



## San Juan County Public Works Department

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### MEMORANDUM

**TO:** Paul Henriksen

**DATE:** 08/14/2019

**FROM:** Krista Davis EIT, CESCL

**RE:** Lopez Airport Drainage Swale Site Visit 08/09/2019

A site visit was conducted on 08/09/2019 to inspect the current condition of the drainage swale located from the southwest corner of the Lopez airport, through TPN's 240421005000 and 240421006000, currently owned by San Juan County acting by and through the San Juan County Land Bank. Attached is the current 2019 LiDAR mapping that shows the swale location.

#### Observations:

- The swale drains the southwestern portion of the Lopez airport property
- The swale meanders through the forest and drains to the beach passing through a variety of armored (approx. 30") culverts
- The swale is well vegetated with native fauna
- The berms are well established with vegetation
- The culverts are armored with 8-12" rip rap
- The condition of the culverts are satisfactory
- The swale receives drainage from TPN 240421006000 through a 12" culvert
  - o Note- This section had wetland markers but is not classified as a wetland or NWI wetland on county maps
  - o The swale also receives water from a classified wetland on the northern adjacent property TPN 253343007000
- The vegetation at the beach was extremely thick and well established
- There was no indication of erosion within the swale caused by high capacity flows compromising the integrity of the swale.
- The erosion of the neighboring bluffs appear to be natural and not cause by stormwater runoff.

The drainage swale was sized to maintain high seasonal flow capacity. The established vegetation within and around the swale in fact reduces erosion and sediment transport. The armoring of the culverts reduces scouring at both the entrances and exits while decelerating stormwater flow. Additionally the vegetation within and around the swale acts as a natural bio filter which increases treatment to stormwater contaminants before entering the Salish Sea.

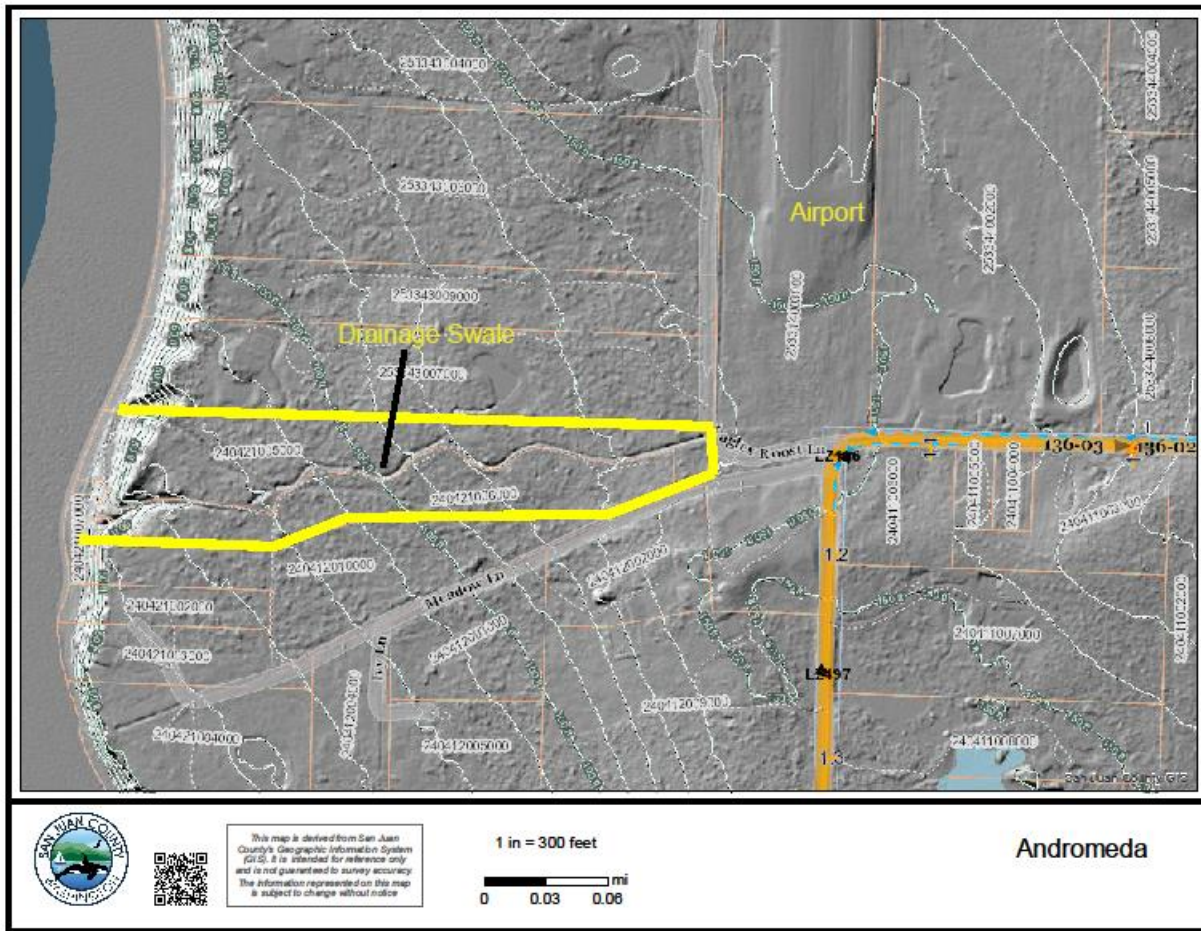


Figure 1- Lopez Island Airport Drainage Swale location.

A separate site visit during the wet season would be appropriate to observe stormwater flows and swale capacity. Thank you for your time in showing me the property. If you have any questions please feel free to contact me.

Regards,

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