody</u>	<u>Town Served</u>	<u>Water Quality Impairment</u>
Youngs Lake	Mars Hill	Classified as Lake at Risk from new Development
Presque Isle Stream	Presque Isle	CWS 303d list for Aquatic Life, Nutrients and Bacteria,

For the potential impacts to St. John River from stormwater runoff at crossings at Cyr Rd and Cove Rd (Figure 31), please identify the stormwater BMPs that will be required to minimize impacts.

Ground Water

Segment 2, Option 1 - This alignment would directly intersect one (1) wellhead protection area and pass close to one (1) wellhead protection area on Jepson Road in New Sweden. The water supplier responsible for these two (2) wellhead protection areas should be notified as required by Maine Public Law 761. This law requires public water suppliers be given an opportunity to review proposed development projects within their source water protection area. (30-A MRSA). We recommend that the BMPs implemented be consistent with the Maine Stormwater Management Law, the Maine Site Law and the recommendations in the Maine Drinking Water Program's Source Water Assessment. Please contact Mr. Andrews Tolman at the Maine Drinking Water Program at (207) 287-6196 for more information.

At-risk Watersheds (page 3-70)

- We recommend that you delete sentences 3 & 4 that refer to the Unified Watershed Assessment (the UWA was a one-time exercise conducted and submitted to EPA in 1999). Instead please refer to Maine's 2004 Integrated Water Quality Monitoring and Assessment Report, submitted to EPA in accordance with Sections 305(b) and 303(d) of the Clean Water Act to research water quality impairment status. The lists of impaired waters are found in the appendices of the report (Category 5 for "303(d)-listed" waters), and are organized by water body type and 10-digit HUC identifier.

Web reference: <http://www.maine.gov/dep/blwq/docmonitoring/305b/index.htm#2004>

- We recommend that you revise the last sentence to reflect that there are several water quality limited waterbodies or impaired streams and lakes within the study area. For example, Cross Lake and Daigle Brook are both listed as impaired waterbodies under §303(d) of the Clean Water Act (the causes for both impairments relate to excess nutrient enrichment. (Refer to Volume 1 of 3, page 4-51).

Potential Impacts to Streams (Table 4-22) and Lakes (if applicable)

For an assessment of water quality impacts, we recommend that the FEIS show the locations of streams and lakes in the project area listed as "303(d)-listed" impaired waters (or listed in the more comprehensive Chapter 502 stormwater-related lists), or list the impaired or especially sensitive waterbodies with direct watersheds at risk from this project.

Measures to Reduce the Impacts of Stormwater Runoff (SDEIS page 4-52)

Stormwater runoff from land development with impervious (hard, non-absorptive) surfaces is currently the largest contributor to the impairment of water quality in New England. Stormwater carries a mix of pollutants from roads, parking areas, etc., into water bodies during and after rainfall, and also contributes large and accelerated flow volumes. Greater quantities of stormwater runoff adversely affect the physical structure and stability of streams and the habitat for aquatic life, while increased runoff of pollutants create water quality problems, and less base flow is available to aquatic life in streams during low flow periods.

The August 2005 SDEIS Technical Report (page 4-43) mentions that mitigation measures to protect water quality will be developed as part of the final design of the Preferred Alternative. Although brief mention is made that mitigation measures "may" include stream crossings, and greater levels of protection for designs in "corridors that affect sensitive or salmon rivers" (SDEIS page 4-123), those sensitive or impaired waterbodies (for purposes of the Clean Water Act) are not identified for the different project options. For this reason, it appears to be premature for the SDEIS to conclude that no additional measures to protect water quality are necessary or proposed (SDEIS page S-15).

The SDEIS (page 4-52) appropriately refers to the MOA between the MDOT and the Maine DEP to achieve stormwater quantity and quality controls "reasonably consistent" with the DEP's Stormwater Management Rules and MEPDES general permit for construction activity. The SDEIS generally mentions that the proposed road projects will be constructed in accordance with the MDOT's Best Management Practices manual for erosion and sedimentation control, primarily focusing on avoiding impacts during construction.

The SDEIS (page 4-123) mentions that other stormwater management measures (to reduce impacts on stream hydrology and water quality impacts) "may" be included, but there is no explanation of what level of stormwater protection will be required under Maine's revised stormwater law effective since November 2005.

Web reference: <http://www.maine.gov/dep/blwq/docstand/stormwater/rule500and502/index.htm>

For example, the SDEIS appears to commit to only the most basic stormwater management standards which address erosion and sedimentation control. Maine State Law has four additional categories of stormwater standards (beyond the "basic" ones): general, flooding, urban

impaired stream, and other. General BMP standards mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide pollutant removal and temperature control (in addition to the basic standards) for stream and wetland watersheds (of one acre or more impervious area, or 5 acres or more of developed area). Additional mitigation is also required for urban impaired streams, and additional flooding standards apply (stormwater management systems) if a project results in 3 acres or more of impervious area or 20 acres or more of developed area. A fifth category of standards addresses management of stormwater discharges (converting concentrated flow to sheet flow to prevent erosion of the downstream receiving area) and discharge to wetlands.

We recommend that the analysis describe the extent of impervious area, extent of developed area, as well as the potential for hydrologic changes, and increased pollution and impacts to aquatic habitat as a result of the proposed projects (also mentioned below).

Managing Road Salt

Impacts to water quality from the application of road salt have emerged as an important issue for highway projects since we submitted our original comments on the DEIS. The proposed highway work associated with Segments 2, 4 and 7 has the potential to fill wetlands which help to purify water and will result in an increase in impervious surfaces that will contribute additional sediment, nutrients, and other pollutants of urban runoff, such as metals, oil, and gas, into streams and ground waters. Additionally, secondary development associated with the highway projects will include the replacement of natural vegetation by impervious surfaces which, in combination with increased sources of pollutants from development will increase non-point source pollutant loading to nearby streams and aquifers. The SDEIS generally mentions that the proposed road projects will be constructed in accordance with the Maine DEP Best Management Practices manual for erosion and sedimentation control and concludes that no additional measures to protect water quality are necessary or proposed. The discussion is primarily focused on mitigation measures that will help to avoid impacts due to erosion and sedimentation during construction, not on the runoff of chemicals (including road salts) to surface and ground waters.

Again, we recommend that the analysis more fully describe the potential for hydrologic changes, increased pollution and impacts to aquatic habitat as a result of the proposed projects. It has been our experience that traditional BMP's do not effectively prevent the movement of deicing compounds to surface or ground waters. Therefore, the EIS should address the potential for impacts to water quality from the application of road salt and should describe how the project would comply with applicable Maine water quality criteria for chloride, sodium, and existing antidegradation statutes for surface water quality, or with the national secondary drinking water standards. We are concerned about road salts because they can pose a significant risk to sensitive aquatic species and water supplies in the project area. In addition, salt in water supplies is especially a concern to older populations and those with high blood pressure. We suggest that the FEIS provide a description of baseline water quality conditions in project area surface and ground waters (including existing salting practices) and the documents should also discuss any

planned instream sampling of pollutants prior to and following highway construction to demonstrate BMP design, feasibility, and effectiveness. EPA is willing to coordinate closely with MDOT/FHWA and Maine DEP to help develop a plan to understand baseline water quality conditions and to evaluate the impacts of road salt application associated with the projects on water quality and to present that information in the EIS.

In addition, EPA New England recommends that MDOT/FHWA contact the Maine DEP Sand and Salt Pile Program Coordinator, Erick Kluck at (207) 287-3901 regarding potential siting for any salt and sand storage piles associated with the proposed projects. Public Drinking Water Suppliers are also required to be notified if potential facilities may be sited within drinking water source protection areas as required by Maine Public Law 761. This law requires public water suppliers be given an opportunity to review proposed development projects within their source water protection area. (30-A MRSA).

Air Quality

Conformity

The proposed highway facilities associated with the alternatives in the Aroostook County Transportation Study all by-pass the Presque Isle Maine PM10 (particulate matter with an aerodynamic less than or equal to a nominal 10 micrometers) attainment area¹ which has a PM10 maintenance plan in place. Hence, the proposed project is not located within (1) a nonattainment area or (2) attainment area with a maintenance plan, and is not subject to transportation or general conformity.

Presque Isle Maine PM10 Attainment Area with a Maintenance Plan

The Supplemental Draft Environmental Impact Statement now identifies the Presque Isle Maine PM10 attainment area with its maintenance plan, and indicates the build alternatives will not adversely impact this area.

Air Quality Analyses and Technical Support

Without reviewing the MOBILE and CAL3QHC modeling EPA can not make an independent

¹That area of the City of Presque Isle bounded by Allen Street from its intersection with Main Street east to Dudley Street, Dudley Street south to Cedar Street, Cedar Street west to Main Street, Main Street south to Kennedy Brook, Kennedy Brook northwest crossing Presque Isle Stream to Coburn Street, Coburn Street northwest to Mechanic Street, Mechanic Street west to Judd Street, Judd Street northeast to State Street, State Street northwest to School Street, School Street northeast to Park Street, Park Street east to Main Street. This defines the 0.6 square mile area which circumscribes the area of high emission densities and ambient PM10 levels. (60 FR 2885, January 12, 1995)

evaluation of the mesoscale and microscale air quality analyses.

In our comments on the DEIS EPA requested that all technical support documentation for the intersection carbon monoxide analyses be made available, including the MOBILE emission factors input files, the CAL3QHC Version 2.0 input and output files and all technical assumptions and parameters. In the response to comments, ID 5.48, it was stated that, "the technical support documentation is available in the SDEIS environmental technical report". Unfortunately, the air quality technical support documentation was not included in the SDEIS documents submitted, nor available on Maine Department of Transportation website:

<http://www.state.me.us/mdot/major-planning-studies/major-planning-stds.php> or

<http://www.vhb.com/aroostook/sdeis.htm>.

Documents submitted included:

- Supplemental Draft Environmental Impact Statement - Volumes 1, 2 and 3 (Volume 1 - Text, Volume 2 - Figures, Volume 3 - Response to Comments);
- Route 1 Corridor Management Plan - Caribou to Van Buren;
- Route 1 Corridor Management Plan - Presque Isle to Caribou;
- Corridor Traffic Analysis Technical Memorandum;
- Economic Technical Report; and Environmental Technical Report - Volumes 1 and 2 (Volume 1 - Text, Volume 2 - Figures).

We have contacted the consultant that helped prepare the SDEIS and anticipate receiving the requested technical support documentation in the near future.