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MDIFW response to Downeast LNG submittals from May 18, 2007 through July 6, 2007

INLAND WATERFOWL/WADING BIRD HABITAT IMPACTS

Downeast LNG has significantly reduced the acreage of High and Moderate value Inland Waterfowl/Wading Bird Habitats (IWWH) that will be impacted by the pipeline. The Inland Wetland Compensation package proposed in section 4.1.2 of Attachment 13 is acceptable to compensate for the remaining unavoidable impacts to IWWH.

VERNAL POOL IMPACTS

In the latest revision, Downeast LNG has significantly reduced the acreage of vernal pool habitat that will be impacted by construction of the send-out pipeline. However, more information is needed to properly evaluate the remaining unavoidable impacts:

** Missing Vernal Pools: In Table 3 of Exhibit DLNG-24-B (attached) estimated upland buffer impacts to 8 SVPs are provided. Firstly, in Woodlot's original Vernal Pool Report (May 2007) and in their 6/12/07 correspondence to DEP they identify a 9th SVP with potential upland buffer impacts -- Pool# 164 East (milepost 28.3). It would help to know if this pool was left out of the latest impact analysis inadvertently or because of a planned rerouting of the pipeline corridor. Labeling the pool on the pipeline maps as was done for the other SVPs would help to clarify. Secondly, in IFW's review of the May 2007 Woodlot Vernal Pool Report (also attached) it was pointed out that single site visits to assess vernal pool wildlife use is generally viewed as inadequate due diligence. As such, we asked that vernal pool # 78 be considered as significant (given the high number of salamander egg masses counted at the early date of May 7th) and treated with the same habitat management standards as other SVPs in the project. We recommend that Woodlots label this pool as potentially significant on the maps and in the associated impact analysis and that avoidance and minimization measures be taken to protect the pool.

** Potential SVPs: In Exhibit DELNG-24-C, map 3 (of 6), I see that at least 2 "potential significant vernal pools" are mapped along the pipeline corridor. We need further information on these pools to understand what is meant by this "potential" status, what the estimated impacts are to the upland buffers, and what, if any, measures are being taken to minimize impacts. I may have missed something but I couldn't find this information in the materials provided.

** Estimating SVP Upland Impacts: In Table 3 of Exhibit DLNG-24-B (attached) estimated upland buffer impacts to 8 SVPs are provided but it is still not known how these "impacts" are being calculated. My understanding is that you asked Woodlots for clarification of this issue (as well for IWWHs) by providing close-up maps of each SVP (pool + 250 ft radial buffer) with a) the ROW outline superimposed, b) a delineation of permanent versus temporary project impacts, and c) a description of current and future land use (and thus habitat potential) within the 250 zone

surrounding each SVP. Without this information it is not possible to understand what is meant by "percentage of upland buffer impacted" (Table 3) and thus whether proposed compensation amounts (Table 1) are appropriate.

TIDAL WATERFOWL/WADING BIRD IMPACTS

The compensation offered to mitigate unavoidable impacts to Tidal Waterfowl/Wading Bird Habitat is acceptable.

SHOREBIRD AREA IMPACTS

Status of Mill Cove as a Significant Wildlife Habitat

In response to Downeast LNG's claim that Mill Cove does not qualify as a Significant Wildlife Habitat (SWH) shorebird feeding area because Greater and Lesser Yellowlegs were combined and treated as one species, MDIFW did a new analysis of the data, omitting yellowleg species observations and including only observations of individual species. The updated analysis included survey data collected by Woodlot Alternatives in 2006. Mill Cove does qualify as a SWH shorebird feeding area because it supports over 12% of the Lesser Yellowlegs and over 10% of the Western Sandpipers in the Cobscook Bay Shorebird Survey Unit.

The purpose of the shorebird survey units is to ensure that the full suite of species is preserved in each major coastal watershed in the state. Cobscook Bay does not have the extensive saltmarsh habitats favored by greater and lesser yellowlegs that the southern Maine shorebird units have, consequently Cobscook Bay supports lower numbers of Lesser and Greater Yellowlegs. The few areas in Cobscook Bay that sustain Lesser and Greater yellowlegs species are worthy of SWH protection to preserve species diversity in Cobscook Bay.

Mill Cove is one of only three shorebird sites in Cobscook Bay Survey Unit that meets SWH criteria for Lesser Yellowlegs. Shorebird numbers observed in Mill cove in 1991, 1997, and 2006 have remained consistent; whereas numbers of shorebirds observed in many other shorebird areas in Cobscook Bay have declined dramatically since 1990.

Effect of development on shorebirds

Woodlot Alternatives suggests there can be successful coexistence between shorebirds and commercial development. They use examples of shorebirds observed feeding in heavily developed areas on the Fore River, Portland Jetport, Thompson Point, I295, etc. These areas are not fair comparisons with the proposed Downeast LNG in Mill Cove. The areas listed in southern Maine are large extensive mudflats allowing feeding shorebirds ample space to feed away from disturbances associated with shoreline development. Shorebirds and waterfowl feeding at these sites are visually buffered from the Jet port and interstate traffic by relatively high embankments and vegetation. There is no such visual screen between feeding shorebirds and waterfowl in Mill Cove and the proposed Downeast LNG 3,800 foot pier.

The heavily developed areas cited above do indeed support feeding shorebirds. Unfortunately, there is no data to show what effect development has had on the shorebirds. We don't know, for example, if the species observed there today are the same as would have been observed before development, or if are we seeing a degraded species assemblage. We also don't know if shorebird numbers in these areas have declined because of the development.

The U.S. Shorebird Conservation Plan (Brown et al. 2001) lists habitat loss, human disturbance, and habitat degradation associated with coastal development as significant threats and reasons for declining shorebird populations. Shorebird scientists agree that when migrant shorebirds have a limited period of time at a stopover place, with limited foraging space, behavioral disruptions during foraging have consequences in terms of needed weight gain (Burger et al. 2004). Pfister et al. (1998), in their study of shorebirds stopping over in Massachusetts on southward migration, found that birds feeding in areas with high disturbance rates had lower departure weights and were half as likely to return the following year as those with higher departure weights feeding at less disturbed sites.
West et al. (2002) suggest disturbance can be more damaging than permanent habitat loss. There are many more studies with similar findings.

Compensation package
To compensate for unavoidable impacts to shorebirds, Downeast LNG has proposed a combination of habitat rehabilitation, habitat preservation (through the in-lieu-fee program) and implementation of a pre-, during and post-construction shorebird survey by a third party. Shorebirds return to the same general area year after year as they migrate, so rehabilitation of a site in Pleasant Bay, about 43 miles from the project site, does not offset loss of an area in Passamaquoddy Bay. Restoration of roosting habitat does not properly compensate for impacts to feeding habitat. Site P2 is very similar to an adjacent area that has been diked and ditched in the past, yet the adjacent site harbors much higher numbers of shorebirds. It is doubtful that simply restoring better tidal flow to the pannes, as is proposed, will increase the value for shorebirds.

For the above stated reasons, MDIFW feels that the compensation package offered is not acceptable to offset unavoidable impacts to shorebird habitat in Mill Cove. We recommend denial of NRPA and SLODA permits due to unreasonable impacts to Significant Wildlife Habitat.

Literature cited
Brown, S., C. Hickey, B. Harrington, and R.Gill, eds. 2001. The U.S. Shorebird Conservation Plan, 2nd ed., Manomet Center for Conservation Sciences, Manomet MA.

Burger, J., C. Jeitner, K. Clark and L. J. Niles, 2004. The effect of human activities on migrant shorebirds: successful adaptive management. Environ. Conservation 31(4) 283-288.

Pfister, C. M., J. Kasperzyck, and B. A. Harrington. 1998. Body fat levels and annual return in migrating Semipalmated Sandpipers (Calidris pusilla). Auk 115:904-915.

West, A. D., J. D. Goss-Custard, R. A. Stillman, R. W. G. Caldow, S.E. A. le V.dit Durell, S. McGrorty 2002. Predicting the impacts of disturbance on shorebird mortality using a behaviour-based model.