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Back ground information for Table Bluff County Park management activities associated with CUP 16-035

The South Spit Interim Management Plan and the associated Consistency Determination has been claimed to be the basis for the vegetation removal from coastal dunes on Table Bluff County Park. Portions of the Park are being considered, through CUP application, to involve coastal vegetation removal. However, neither the SSIMP or CD documents include the intention nor authorization to promote topographical changes to the project area. According to the SSIMP Environmental Assessment (EA) there were to be **no impacts** to geology including lateral spreading, subsidence or erosion.

However, there has been no identified project description or record of an approved CDP or CUP associated with the non-native vegetation removal project conducted on Table Bluff County Park NR or PR zoned parcels. There has there been no MOU between BLM and the County associated with the project.

The Table Bluff County Park project encompassed a half mile of coastline and has converted rare dune scrub habitat without CEQA review. This is unprecedented and out of compliance with the requirements of the Local Coastal Plan (LCP)

The presently described intention (CUP 16-035 application documents) of "enhancing inland sand transport" ie. destabilizing/mobilizing sand dunes, is not identified in the South Spit Interim Management Plan (SSIMP). The effects and extent of mobilization/sand transport has not been officially estimated.

The SSIMP EA identifies "vast eel grass meadows" east of the project area. This critical habitat could be significantly impacted by unmitigated and uncontrolled inland sand transport. There are no mitigation measures identified in the SSIMP for addressing the potential impact to eel grass or other adjacent habitats already established on a very narrow portion of the spit. The Table Bluff CP portion of the South Spit has been identified as an area of high vulnerability for sea level rise. (Laird 2016)

"Lowering foredune elevations will likely make the Habitat Restoration Areas (HRAs) more susceptible to breaching and could increase the likelihood of overwash and sand deposition into the estuary immediately behind the spit" (Carrol 2016)

Humboldt County Code, "...when development in beach and dune areas zoned NR is approved the following mitigation must be required:

17.1.8.1 Minimize disturbance of vegetated dunes

17.1.8.2 Replant vegetation in disturbed habitat areas; 17.1.8.3 Provide measures to control wind blown sand;

Breaching of the South Spit in the area of Table Bluff County Park would significantly jeopardize the Public's access to an important recreational and wildlife area enjoyed by thousands of visitors every year. To date there has been no identified liability policy should that increasingly likely event occur.

There has been no comprehensive assessment of the effects to established wildlife that has occurred on the South Spit following the current level of habitat conversion from dune scrub to dune mat, nor is there any assessment as to what would be the likely cumulative effects to displaced wildlife if such conversion continues. Previous although limited HSU studies report a loss of rodent populations following ammophila eradication efforts at Lanphere dunes. This obviously impacts raptor and other native wildlife and migratory bird populations.

The SSIMP EA written in 2002, prior to habitat conversion, indicated the existing "area is rich with bird life". Migratory birds benefit greatly by the shelter and food resources provided by dune scrub habitat. The impacts to these species related to the conversion of dune scrub habitat to dune mat has not been adequately considered. Dune shrub habitat is extremely rare and exists in only 21 places world-wide according to the fish and wildlife data.

It is noted in the plant monitoring report (BLM 2014) that native dune scrub species are also being removed during ammophila eradication efforts. That intention was not indicated in the SSIMP.

The western snowy plover has not responded consistently to local ammophila eradication programs including the 20-acre bulldozed area on the south spit, the Little River and Gold Bluff Beach project areas. The South Spit plover restoration area essentially failed to attract a significant number of breeding plovers as of 2015. The similar Little River project has had a significant drop in nesting success since the 2006 project implementation. Naturally restored areas such as around river mouths are far more successful that manually altered HRAs (snowy plover report 2016).

It should be noted that the South Spit plover restoration area has not had follow up removal of ammophila since the last bulldozing treatment (2008) and ammophila has re-inhabited the area. Re-establishment of the ammophila includes the process of restoring former foredune elevations. 2016 was the first year that snowy plovers have successfully nested since initial bulldozing in 2002.

FEMA guidelines state in part that a Qualified Coastal Engineer must be utilized to determine that any alterations in the sand dune will not result in increased flooding. There has not been a Qualified Coastal Engineer identified as a part of this project.

Communities may issue a permit for an alteration of a dune only if the evidence including, but not limited to an analysis and calculations, presented by the applicant from the coastal engineer or coastal geologist, indicate that the alteration will not increase flood damages. FEMA guidelines.

"... because Habitat Restoration Area (HRA) establishment alters dune geomorphology, HRAs have the potential to be more exposed to coastal flooding". (Carroll 2016)

FEMA guidelines also state that vegetation removal from coastal dunes or the velocity zone (seaward side of the foredune) should not be permitted.

1. The Excavation and Removal of Sand. The excavation and removal of any portion of a sand dune will likely render the dune more susceptible to erosion and increase the potential damages to structures behind that dune and should not be permitted.

2. Earthmoving Activity with No Removal of Sand. Any earthmoving activity on a sand dune, even if there is no net loss of sand, can potentially damage the structural integrity of the dune and make it more susceptible to erosion. The practice of removing a sand dune during development and relocating or rebuilding the sand dune after construction is completed should not be permitted.

3. Removal of Vegetation. Removing vegetation from the sand dune will likely make the sand dune more susceptible to erosion. In addition, loss of vegetation hinders the sand dune's ability to regenerate itself by trapping wind-blown sand. Thus removal of vegetation should be avoided.

Humboldt County code prohibits man made alterations of sand dunes that would increase flooding. This would include the manual removal of coastal vegetation. County Codes also stipulate the necessity for mitigation to control windblown sand and to minimize disturbance of vegetated dunes.

Humboldt County Code, "when development in beach and dune areas zoned NR is approved the following mitigation must be required:

17.1.8.1 Minimize disturbance of vegetated dunes;

17.1.8.2 Replant vegetation in disturbed habitat areas;

17.1.8.3 Provide measures to control wind blown sand;

The southern portion (Table Bluff County Park) of South Spit, in areas where dune building/stabilizing plants are being removed, is a known site of wave over topping as is noted in the SSIMP documents. Increasing already established vulnerability is counter to federal and state laws as well as common sense. We can expect anticipated rise in sea levels to compound the likelihood of breaching.

It should be noted that another area of mass vegetation removal on the north spit (BLM's Ma-lel) was overtopped (January 2017) and tidal inundation nearly reached the municipal water mains behind the lowered foredune. Whereas adjacent dunes that have maintained ammophila did not experience overtopping.

The 2002 SSIMP does not include references to sea level rise nor qualified studies of erosional responses from removing dune building/stabilizing vegetation and the effects that current program would have to dune topography and living shoreline stability.

"the combination of medium and high Sea level rise scenarios and lower foredune crest elevations associated with some of the restoration scenarios yielded increased overtopping potential, across all sites" (Carroll 2016)

It has been noted in the 2002 SSIMP documents that the Table Bluff County Park site had seen a widening of the beach that coincides with the 20 years that the ammophila had been present. The widening and raising of dune elevations is also consistent with numerous studies and observations of ammophilated dunes. (Pickart) The stated intention in the Table Bluff permit application documents anticipates a narrowing of the spit by enhancing inland sand transport. *"Locations where shorelines are building seaward (prograding) have lower coastal vulnerability compared to shorelines that are moving landward (eroding)." (Ruggiero et al 2013)*

Shoreline losses are a serious consideration particularly in an area already identified as vulnerable. This is a significant recreational and wildlife management area as well as a critical maintenance access to the South Jetty. There is a great responsibility placed on the county to maintain this key access point to a valuable coastal resource and assure that the public interest is secured.

It should be noted that the Plover Restoration site specific to the SSIMP was chosen in part because it was far enough from the road and a particularly wide portion of the spit to avoid effects to the road from wind-blown sand. Current vegetation removal efforts are taking place on the immediate edge of the same road at a very narrow portion of the spit, with no mitigations or efforts identified to control wind-blown sand or overwash debris.

The adoption of the 2002 SSIMP as the Final Plan (2008) was done so after there was no significant new input from the public. This lack of significant input was likely for the simple reason that the cumulative impacts from 5 years of limited coastal vegetation removal have not been measured or apparent at the time. It often takes six to seven years in to witness the significance of major vegetation removal such as topographical losses, established tree deaths, wildlife impacts, and wetland functions.

"We assure you that if new issues arise we will come back and write a new plan". Lynda Roache September 12, 2008 Coastal Commission hearing for the adoption of the SSIMP as an Final plan.

I think we can all agree that BLM is doing work that produces cumulative effects that are clearly not consistent with the associated Consistency Determination or clearly stated in the Interim/Final Plan. The project description is now changing as indicated in BLM's CUP permit application for Table Bluff County Park and in comments recently received from BLM. They include intended effects not previously identified under original authorization. The only course warranted by these changes of intention is to relinquish previous authorization, evaluate current information/intentions and adopt a new plan reflective of those alterations and desired outcome. In closing, considering the significant risks and inconsistencies taking place under an outdated and initially temporary plan meant to gather relevant data, we should expect BLM to fully consider honoring their often repeated commitment by formulating an updated Plan that encompasses the vast scope and changes to the project to reflect those new intentions, extent of acreage and cumulative impacts (mentioned above). I think we agree that this commitment to developing a new Plan under these circumstances was clearly indicated in the Interim/ Final Plan and the associated Consistency Determination and by the BLM during Coastal Commission Hearings.