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April 14, 2023

**Subject: SMA Revegetation Analysis of APN 311-221-026**

**Purpose Statement**

This Revegetation Analysis is in response to the 18117 Deficiency letter issued to the property owner Ryan Hedding by Humboldt County Senior Planner Steven A. Santos. This analysis is to show how the land is naturally revegetating as well as which species are revegetating.

**Methods**

Evan Henricksen, Environmental Scientist and Biologist for Timberland Resource Consultants visited the parcel on April 11, 2023. The disturbed area within the SMA of Willow Brook was evaluated and all observed plant species were recorded and identified. The SMA outside of the disturbed area on the parcel was also observed in order to compare vegetation between the disturbed area and the non-disturbed area.

**Results**

Willow and Red Alder saplings were observed regenerating within the disturbed area of the SMA, no Sitka spruce saplings were observed but a high density of Sitka Spruce cones were observed on the ground throughout the disturbed area. Red Alder Catkins were observed on the ground of the disturbed area in high density. 25 different plant species were observed within the disturbed area on April 11<sup>th</sup>, 2023. The disturbed area is revegetating with Willow (*Salix*), Red alder (*Alnus rubra*), Red-berried Elder (*Sambucus racemose*), Great Horsetail (*Equisetum telmateia*), Arctic butterbur (*Petasites frigidus*), Great Stinging Nettle (*Urtica dioica*), Hedge nettle (*Stachys bullata*), Candy Flower (*Claytonia sibirica*), Pacific waterleaf (*Hydrophyllum tenuipes*), Trailing blackberry (*Rubus ursinus*), Licorice Fern (*Polypodium glycyrrhiza*), Western Sword Fern (*Polystichum munitum*), Lady Fern (*Athyrium filix-femina*), Water Parsley (*Oenanthe sarmentosa*), Catchweed bedstraw (*Galium aparine*), Creeping Buttercup (*Ranunculus repens*), Broad-leaved Dock (*Rumex obtusifolius*), Common Cowparsnip (*Heracleum Maximum*), Coastal Manroot (*Marah oregana*), Bristly Oxtongue (*Helminthotheca echioides*), Hairy Bittercress (*Cardamine hirsuta*), Pond Water-starwort (*Callitriche stagnalis*), Western Skunk Cabbage (*Lysichiton americanus*) and Youth-on-Age (*Tolmiea menziesii*). Miscellaneous grasses and sedges were also observed during the site visit. Chorus frogs and banana slugs were also observed within the disturbed SMA area.

**Conclusion**

Artificial revegetation of native plants within the SMA is not required due to the prolific natural regeneration of native plant species which were present prior to disturbance. The diversity of species observed within the disturbed portions of the SMA are not measurably different than that of the undisturbed area. No tree stumps freshly cut or old were observed during this analysis.

## Pictures



Picture 1: Looking north from the watercourse showing the revegetation of the disturbed area. Photo date 4-11-2023.

## Pictures



Picture 2: Looking south from the watercourse showing the revegetation of the disturbed area. Photo date 4-11-2023.

## Pictures



Picture 3: Looking north-west along the southern edge of the watercourse showing the revegetation of the disturbed area. Photo date 4-11-2023.

## Pictures



Picture 4: Looking north-west on the northern side of the watercourse showing the revegetation of the disturbed area. Photo date 4-11-2023.

## Pictures



Picture 5: Catchweed bedstraw (*Galium aparine*). Photo date 4-11-2023.

## Pictures



Picture 6: Red-berried Elder (*Sambucus racemose*). Photo date 4-11-2023.

## Pictures



Picture 7: Great Horsetail (*Equisetum telmateia*). Photo date 4-11-2023.



## Pictures



Picture 8: Great Stinging Nettle (*Urtica dioica*). Photo date 4-11-2023.

## Pictures



Picture 9: Hedge nettle (*Stachys bullata*). Photo date 4-11-2023.

## Pictures



Picture 10: Arctic butterbur (*Petasites frigidus*). Photo date 4-11-2023.

## Pictures



Picture 11: Trailing blackberry (*Rubus ursinus*). Photo date 4-11-2023.

## Pictures



Picture 12: Broad-leaved Dock (*Rumex obtusifolius*). Photo date 4-11-2023.

## Pictures



Picture 13: Common Cowparsnip (*Heracleum Maximum*). Photo date 4-11-2023.

## Pictures



Picture 14: Coastal Manroot (*Marah oregana*). Photo date 4-11-2023.

## Pictures



Picture 15: Lady Fern (*Athyrium filix-femina*). Photo date 4-11-2023.



## Pictures



Picture 16: Western Sword Fern (*Polystichum munitum*). Photo date 4-11-2023.

## Pictures



Picture 17: Licorice Fern (*Polypodium glycyrrhiza*). Photo date 4-11-2023.

## Pictures



Picture 18: Creeping Buttercup (*Ranunculus repens*). Photo date 4-11-2023.

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Picture 19: Water Parsley (*Oenanthe sarmentosa*). Photo date 4-11-2023.

## Pictures



Picture 20: Bristly Oxtongue (*Helminthotheca echioides*). Photo date 4-11-2023.

## Pictures



Picture 21: Willow (*Salix*). Photo date 4-11-2023.

## Pictures



Picture 22: Hairy Bittercress (*Cardamine hirsuta*). Photo date 4-11-2023.

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Picture 23: Pond Water-starwort (*Callitriche stagnalis*). Photo date 4-11-2023.



## Pictures



Picture 24: Red alder (*Alnus rubra*). Photo date 4-11-2023.

## Pictures



Picture 25: Candy Flower (*Claytonia sibirica*). Photo date 4-11-2023.

## Pictures



Picture 26: Youth-on-Age (*Tolmiea menziesii*). Photo date 4-11-2023.

## Pictures



Picture 27: Pacific waterleaf (*Hydrophyllum tenuipes*). Photo date 4-11-2023.