



Wetland Resources
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Mr. Pectol,

I am writing to provide public comment on the Willow Lakes project in Logan, Utah (SPK-2020-00588).

1. The project does not minimize the impacts to wetlands and waters of the U.S. to the extent practicable. Roughly half of the developed area shown on the project maps consists of two large water ski ponds. These ponds are superfluous and not critical to the project's success or financial feasibility. If the ponds were eliminated, the applicant could create 50% more building lots in a smaller overall footprint that could avoid most of the wetlands and waters of the U.S. Section 404 of the Clean Water Act requires the applicant to minimize impacts to the extent practicable, and that threshold has not been met on this project.
2. Based on the National Wetland Inventory (NWI) maps that the applicant is using for the alternatives analysis, the proposed subdivision property would have by far the greatest wetland impact of the five alternatives, and is therefore not the least damaging alternative. The applicant provides the NWI maps for the four alternate properties, but does not include the NWI map for the proposed property, possibly because the NWI maps show roughly 70% of the proposed property as wetland. The NWI maps are not extremely accurate, but if that is what the applicant is using to assess impacts for the four alternate properties, the same source must be considered when assessing the proposed property. The fact that the delineation shows much less wetland than the NWI maps is the subject of my next point.
3. The delineation for the proposed property shows only a small fraction of the wetlands shown on the NWI map. While the NWI maps are not extremely accurate, a discrepancy of this magnitude on a very active floodplain between two rivers, with no disturbance other than agriculture is suspicious. In reviewing the delineation data sheets, I see numerous questionable calls:
 1. There are several sample points where a possible misidentified plant would make the difference between meeting the vegetation criteria or not. I am not familiar with any of the three different wetland delineators who worked on the project, despite working full time in the wetland consulting industry myself in northern Utah for the past 26 years. This property is always heavily grazed and has been under extreme drought stress, which would make vegetation identification challenging, even for an experienced wetland delineator. And a majority of the points were taken in May, before flowers and seed heads have fully formed on many species, making identification even more challenging. *Trifolium repens* (FACU) is identified in numerous areas on this project, but *Trifolium fragiferum* (FAC) is much more common in low-lying pastures in Cache Valley. In May, without flowers, it would be difficult to discern between the two species. The same can be said for *Alopecurus pratensis* (FACW) being misidentified as *Phleum pratense* (FACU). *Alopecurus* is much more common in low-lying pastures in Cache Valley.
 2. The delineation shows very few wetlands in the western half of the project property, and there are very few sample points in that area, despite obvious drainage patterns,

saturation, and inundation being visible in several years of historical imagery. The Logan River regularly floods much of the project property, as can be seen in this 2017 drone footage (<https://www.youtube.com/watch?v=YMzuNltyUeg#t=5.482027>). The view of the camera is mostly to the north, with 1000 West in view, and the Logan River in the foreground. The project property is to the west (left) of 1000 West. At the time this footage was taken, the Logan River was flowing 914 cfs. In exactly 25 out of the past 50 years (1971 through 2021), the Logan River has exceeded 914 cfs (USGS gauge data). Sufficient wetland hydrology clearly seems to be present across much of the project area.

3. Cache Valley soils are notorious for their lack of any hydric soil indicators, possibly due to the high pH in the soils throughout much of the valley. The western half of the project area consists of Provo loam soils. The Provo loam soil is poorly drained, has a shallow water table, and is classified as a Wet Fresh Meadow ecological site by the NRCS. These soils types are certainly capable of supporting wetlands.
4. Wetland A and Wetland B are shown as a bog/fen wetland type. This wetland type is very uncommon and unique in Cache Valley. I assume that since it was classified as a bog/fen that the wetland must have a deep organic soil layer (a histosol). Wetlands with histosols are given special protection under Section 404 of the Clean Water Act, yet both of the wetlands are shown as being permanently filled. What would be the justification for allowing permanent impacts to this unique wetland type?
5. There is no mention in the public documents of what mitigation is being proposed to offset the impacts to the high functioning wetlands and perennial channels that occur on an active floodplain. The mitigation ratio for permanent impacts to high quality wetlands on an active floodplain is typically at least 2.5:1, so the public has a right to know what the applicant is proposing for such a large mitigation project. Logan City officially proposed wetland preservation as mitigation several years ago for a much smaller impact from the Logan River Trail on the south side of the river immediately across from the Willow Lakes project. The Corps response was that the wetlands along the Logan River were not under imminent threat of development, so they did not qualify for preservation credits. Not knowing what the applicant has proposed for mitigation, I don't know that they have proposed preservation, but I just want to bring it to your attention that the Corps did not allow that on the other side of the river. It seems unfair that the public does not have the opportunity to review and comment on the mitigation plan as part of the public comment process.
6. A population of the federally-listed threatened species, Ute ladies'-tresses (*Spiranthes diluvialis*) has been identified on the project property. This is only the second known occurrence of this species in Cache Valley. It is my understanding the project won't directly impact the population, but what indirect impacts from the development might threaten this population? The main concern would be hydrologic changes, since the Ute ladies'-tresses inhabit an extremely narrow hydrologic window (not too wet, not too dry). Another concern will be increased pedestrian traffic in those wetlands due to children and adults recreating in the open space within their private development. Soil compaction and trampling of plants by pedestrians would certainly impact the population.
7. There is currently no FEMA floodplain map for the subject property, but one is nearly complete. Talking to someone who has seen the draft maps, they show a majority of the subject property in the 100-year floodplain. This should be obvious by viewing the video of the property when the Logan River was at only 914 cfs, combined with the fact that the Logan River has exceeded 914 cfs 25 out of the past 50 years. Does this project avoid any scrutiny regarding responsible development in floodplains simply because the map isn't finished? Logan City taxpayers were on the hook a few years back when the city had to purchase roughly ten lots in the Country Manor

Estates subdivision and demolish them. The Country Manor Estates subdivision was built on the floodplain of the Blacksmith Fork River just over a half mile upstream of the Willow Lake project, and the subdivision regularly flooded. Eventually, Logan City decided they could not afford to maintain the regular flood control efforts in the subdivision, so they purchased roughly ten of the most-frequently flooded homes and demolished them at taxpayers expense. It is concerning that Logan City has now approved another subdivision in a floodplain a short distance downstream.

8. The wetlands on the Logan River floodplain provide high quality habitat for a diverse population of wildlife species. The wetlands also provide important flood control and water quality functions due to frequent flooding from the Logan River. We can't keep chipping away at these high value wetland areas in the floodplain and expect to somehow maintain the quality of the Logan River corridor.
9. I am curious why the impacts to Wetland K1 and K2 are shown as temporary, when all the other wetlands impacted by the water ski ponds are shown as permanent?
10. This project has high public awareness due to the popularity of the Logan River as a recreational resource for citizens of Cache Valley, and the public's concern about responsible stewardship of this valuable community asset. There have been numerous articles in the local newspaper, as well as on the radio (<https://www.upr.org/utah-news/2022-04-15/environmental-concerns-over-planned-cache-valley-subdivision>).
11. The applicant states that part of the project purpose is affordable housing. I'm not sure how much this plays into the Section 404 permit decision, but the claim is absurd. Affordable housing is not built around water ski ponds with community boats with hired drivers. The lots are being sold for \$200,000 to \$400,000, according to the developer's website. The multi-family phase of the project is supposedly going to be the final phase of the project. The property is not zoned for multi-family, so a rezone would be required. Once the development is built out with a bunch of million dollar homes, it is highly unlikely that the homeowners would be in favor of a multi-family affordable housing unit being built along the shores of their private water ski pond.
12. The western U.S. is in the midst of an unprecedented drought, with cities and water conservancy districts in northern Utah cutting back on water delivery and implementing water conservation measures. With climate change, it is possible that these conditions could become the new normal. In this arid desert environment experiencing unprecedented drought, it is inconceivable that a project would be approved that creates two large bodies of open water that will lose large amounts of water each day due to evaporation. As Cache Valley continues to grow, groundwater is going to become a much more important source of water for communities in the valley, and we must do everything we can now to protect those aquifers lying under the valley. The water ski ponds would not only allow evaporation of this shallow groundwater, but will also pollute those waters with fuel and oil from the regular boat traffic, and from fertilizer and herbicides from the surrounding lawns.

Given the importance of the wetlands on the floodplain of the Logan River, and the applicants failure to minimize impacts to the extent practicable, I urge you to reject the Section 404 permit application for the Willow Lakes project.

Sincerely,

Todd Sherman

Todd Sherman, Senior Professional Wetland Scientist #1345