

## **Appendix E.6**

### **Visitor Use of the old Haul Road within the Inglebrook Fen-Ten Mile Dunes Natural Preserve**

This document presents and summarizes information and data regarding the current condition, visitor use patterns, and viability as a trail of the remnant Haul Road within the Inglebrook Fen-Ten Mile Dunes Natural Preserve at MacKerricher State Park. Sources include data collected during surveys, geomorphological maps produced for past and current project purposes, Ground Penetrating Radar (GPR) reports provided by NORCAL Geophysical Consultants, and anecdotal observations from California State Parks (CSP) staff and Save Our Shorebird (SOS) volunteers.

#### **Survey Data**

Incidental observations of visitor use were made during weekly snowy plover surveys that took place on the beach and in the back dunes during the months of March through August in 2012.

Most surveys were conducted simultaneously with two separate observers recording data for either the beach or the back dunes. A few of the surveys were conducted separately, but within a day or two of each other.

Although the focus of the surveys was collecting data on shorebirds, visitor presence was also noted. Protocols for both the beach and back dune surveys include recording observations of visitor numbers and type of use, as well as potential disturbance.

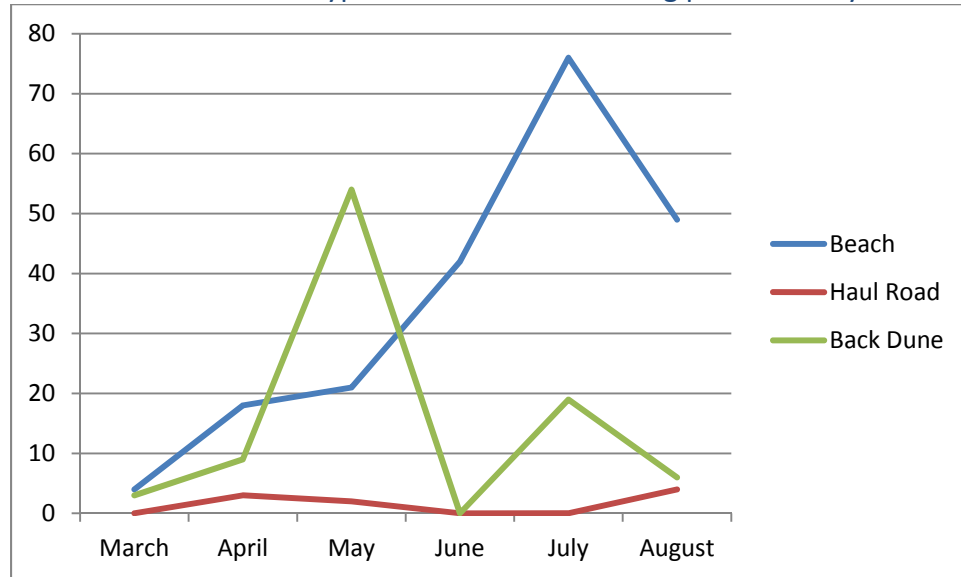
For the purposes of this comparison, “beach” is defined as the area from the ocean to the foredunes. “Back dunes” is defined as the dunes immediately west of the Haul Road to the foredunes, as well as the dunes to the east of the Haul Road. Only observations of visitors actually ON the Haul Road, either walking, jogging or bicycling, were recorded as using it. In other words, if it could be determined that the visitor only crossed the road to get to another destination, this was not recorded as using the road.

Although these surveys were not conducted with the intention of determining visitor use of the beach vs. the haul road, these observations provide an indication of typical use at Ten Mile beach and offer an objective assessment of visitor preference.

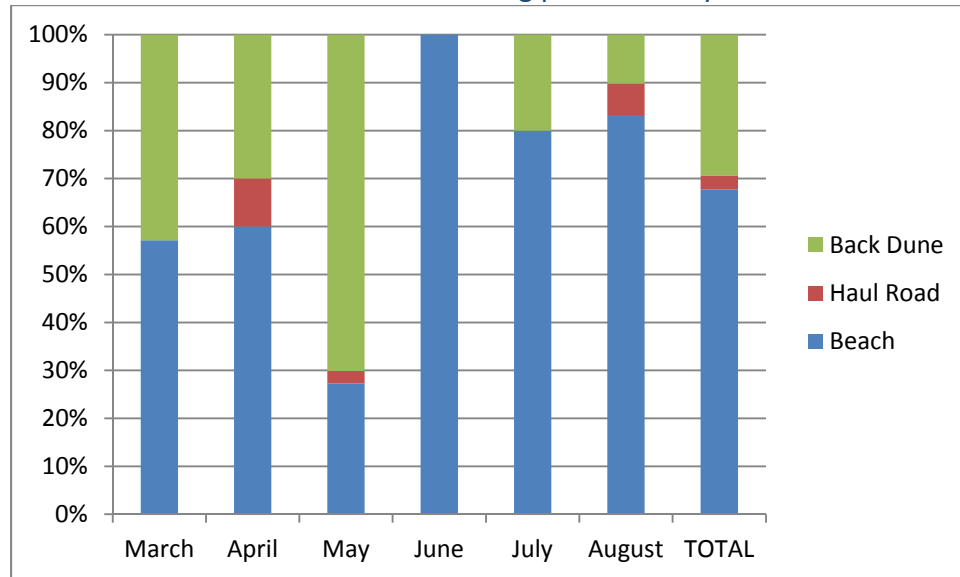
Visitor (pedestrian) numbers at Ten Mile – 2012  
 Incidentally observed during weekly snowy plover surveys

Month	Percent of Monthly total observed (total observed)			Park users observed
	Beach	Haul Road	Back Dune	
March	57% (4)	0% (0)	43% (3)	7
April	60% (18)	10% (3)	30% (9)	30
May	27% (21)	3% (2)	70% (54)	77
June	100% (42)	0% (0)	0% (0)	42
July	80% (76)	0% (0)	20% (19)	95
August	83% (49)	7% (4)	10% (6)	59
Season Total	68% (210)	3% (9)	29% (91)	310

Number of visitors and type of use observed during plover surveys in 2012



Percentage of visitors using the beach, the haul road, and the dunes within the Natural Preserve as observed during plover surveys in 2012



### Geomorphological Maps

Maps illustrating the extent of dune height along the old Haul Road as well as the current condition of the road and the surface area covered by sand are included at the end of this document (see Plates I-V). The maps were originally produced as part of the CSP document *Geomorphological Study of the Ten Mile Dunes in Relation to the Old Logging Road* (Wollenberg and Maslach, 2003), and were contracted from engineering consultants PSOMAS.

The maps document the topography and height of the foredunes west of the Haul Road as recorded in 2003 using orthophotographical survey data combined with GIS. The maps show that dune crests frequently exceeded 8 feet in height, effectively blocking the view from the Haul Road of the beach and ocean from most locations along the remnant road. The lack of an ocean view influences visitor use of the road. Since the majority of visitors wish to be near or see the ocean, most visitors are not interested in remaining exclusively on the Haul Road. Survey data and anecdotal observations support the assertion that most visitor use takes place on the beach or in the open dunes, and only a small percentage of visitors make use of the Haul Road as a trail or as a reason for their visit.

Current data regarding the areas of the road that are partially or completely covered by sand have been added to the dune height map. This data was collected by California Geological Society engineers and CSP staff in 2011. The Haul Road is indicated by the black line. The blue shading/line indicates areas of the Haul Road where sand has encroached or completely covered the road surface.

The total length of the Haul Road that is proposed for removal is approximately 2.7 miles. In the southern area of the Preserve, the remnant Haul Road has been completely washed out or exists only as isolated fragments separated by additional washouts. In the northern area of the Preserve the road remains mostly intact, but is partially or completely covered by sand in some locations. Based on calculations using the most recent data available, approximately 67% of the entire existing road remnant surface is covered to some extent by sand. In the northern portion, up to 29% of the Haul Road is completely covered by sand.

### **Ground Penetrating Radar**

In August 2011 NORCAL Geophysical Consultants conducted an investigation of the Haul Road within the proposed project area using Ground Penetrating Radar (GPR). Fourteen separate locations distributed every 900 to 2,100-feet along the length of the road were tested to determine the amount of ballast and road base beneath the surface of the remnant road. In this report the geophysicist conducting the investigation noted that the pavement was partially covered by sand dunes in 2 of the 14 study locations, and sand completely covered a third location. The depth of the sand ranged from approximately 1.5 feet to 2.5 feet.

### **Additional Visitor Use Information for the Haul Road**

The following statements offer descriptive or anecdotal information of visitor use of the remnant Haul Road within the Natural Preserve. The information is provided by State Park employees whose work assignments have required frequent access and work within the Preserve, and by volunteers with the Save Our Shorebirds group who conduct daily shorebird surveys within the Preserve from July to September each year.

#### From Becky Bowen, Save Our Shorebirds Volunteer, Mendocino Coast Audubon Society

Since 2007 when Save Our Shorebirds began extensive on-foot surveys on Ten Mile Beach, we have noticed progressive deterioration of the Haul Road in the Preserve. I made a special note of this in our 2009 year-end report. The road, in many areas, was completely covered with sand and/or vegetation at that time. Below is a photo of the road at the north end near Ten Mile River.



Portion of the Haul Road approximately 200+ feet in length where the road is completely covered in sand up to 3 feet deep. September 2009.

On November 11, 2007, I participated in the opening of the Ten Mile Beach portion of the California Coastal Trail on a hike sponsored by State Parks, Coastal Land Trust, Mendocino Land Trust and Coastwalk. The Ten Mile portion of the CA Coastal Trail was a hike along the public trail that began at Ten Mile River and ended at the Ward Avenue Ramp. The trail was described as the "face of the beach" and that is where we hiked. The trail was NOT on the Haul Road and the sponsors were very specific in their answers that the trail followed the face of the beach--on wet sand--and did not at any time include walking on the Haul Road (probably because it was not passable). This event and the route we took on that hike can be confirmed by the organizations mentioned above.

In recent years (from about 2009 to the present) the combination of intense winter storms and higher tides have hammered parts of the Haul Road, making it impassable on foot (and certainly not by vehicle). The road is crumbling and chunks are either falling on wet sand or tumbling into the ocean as in the photos below.



Crumbling portion of old Haul Road within the Natural Preserve. April 2010.



Remnant section of old Haul Road and eroded asphalt. August 2012.

No emergency vehicles could use this road for any purpose. When a recreational fishing boat crashed on the beach in February, 2011, some rescue personnel were sent in from Ward Avenue on the wet sand to help rescue the people in trouble--the vehicles did not come to the accident scene in mid-beach on the Haul Road because vehicles could not get to that area of the beach on the Haul Road.



Wreckage of boat at Ten Mile beach. February 2011.

It's clear from these photos and other data that our volunteers spend a great deal of time in Ten Mile Preserve. Most of that time is on the beach, but we frequently go into the fore dunes and we access Ten Mile Beach from the north end by the river and the south end by Ward Avenue. So we are familiar with the use and condition of the Haul Road in the Preserve. To say that it is frequently used by the public with strollers and wheelchairs is not a realistic statement. Perhaps that could have been true years ago, but not since 2007 and probably long before that. Our frequent surveys began in 2007 and we have spent more than 4500 hours in the field since that time--most of it in Ten Mile Preserve. Our data includes notations of disturbance and reports made to State Park rangers citing disturbance to wildlife and safety concerns.

So much of the plant and wildlife in the Preserve are protected by federal laws. That protection surely has a role in management of the Preserve to provide recreational access without endangering federally-protected resources. It's our belief that both public recreation and plant and wildlife protection can be successfully created in the Preserve. To that end, we applaud efforts of State Parks to provide a safe place for

people and wildlife. But the Haul Road as it exists today inside Ten Mile Preserve, is not part of that equation (and we're not talking about the Haul Road south of Ward Avenue-which is a completely different situation). I've never seen a stroller or a wheelchair on the road and it is difficult and not always possible to ride it on a bicycle.

It's our observation that trails that cut across the dunes from the east are the way in to the Preserve for many members of the public. It's a shorter hike to cut across the dunes to the beach.

Our SOS volunteers would be happy to talk with the commission staff, or take them on a shorebird survey of the beach to point out how the public comes to the beach. To say that the Haul Road inside the Preserve is heavily used by the public is sheer fantasy and perhaps the product of confusion with that portion of the Haul Road south of Ward Avenue where it is indeed heavily used by walkers, bikers, hikers with strollers (and would be easily accessible to wheel chairs) and is very much a part of the local culture. But NOT the Haul Road in the Preserve north of Ward Avenue. I hope this distinction can be made clear.”

Becky Bowen  
Save Our Shorebirds  
Mendocino Coast Audubon Society

From Robert Gaines, Senior Park Aid, California State Parks

“I'm passing on my experiences of users of the Haul road through the years while working there for State Parks. To be honest, I had more interactions with people driving on the beach, talking to dog owners about leash laws, and homeless encampments than seeing people along the Haul road.

Although it's been years since I've worked on a daily basis near and around the Inglenook Fen at the 10 Mile Preserve State Park, I can honestly attest that there had never been more than a few patrons of the Haul road a day on any regular basis. In fact, I can't recall seeing more than two to three people using the Haul road by any means on any day. In the years that I worked eradicating *Ammophila arenaria* (invasive European beachgrass), I witnessed perhaps a few bicyclists using the road once over the course of five years. I had never seen anyone using the haul road with strollers, rarely have seen bicyclists, and other than a daily jogger for a few weeks, I have never seen anyone taking their daily walks along the Haul road. The few people I had seen walking on a daily basis had always been observed walking along the low tide zone.

Before being employed with State Parks, I had walked and attempted to ride a bike out to the exposed section of the Haul road just North of the horse ramp (Ward Avenue) during a strong sea swelling storm. When I got up to the Haul road section, a few large



waves had crashed along the undercut of the road, sending water about 20 feet high to come crashing down on my dog and I, and the sheer weight of the water falling on us was massive and nearly left my dog and I stranded as there was water trapped behind us. I believe the process of this particular beach is that the Haul road traps the water to the East and creates an artificial inundation zone.

While living and attending college at San Francisco State University, I had witnessed the construction of the breaker unit along the Great Highway, and it is my personal belief that the breakers had contributed to the diminished amount of beach sand left at Ocean Beach. With the increase in rising sea levels, it's fairly likely that someday the Haul road at 10 Mile S.P. will act like the breakers at Ocean Beach, washing away the sand into the Sea, creating dangerous situations for park users, and taking essential habitat from migratory shore birds.

In closing, I have never been to a more isolated and least populated beach in my life. I've occasionally looked to see how many people are on the beach, road, and high dunes areas only to find no one within sight, especially during foggy days.”

-Robert S. Gaines

From Louis Reynolds, Senior Park Aid, California State Parks

“My name is Louis Reynolds. I started working in the Ten Mile sand dunes starting in early August of 2000 removing European beachgrass (*Ammophila arenaria*) for California Department of Parks and Recreation.

I worked in the Inglewood Fen-Ten Mile Dunes Natural Preserve for most of the time except weekends up until the fall of 2006 when hand removal was no longer part of the management plan. During that time I observed very few people using the haul road from Ten Mile River south to where it breaks off south Fen Creek for recreational purposes. Mostly people would walk or ride horses along the beach. If people did use the haul road they would use it only from the bridge to the beach or cross over it to get to the beach, other than an occasional bike rider (maybe 10 or so that I can recall), hikers that seemed to use the road (maybe 5 to 10 a year), and a local man that use to run out there from time to time for a year or two. Most people seemed to want to be on the beach near the Ten Mile River. The farther south you went it seemed like the chance of seeing a visitor decreased unless it was horse riders. I never saw anyone in wheelchairs out on the haul road. For one, they would somehow have to make it to the haul road. They would have to be carried to the road from the parking lot unless they had some walking ability or they came from the south across the beach. Now a large portion of the haul road is covered in several feet of sand and unless they had a special wheelchair it would be a major undertaking using the haul road.

Over the next several years the sand that covers the haul road will wash out or be deposited on the east side of the road. The haul road will begin to wash away so if the road is removed by man or by the ocean it is only temporary no matter who does or doesn't use it. I think removing it now is the best thing for visitor safety after what I observed happening to the section of broken off haul road just north of Ward Ave over the 12 years I have spent time in the dunes. Big chunks of asphalt weighing hundreds of pounds have broken off due to undercutting by the ocean. The undercutting also left ledges of asphalt with nothing under them that could break off at any time with the potential of killing or harming visitors.”

-Louis Reynolds



From Alison Cebula, Environmental Services Intern, CA State Parks

“I have worked for California State Parks from 1999-2004, and currently from January 2011 until present. My job duties have included wildlife surveys and plant mapping within the Inglewood Fen-Ten Mile Dunes Natural Preserve. I have spent over 2000 hours (a conservative estimate) working on the beach and in the dunes at the Preserve, accessing the dunes from almost every possible location. I also grew up in Fort Bragg, and have considerable knowledge of the area, as well as the history of the old Haul Road and the Preserve. Based on my experience as both a park employee and a local community member, I submit the following information regarding how most people access the Preserve and use the haul road.

- Visitors entering at the Ten Mile bridge either scramble down the unofficial trail south of the bridge, or over the first dune to reach the Haul Road below the bridge. Most visitors head to the shoreline of the river to get to the beach. OR... they walk as far as the curve in the road, then cut across dunes to the beach. Either way, the portion of the Haul Road that they are currently using will remain intact, or only the asphalt cap will be removed (due to the sensitive species/plants), leaving a hardened surface and a very obvious path or trail to get to the beach area. Access to the beach or dunes will not be affected at this location.
- Observations of people in the back dunes follow a similar pattern. Visitors come over the dunes from either the Ten Mile bridge area, or from the Caltrans mixing table. Some visitors play in the back dunes, and never even reach the Haul Road. OR... they meander across the dunes, eventually cross the Haul Road, and continue west to the beach. They may walk a short distance on the Haul Road, depending on where they randomly come out of the dunes, but the goal is usually the quickest route to the beach. I have seen the occasional jogger who runs a route from the bridge area down the road to the river and beach, then heads back through the dunes to the bridge either on the road or through the back dunes, making a loop. The time spent on the actual road is minimal.

- People accessing the Preserve from the Beal Lane/Ocean View Drive area have created multiple volunteer trails from their properties. These trails tend to lead from the far back dunes to the Haul Road in an east/west orientation, crossing the Haul Road at popular destinations such as Inglenook Creek beach and Fen Creek beach. It's possible that some of these visitors also walk along the Haul Road, but in general what I have observed is people walking from the back dunes and crossing over the Haul Road to reach the ocean.
- The majority of visitors entering from the Ward Avenue ramp usually head directly to the beach and the hard-packed/wet sand. Some visitors take the bluff trail to the east into the dunes, but since the Haul Road is completely washed out here for over 0.75 miles, they usually end up meandering back down to the beach. The same goes for joggers. Most joggers remain on the wet sand where it is most efficient to run. Occasionally a jogger will leave the beach, cross through the foredunes and reach the old Haul Road, but since the road only exists in fragments, or is covered in many areas by sand, the jogger returns to the beach again. I have only rarely observed visitors scrambling up to the remnant portions of perched road, but it is a very small percentage, usually trying to take a photo, look for birds, or to avoid sneaker waves during high tides or storm surges. Some portions of the beach are so narrow that the remnant road sections act like a wall, and during winter storms and high tide events, passage is not only dangerous, but impossible. It's not safe to walk on the remnants either, because the road is crumbling and undercut. If the road was removed, people would have access to the dunes above the high tide line in these areas, and the beach would be safer for visitors. Since the road is washed out in multiple areas or completely covered in sand until Fen Creek is reached (a distance of over 1.5 miles), it really can't be argued that this is a viable trail for strollers, wheelchairs, or bicyclists. Lately I have seen mountain bikers riding on the wet sand, and bike tracks indicate that some riders do push through dry sand to reach the old road. I have tracked the bikes and found that most end up pushing their way back down to the wet sand. I have never seen a stroller or wheelchair used at any time in all my years of survey work, either on the beach or on the road. MacKerricher State Park does have two "beach wheelchairs" available to visitors for free use. They work best in the wet sand." The access point at Ward Avenue ramp will not be changed, impacted or affected by any aspect of the proposed project.
- Visitors who wish to access MacKerricher State Park using strollers, wheelchairs, or bicycles have the option of recreating on the intact portion of the old Haul Road that stretches from Ward Avenue to just north of Lake Cleone, and continues on the south side of Lake Cleone all the way to the restored Pudding Creek trestle. The Laguna Point boardwalk also provides stroller and wheelchair access to a beautiful overlook of the shoreline and ocean. These existing trails offer over 3.5 miles of coastal views and access. They are very popular, used heavily by both tourists and the local community, and receive the highest levels of visitation at MacKerricher State Park.



**Mackerricher State Park  
Dune Rehabilitation  
Haul Road Condition  
Legend**

-  Sand Cover - 2011
-  Haul Road - 2011

**Foredune topography  
2003 Elevation (feet)**

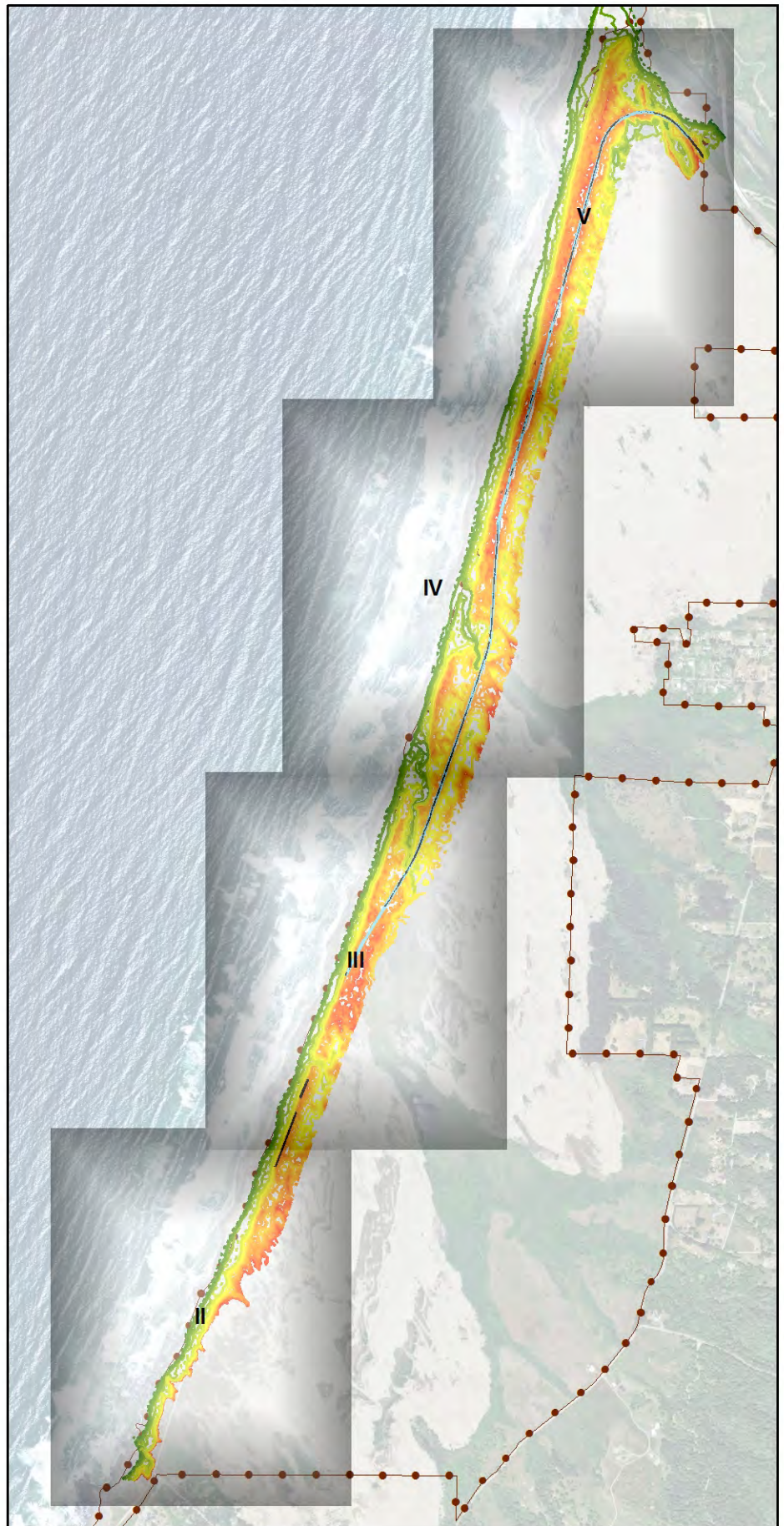
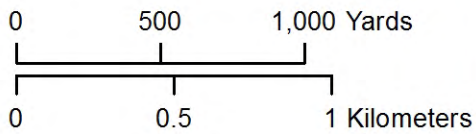
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**Preserve**

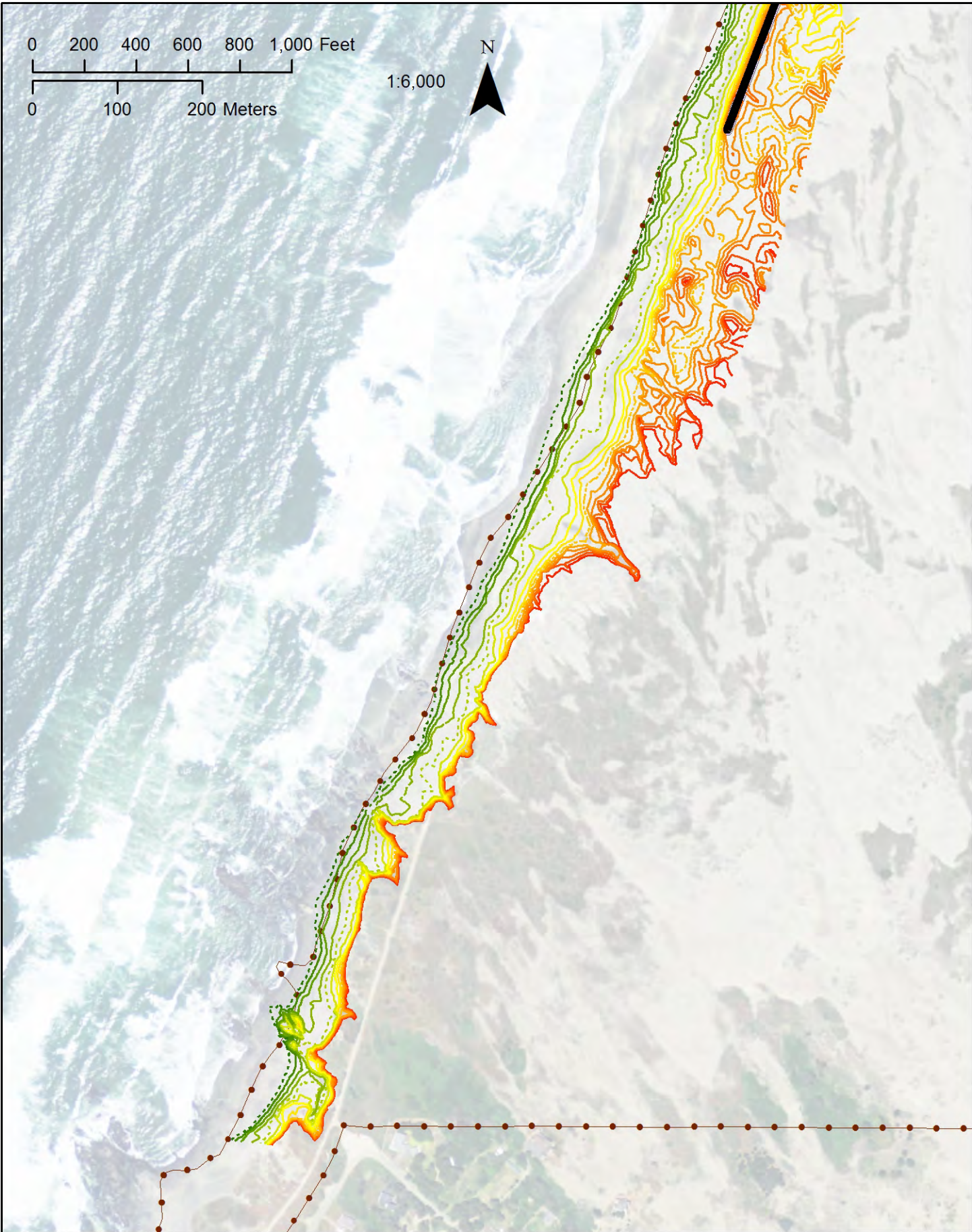
-  Park Boundary
-  Detail Plate

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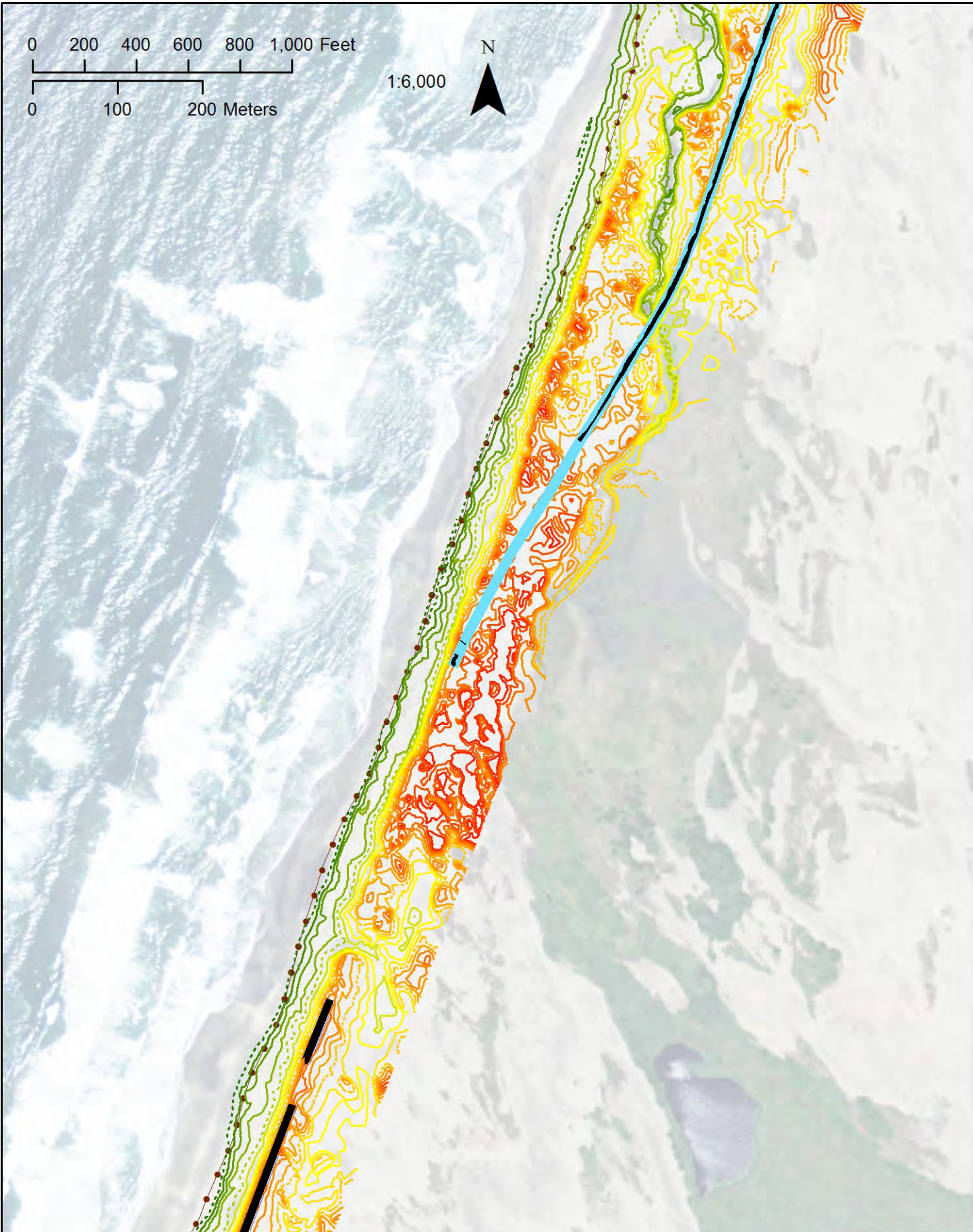
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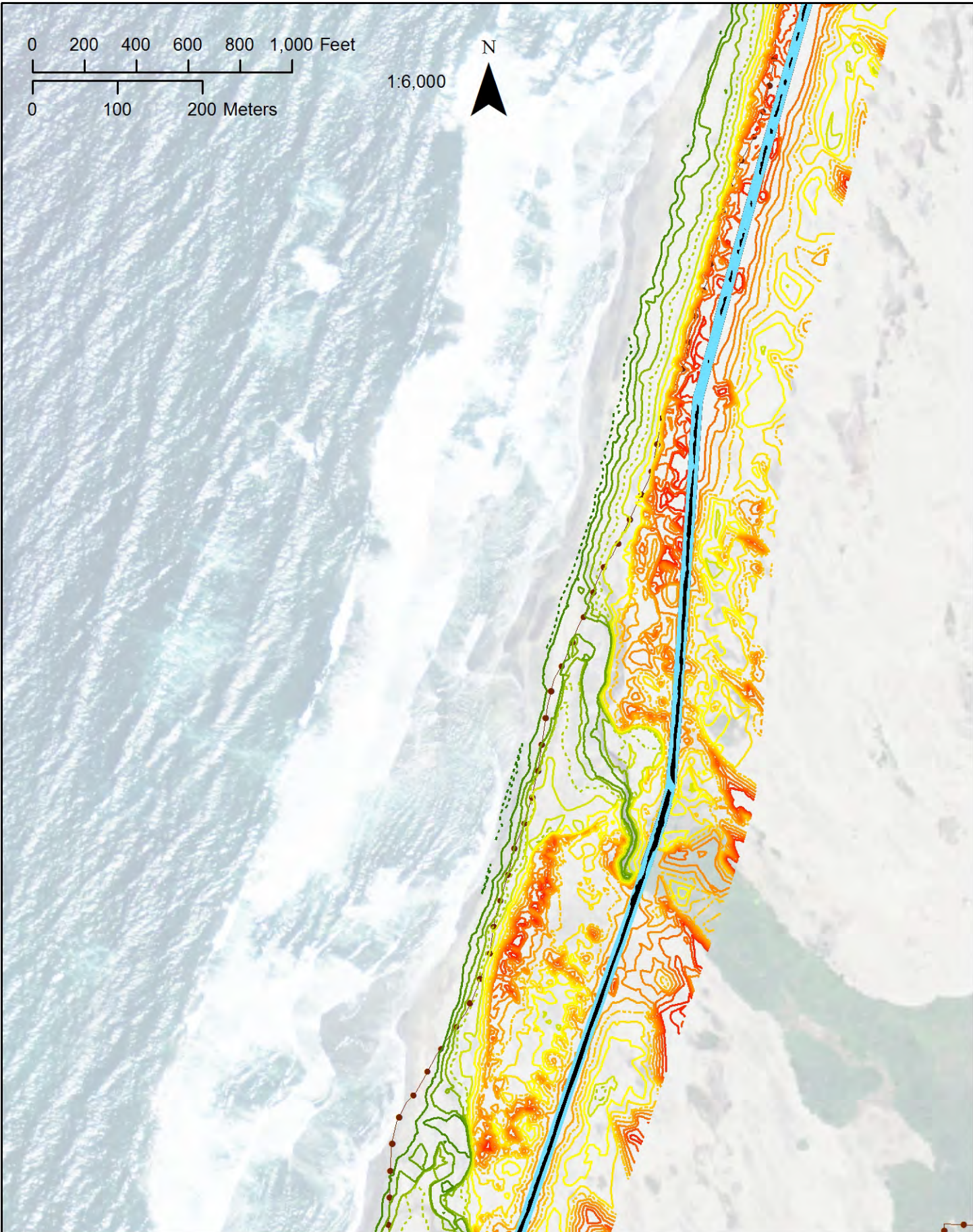
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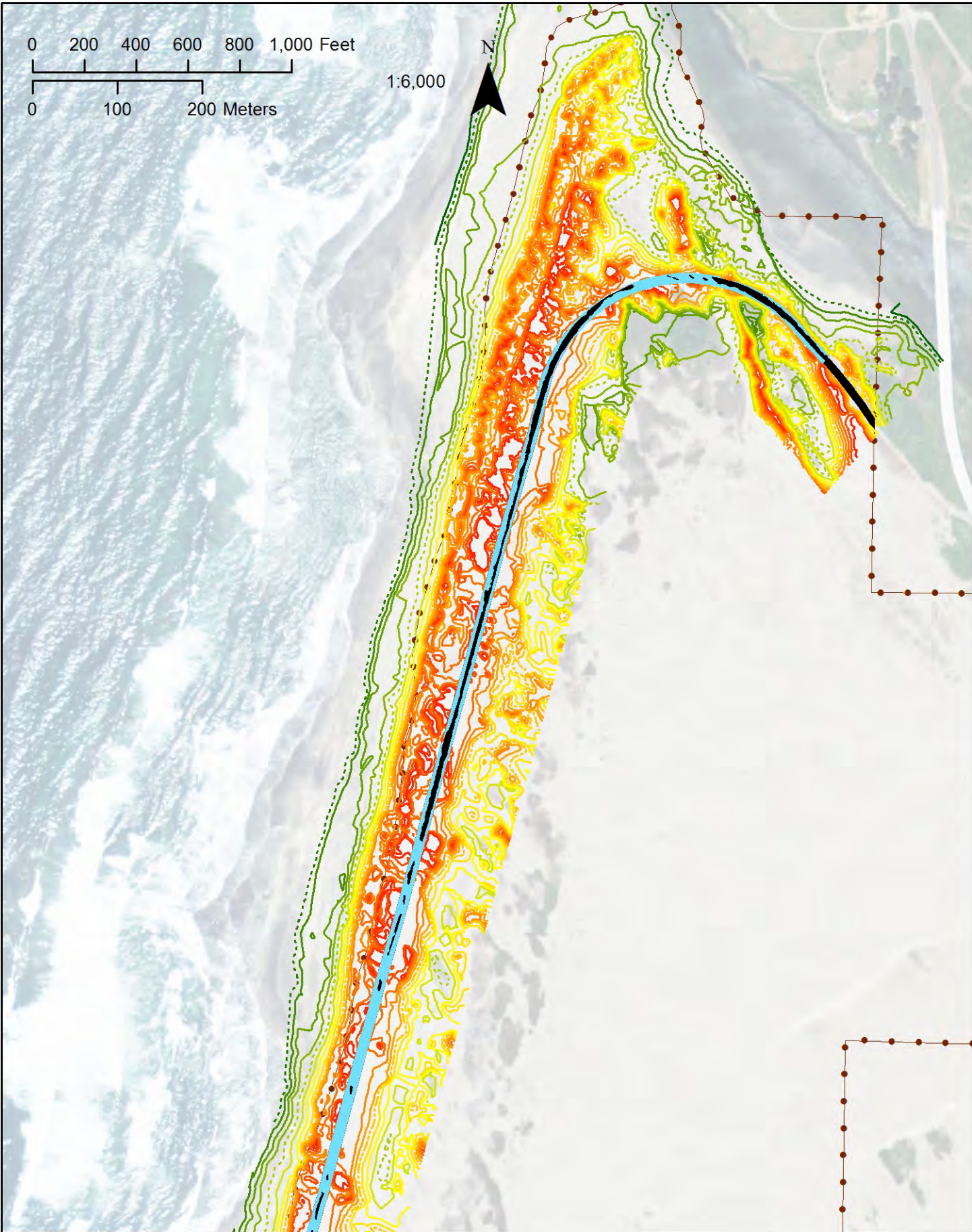
Haul Road Condition: **PLATE II**



Haul Road Condition: **PLATE III**



Haul Road Condition: **PLATE IV**



Haul Road Condition: **PLATE V**