

RESPONSE TO NH DEPARTMENT OF ENVIRONMENTAL SERVICES
ADDITIONAL DATA REQUESTS

WETLANDS BUREAU

9. DES review of the wetland impact plans found that portions of the project did not appear to fully avoid and minimize wetland impacts within the ROW. Please address each of the following plan specific questions:

We appreciate DES's identification of the 20 locations along the route where you ask whether the Project has fully avoided or minimized wetland impacts. Northern Pass's engineering and environmental consultants have taken time to review each of these locations, and we have concluded that it may be possible to adjust the locations of some proposed structures and associated temporary work pads or adjust the location of access roads to reduce impact further. The final design layout will depend on the constructability walk downs that will be conducted in 2017. The Project design team and its construction contractors will continue to review opportunities to reduce wetland impact, and, as is the case in all large construction projects, opportunities for adjusting the location of access roads, especially, will present themselves at these constructability walk downs. If these small adjustments are determined at a time when the SEC can consider them, we will request approval from the SEC and the resource agencies. Otherwise, we would expect that DES will be able to exercise its delegated authority from the SEC to address them. We also would seek an amendment to the Section 404 permit from the Army Corps, as well.

- a) On plan sheet 006, temporary impact within wetland PB27 could be avoided by relocating the access road to the southeast, and wetland PB26 avoided by moving the road northwest.

The land to the west of wetland PB26 is much steeper than the proposed access route, with the wetland located at the toe of slope. The steeper locations would require additional grading or contouring of the land with greater disturbance to the immediate terrain and we do not recommend shifting the access road at that wetland location. We may, however, be able to adjust the access road location to the southeast of wetland PB27, absent other countervailing reasons identified during the constructability walk downs.

- b) Plan sheet 007, wetland PB23 could be avoided by moving the road east.

We agree that shifting the access road to the east of wetland PB23 would reduce wetland impacts some, but it would also shift the road to steeper, less uniform slopes with greater overall impact on the immediate landscape. It would also appear to shift the location of the access road to where it would necessarily impact the confluence of two intermittent streams, likely resulting in greater

stream effects at that more sensitive location. From an engineering standpoint it is feasible to make this shift but we are not sure that the tradeoff in impact merits a change here. With that said, we welcome DES's input on this.

- c) Plan sheet 008, it appears that Transfer Station 1 could be relocated further east to minimize impacts.

The project design team considered shifting Transition Station 1 farther to the east on the parcel but rejected doing so for several reasons. First, that would entail impacts to portions of the wetland complex having a wetter hydrology as it contains ephemeral streams and side-slope wetlands that are largely avoided with the current design. Also, although the portion of the forested wetland PB10 to the west of the proposed access road would not be impacted if the transition station were to be placed further to the east, the overall wetland impact from this shift would likely be greater due to the slopes and necessary layout of the design to provide access to the station. In addition, placing the transition station further to the east would make the facility more visible from Route 3 and the adjacent property. For these reasons, and others not related to wetlands, the transition station was proposed for the present location.

- d) Sheet 011, the access road could cross wetland CK30 further south, and wetlands CK29 and CK28 could be completely avoided.

We agree that the access road can be shifted as suggested, and will confirm that during constructability walk downs.

- e) Sheet 012, tower DC-29 could be relocated outside of wetland CK20 (either east or west).

DC-29 could be moved approximately 100 feet to the west without changing the structure height. However, this reduction in permanent wetland impact would also entail additional temporary impact from additional clearing of forest land. This shift is feasible, and we will propose a specific design modification for this location after the construction walk down with a recommendation as to which option has the least impact. We welcome DES's input for guidance on this.

- f) Sheet 047, shift access road southwest to avoid wetland S37.

The shift of the access road location to avoid wetland S37 appears to be feasible and the Project will propose that shift if the constructability walk down confirms that that is feasible and less impacting.

- g) Sheet 055 and 056, towers DC-138 and DC-139 could be relocated east or west to avoid impacts to wetland S2 and S1.

The project design calls for these structures to be placed in a location to reduce visibility. The tradeoff between that goal and some modest reduction in impact to low value wetlands associated with prior logging activity weighs in favor of maintaining the current design.

h) Sheet 057, towers DC-142 and DC-143 could be shifted west to avoid wetlands DX261 and DX254, respectively.

Items h through j are related in the context of the line design and are reviewed in a combined way here. This is another example of a potential tradeoff between visual effects and wetlands impact. Overall, the small increase in height of certain structures along the line in this location may be acceptable in order to reduce wetlands impact to wetlands DX253, DX254, DX250 and DX241. Therefore, the project can shift the structures outside of the wetland areas reducing or eliminating proposed permanent impacts; however some temporary impacts associated with work pads and access roads will remain, and these will be minimized to the extent practicable. The exact design modification to achieve this will depend on the constructability walk downs.

i) Sheet 058, towers DC-144 and DC-145 could be moved east outside of wetlands DX251 and DX250.

See response to (h), above.

j) Sheet 059, tower DC-147 could be shifted east to avoid DX241.

See response to (h), above.

k) Sheet 074, tower DC-184 could be moved northwest to avoid wetland DX124, and the access road could be moved southwest to avoid wetland DX123.

This is another example of a design intended to reduce structure height where possible. By moving structure DC-184 to the northwest, we can eliminate a small area of permanent impact and reduce temporary impact as well. Given the location of this structure, moving the structure and access road to minimize impact to wetlands DX123 may be appropriate, even though the structure height would have to be increased 5 feet. This again will be determined at the time of the final constructability walk down.

l) Sheet 078, access road could be moved southwest to avoid wetland DX97.

The location around wetland DX97 presents another question of the tradeoff of reduced wetlands impact at one location and other possible reductions in another

location. We will review this at the time of the constructability walk down and invite DES's input on whether this tradeoff is merited. Another factor to consider is whether crossing the stream at a narrower point is significant, even though the stream will be bridged in any event.

- m) Sheet 083, move access road east to avoid wetland DX33 and DX32.

The location of the access road in the vicinity of wetlands CK28-CK30 should not be changed. This area has been heavily logged and the wetlands are low quality, related largely to past skidder activity. A shift might reduce some wetlands impact but would move the access road to substantially steeper slopes with additional impact of its own.

- n) Sheet 091, move road east to avoid wetland M195.

While shifting the access road to avoid wetland M195 looks possible, the proposed road utilizes an existing logging road through the wetland area and avoids more difficult terrain. This will be reviewed during the constructability walk down to determine whether reduced impact can be accomplished.

- o) Sheet 101, tower DC-258 could be moved northwest to further avoid wetland M147.

Relocating structure DC-258 would require that it be raised by 5 feet. Although this structure is visible from the Signal Mountain Fire Tower, it is a mile away from that location. The benefits of eliminating wetland impact may offset the inconsequential increase in visibility from a very small increase in height of that structure.

- p) Sheet 121, tower DC-306, could be shifted southwest to further avoid wetland DU167.

Structure DC-306 could be moved approximately 100 feet to the southwest to minimize impact on wetland DU167 without raising the structure height. This looks feasible, again subject to final review at the construction walk down.

- q) Sheet 139, the north portion of the access road may not be needed between towers DC-351 and DC-352, as other access points exist. This will reduce impacts to wetland DU36.

The transmission line at the location of structures DC-351 and DC-352 crosses over the existing Granite Reliable Wind Project feeder transmission line. The best access for construction vehicles must take account for the need to maintain proper clearances of the Granite Reliable line, and it will be finalized

at the time of the constructability walk down. If the off-ROW access road can be utilized safely during construction, it may be possible to eliminate a portion of the temporary impacts to wetland DU36.

- r) For long stretches of wetland crossings that occur over several thousand linear feet, (e.g. sheets 169 and 170 for wetland SK37, and sheets 231, 232, 233 and 234 for wetland WF59) could different pole technology be employed to allow for longer spans between towers that would further avoid the overall wetland impact?

The section of the route discussed in this item is in the town of Stark. The line was designed to minimize structure height there, and we do not recommend modifying the design in this location. As is true in other locations along the line where there are multiple structures located within the same wetland or closely associated wetland complex, it will be possible to eliminate one section of the proposed access road, with construction access achieved from either side independently. The specific span cannot be determined, however, until the constructability walk down.

- s) Plan sheet 191, tower DC-485 could be moved north to avoid wetland NU30.

Relocating structure DC-485 as suggested would require an approximately five (5) foot increase in height of structures DC-485 and DC-486. Though these structures are in the area of the Cape Horn State Forest, there appear to be no public access places that would be affected by this small increase in height of the two structures. Therefore, the Project can make that shift, again to be verified upon subsequent constructability walk downs.

- t) Sheet 262, it appears that there is an existing access road through wetland WF24 that could be used. Why wasn't this considered over the proposed road location?

There are two reasons why the existing access road through wetland WF24 is not the preferred approach. First, wetland conditions have developed along that existing access road, so use of that road will result in substantially more temporary impacts. The proposed route is the most direct route and crosses the wetland at the narrowest point. Moving the access road also avoids vernal pool WF-VP24. As with all of these, there is a trade-off of impacted resources depending upon which route is chosen, and it appears that the Project can use either access road at this location.

- u) Sheet 537, there is an existing road east of the proposed access road that could be used to avoid new impacts to wetland F37.

The access route selected at this location is the most direct route to the structure.

That structure is located in wetland, but given the nature of this area, that cannot be avoided. Using the existing access road would require navigating around a substantial ledge outcrop and would result in more temporary impacts to wetland overall.

- v) Sheet 689, why wouldn't the existing road be used on the west edge of vernal pool DF94 to minimize impacts?

We agree that shifting the location of the proposed access road as far away as possible from vernal pool DF94 is appropriate. We will redesign the access at this location with this goal in mind at the time of the constructability walk downs to determine the least impacting practical alternative at this location.