

NOVATO

Community Profile: Novato

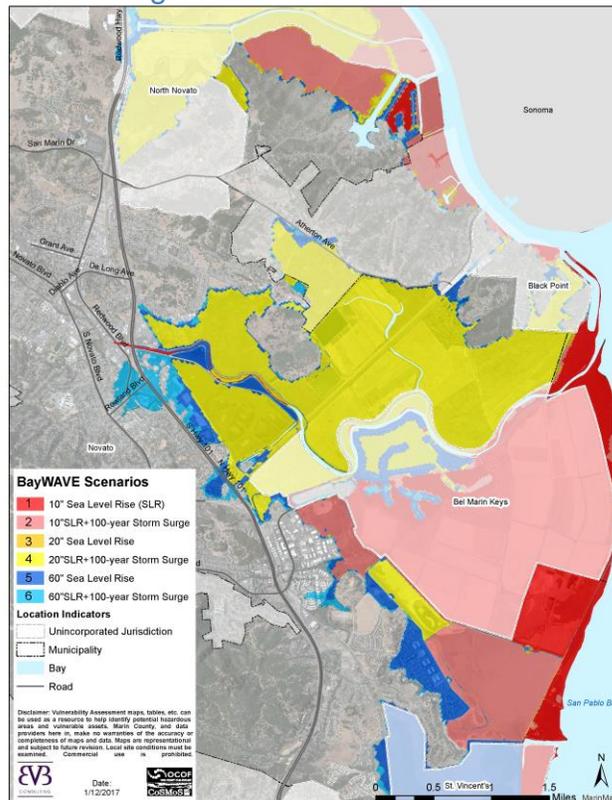
Novato is the second largest city in the county. The community is primarily residential with some large retail areas along the highway corridor. Development is largely inland with a few buildings fronted by tidal marshes and the bay. Much of the community is fronted by unincorporated areas, managed stormwater, agricultural, utility, and marsh lands. These lands could buffer Novato from the bay for several decades, thus, the majority of assets may not experience saltwater flooding until the end of the century. The following are key issues related to Novato sea level rise and a 100-year storm surge:

- The Hamilton neighborhood could anticipate the FEMA certified levee overtopped in the long-term. This would flood hundreds of homes and several professional workspaces.
- The Vintage Oaks Shopping Center could anticipate storm surge impacts in the medium-term and tidal impacts in the long-term. The loading bay would be the first section of the property to flood.
- Development east of US Highway 101 at the Bel Marin Keys and Rowland Boulevards.
- Buildings and marshes in Bahia, along Davidson Drive, and on Olive Ridge are vulnerable to sea level rise.
- State Route 37 to Sonoma and Napa is vulnerable in the near-term in several locations along its route. This road also serves as a bike path and provides access to several publically accessible natural resource assets.
- Tidal and storm surge flooding could impair travel on US Highway 101 in the long-term.
- Sonoma Marin Area Regional Transit rail tracks could be vulnerable in the near-term. Train cars could also be damaged by saltwater exposure.
- The Novato Sanitary District wastewater treatment could expect long-term impacts to several critical buildings.
- The Novato Fire Station 62 is vulnerable in the medium-term, and flooded, in part, in the long-term. In addition, the Fire Protection District and the Novato Professional Fire Fighter's Association office off Rowland Boulevard could be vulnerable in scenario 6.
- Most vulnerable parks are in Hamilton and exposed in the long-term.
- Marsh lands are vulnerable in Hamilton, Deer Island and the surrounding diked baylands, and Bahia.

IMPACTS AT-A-GLANCE: Scenario 6

4,249 acres	51,000+ people
1,100+ living units	78 commercial parcels
17 road miles	
Issues during stormwater and high tide coincidence	City of Novato Novato Fire Department Novato Sanitary District Caltrans Property Owners SMART Marin County DPW North Marin Water District
\$1 billion in assessed property value; more than \$650 million in single-family housing market value ²⁰⁸	

Map 106. Novato Sea Level and 100-year Storm Surge Scenarios



Source: MarinMap, CoSMoS. Credit: BVB Consulting LLC.

²⁰⁸ 2016 dollars

Vulnerable Assets

The most vulnerable assets are the wastewater treatment plant, State Route 37, and Northern Marin Water District. In the long-term, Hamilton could also be vulnerable to the levee overtopping. Due to Novato's inland development, very little of the community is directly impacted. Nevertheless, those dependent on the US Highway 101 corridor will be impacted. In addition, those who use the Novato Sanitary District treatment plant could experience wastewater disruptions.

Land

By land area, Novato is the largest municipality in the County, and relative to its size, a small area, mostly marshes, could be vulnerable to sea level rise. Nevertheless, a considerable number of acres, parcels could flood, compromising their existing land uses and human activities. In addition because of Novato's size and the existence of several smaller communities, complex levee systems, and extensive marsh land, much of the impacted developed land is dispersed into pockets of flooding.

Acres

In near-term scenario 1, 426 acres, or four percent of Novato's land area, could be exposed to sea level rise. An additional 100-year storm surge could flood a total of 1,336 acres, or 14 percent of Novato's land area. This acreage could flood tidally by the medium-term, and more than twice this amount could face storm-surge flooding. Moving into the long-term scenario 5, all of this land plus 450 more acres could now face tidal influences. This acreage amounts to more than 40 percent of Novato's land area. Even more, 44 percent of the city, or 4,250 acres, could be exposed with an additional 100-year storm surge. By this time, flooding could extend beyond US Highway 101. By this time, marshes could be damaged beyond repair, shoreline armoring could be overtopped, and properties would unusable, some temporarily, others into perpetuity, without adaptive measures.

Parcels

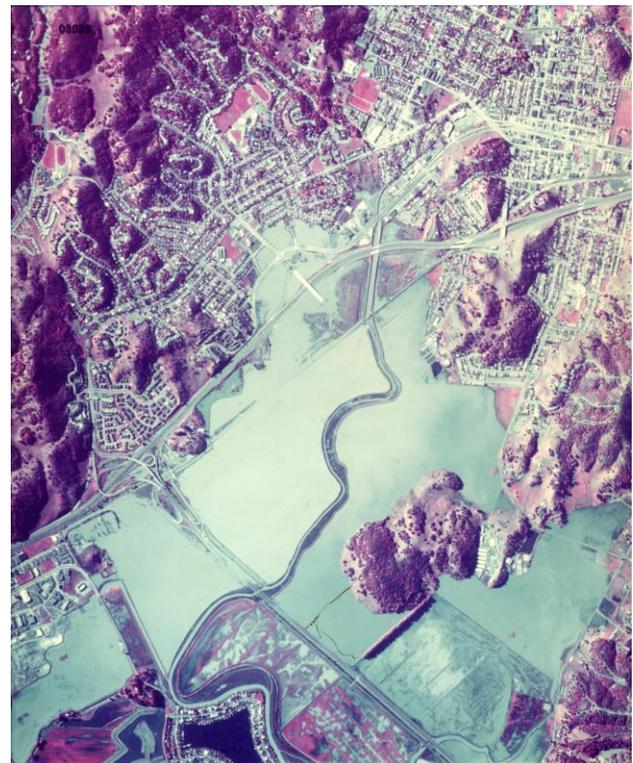
Much of the exposed acreage is vulnerable marsh land that is typically used for public services, such as flood control, or waste water management. Thus, large amounts of acreage are held a few parcels by a few, mostly public, property owners. This holds true through the medium-term, though with a 100-

year storm surge, 55 parcels, still less and one percent of the community's parcels could experience temporary flood conditions. In the long-term, however; bay waters could reach levels high enough to overtop protective armoring. At five feet of sea level rise 800 parcels could flood at MHHW. An additional 3 feet of storm surge waters could flood these 800 properties and an additional 450 properties could experience storm-surge flooding.

Table 110. Novato Vulnerable Acreage

Scenarios	Acres		
	#	%	
Near-term	1	426	4
	2	1,336	14
Medium-term	3	1,327	14
	4	3,535	36
Long-term	5	3,998	41
	6	4,249	44

Source: *MarinMap, CoSMoS*



Historic flood Jan. 4, 1998, Novato. Credit: Unknown

Table 111. Novato Vulnerable Parcels

Scenarios		Parcels	
		#	%
Near-term	1	3	0
	2	7	0
Medium-term	3	6	0
	4	55	0
Long-term	5	800	4
	6	1,256	7

Source: MarinMap, CoSMoS

Table 112. Novato Vulnerable Parcels by Land Use

Land Use	Scenarios					
	1		3		5	
	Near-term		Medium-term		Long-term	
	#	Ac.	#	Ac.	#	Ac.
Commercial Improved					10	37
Commercial Unimproved					6	82
Industrial Improved					8	11
Industrial Unimproved					3	4
Residential					691	59
Single Family Attached					259	8
Single Family Improved					430	51
Single Family Unimproved					2	0.2
Common Area	1	33	1	33	4	67
Tax Exempt	2	82	6	480	62	1,473
Exemption Improved					2	3
Exemption Vacant					4	85

Source: MarinMap, CoSMoS

Table 113. Novato Vulnerable Residential and Commercial Parcels

Land Use	Scenarios					
	Near-term		Medium-term		Long-term	
	1		3		5	
	#	%	#	%	#	%
Residential					691	4
Commercial					16	3
Industrial					11	5

Source: MarinMap, CoSMoS.

In the long-term, impacts go from largely impacting publically owned parcels to impacting commercial, industrial, and residential parcels as well. In the long-term, tidal flooding could impact three percent of commercial, five percent of industrial, and four percent of residential parcels. While only four percent of residential, nearly 700 properties could face tidal flooding on a regular basis. With the 100-year storm surge nearly ten percent of commercial, and more than 20 percent of industrial parcels could face temporary storm surge flooding. Of the vulnerable residential parcels, about 60 developed single family acres could flood tidally.

Buildings

Most developed parcels feature one or more built structures. Most structures, unless already in a flood prone area, are not built to withstand regular or major flooding. The buildings in the exposed area of Novato are relatively newer construction compared to the other communities in the study area. In addition, a relatively small percent of Novato's building stock is vulnerable, topping off at five percent.

In scenarios 1-3, less than 20 buildings could expect tidal impacts. These buildings may be mechanical buildings or small out buildings that exist in or near the marsh lands. In the medium-term with a 100-year storm surge, scenario 4, several buildings at the storage facility in north east Novato could flood. In long-term scenario 5, nearly 700 hundred buildings could flood at MHHW. In scenario 6, with the additional 100-year storm surge, more than 3,000 buildings could flood. This figure amounts to nearly twenty percent of Novato's buildings stock.

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Major neighborhoods include Hamilton, Bahia, Olive Ride, Davidson Street, and Los Robles.

Table 115 divides most of the vulnerable buildings by how much water could fill the premises, whether it is one, two, or ten feet of flooding. In the long-term, roughly 100 buildings are flooded with three feet or shallower of water, 30 buildings between three and six feet, and more than 500 buildings could be vulnerable to more than six feet of tide waters. While flooding with several feet of water with the average high tide would be devastating, still, even shallow depths can make a property or home unbearable to live on and difficult to service.

Table 116 shows FEMA Hazus post-disaster estimates of more than \$600 million²⁰⁹ in assessed structural value vulnerable in scenario 6 if all vulnerable buildings were destroyed. If all of the buildings and their contents were damaged at the yellow tag level, \$4 million in damages would be estimated.²¹⁰ Reality would likely reflect a mix of the three damage levels, and a monetary figure between the low and high end figures provided here.

The maps on the following pages illustrate vulnerable buildings by scenario. The areas in the call out circles enable the reader to see areas that are difficult to see on the large scale map. The circles do not indicate that these areas are more vulnerable than others along the shoreline.



Hamilton levee and pathway. Credit: Marin County CDA

Table 114. Novato Vulnerable Buildings

Scenarios	Buildings		
	#	%	
Near-term	1	6	0
	2	17	0
Medium-term	3	17	0
	4	56	0
Long-term	5	672	4
	6	3,247	18

Source: MarinMap, CoSMoS

Table 115. Novato Tidal MHHW Flood Depth Estimates for Vulnerable Buildings

Flood Depth (feet)	Scenarios		
	Near-term	Medium-term	Long-term
	1	3	5
0.1-1			54
1.1-2			38
2.1-3			11
3.1-4			13
4.1-5			11
5.1-6			16
6.1-7			23
7.1-8			25
8.1-9			137
9.1-10			120
10.1+			207

Source: MarinMap, CoSMoS

Table 116. Novato Vulnerable Buildings FEMA Hazus Damage Cost* Estimates

Buildings in Scenario 6	871
Yellow Tag: Minor Damage \$5,000 minimum	\$4,355,000
Orange Tag: Moderate Damage \$17,001 minimum	\$14,807,871
Red Tag-Destroyed Assessed structural value	\$629,369,009

Source: MarinMap, CoSMoS, FEMA Hazus Model

* 2016 dollars

²⁰⁹ 2016 dollars

²¹⁰ 2016 dollars

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Map 107. Novato Vulnerable Buildings

Vulnerable Assets

F Fire Station

Vulnerable Buildings

Red Scen. 1: 10" Sea Level Rise (SLR)

Light Red Scen. 2: 10" SLR+Storm Surge

Orange Scen. 3: 20" Sea Level Rise

Yellow Scen. 4: 20"SLR+Storm Surge

Dark Blue Scen 5: 60" Sea Level Rise

Light Blue Scen. 6: 60"SLR+Storm Surge

Location Indicators

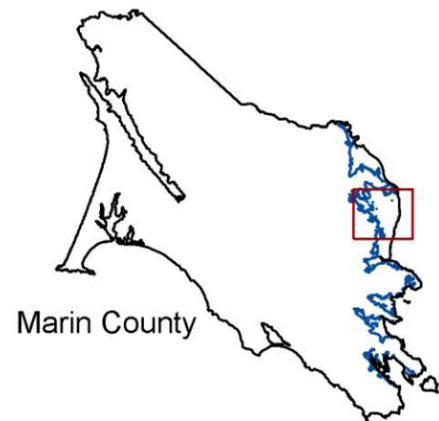
White outline Unincorporated

Grey outline Municipality

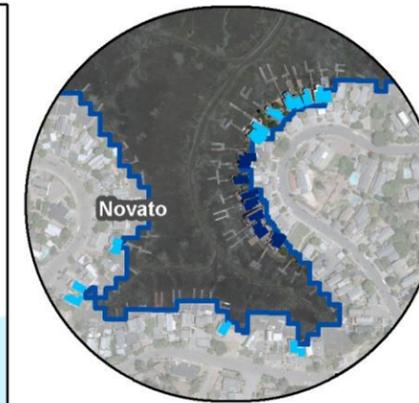
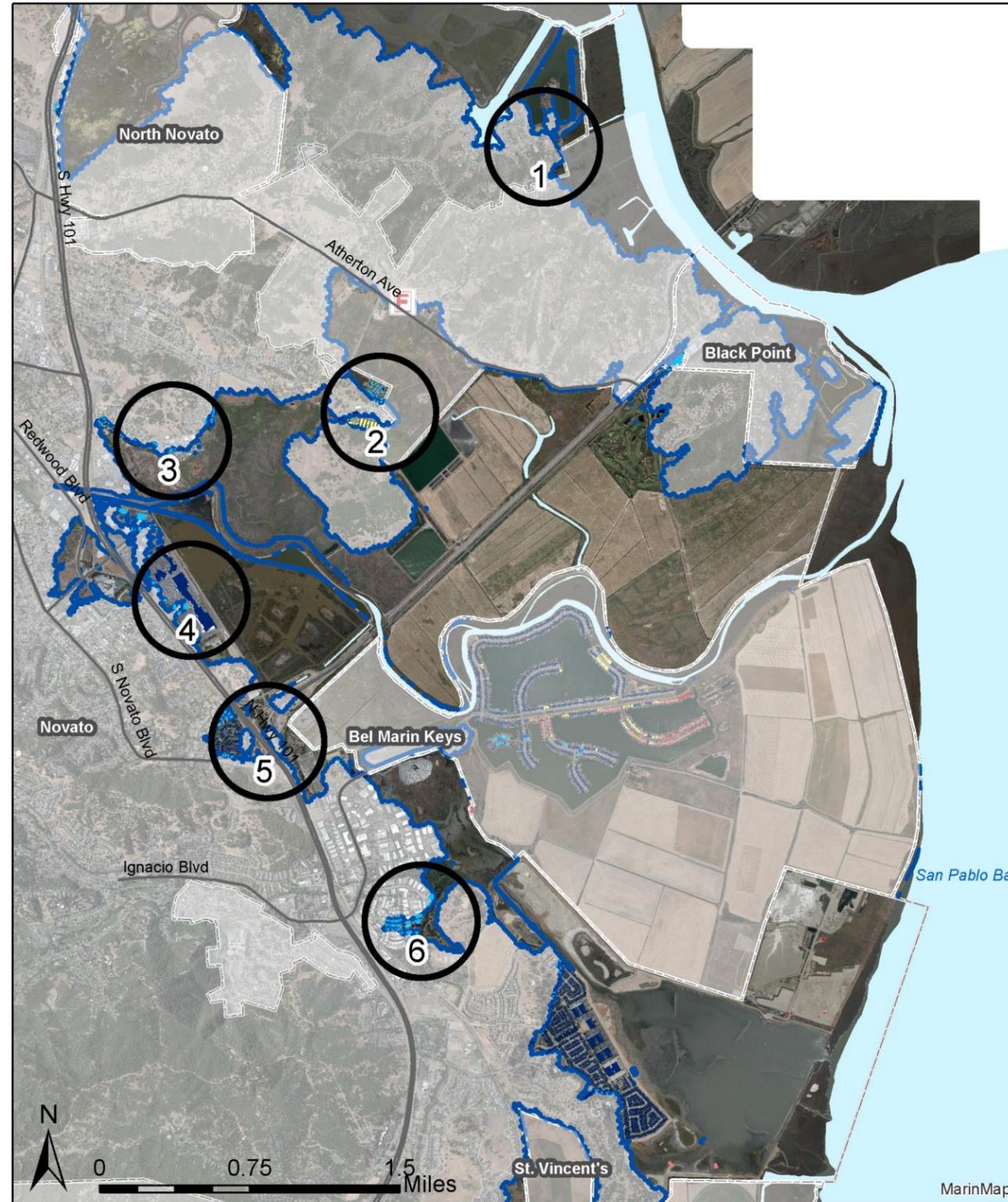
Black line Road

Light blue area Bay

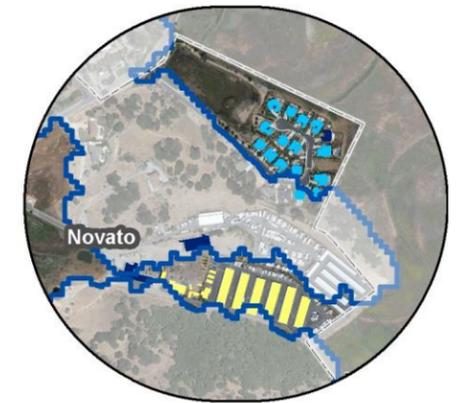
Blue wavy line Inland Extent: Sea Level @ 60"+100-year Storm



Marin County



1: Bahia Neighborhood



2: Olive Ridge



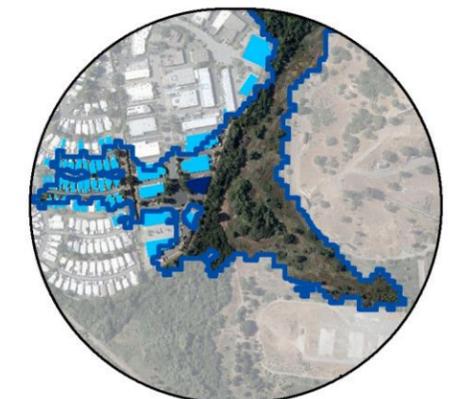
3: Davidson St. Buildings



4: Vintage Oaks Shopping Center



5: Neighborhood at U.S. Hwy. 101 @ S. Novato Blvd.



6: Pamoran Rd.

Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



Date: 3/30/2017



Transportation

In the near-term, major roadways could be vulnerable to sea level rise including State Routes 101 and 37, Redwood Boulevard, and Rowland Way. A handful of other roads are impacted in the near- and medium-term storm surge scenarios. By scenario 5, a significant number of roads in the low lying areas of the city, including roads on the other side of the Hamilton Levee, could be vulnerable. Examples include: Rowland Boulevard, Bel Marin Keys Boulevard, and Hamilton Parkway. [Table 117](#) lists transportation routes that could be vulnerable by scenario and annotates if the road is managed locally, or by the state or county.

According to Caltrans District 4 managers segments of State Routes 101 and 37 that already experience seasonal flooding that could escalate in frequency and scale due to sea level rise include:

- US Highway 101 at Rowland Boulevard, Novato: This stretch floods, is adjacent to Scottsdale Pond, and a series of ponds, levees, and pumps operated by others protect it.
- US Highway 101 at the 101/37 Interchange, Novato: This vulnerable 3,100-foot stretch is protected by levees and pumps operated by others.
- State Route 37 between Atherton Avenue and US Highway 101: This stretch of State Route 37 is protected by non-engineered levees that have a history of overtopping with combined high tides and Novato Creek flows.

Transit is also impacted in Novato at the intersection of US Highway 101 and Rowland Boulevard. Vulnerable Golden Gate Transit routes are 56, 70, 71, and 80, with stops at:

- Rowland Blvd. Park and Ride, and
- Hwy 101 and Rowland Blvd.

Marin Transit route 251 has vulnerable stops at:

- Rowland Blvd. and Hwy 101 Sb Off-Ramp
- Rowland Blvd. and Redwood Blvd.,
- Rowland Blvd. At Vintage Oaks Entrance,
- Vintage Way at Sleep Train, and
- Vintage Way at Fresh Choice.

Impacts to transit can have disproportionate impacts to households without vehicles and low income household that depend on transit. Persons who work at or use the stores and services provided in this

part of Novato may have to look elsewhere if measures are not taken to adapt to bay flooding. Flooding on the freeway itself could also impede travel to other bus stops that are not vulnerable under these scenarios. Regional travel on cross-county busses would also be impeded for many Novato residents.

The maps on the following pages illustrate vulnerable transportation features. The areas in the call out circles enable the reader to see areas that are difficult to see on the large scale map. The circles do not indicate that these areas are more vulnerable than others along the shoreline.



Rowland Way behind Vintage Oaks Shopping Center. Credit: BVB Consulting LL

Table 117. Novato Vulnerable Transportation Routes

Near-term		Medium-term		Long-term	
Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
0.1 miles	0.5 miles	0.5 miles	6 miles	15 miles	17 miles
Hwy 101 ^C Hwy 37 ^C Redwood Blvd ^L Rowland Wy ^L	Roads in scenario 1 Burma Rd ^L Perimeter Rd ^L Terminal Rd ^L	Roads in scenario 1	Roads in scenarios 1 and 2 Hamilton Dr ^L Ryan Ave ^L Deer Island Ln ^L Hanna Ranch Rd ^L Marsh Rd ^L Olive Ave ^L Two water Trl	Roads in scenarios 1-4 Rowland Blvd ^L Bel Marin Keys Blvd ^L Hamilton Pkwy ^L Alconbury Wy ^L Alhambra Ct ^L Amelia Dr ^L Arnold Dr ^L Audubon Wy ^L Avocet Ct ^L Caliente Real ^L Club Dr ^L Emerson Ave ^L Ferdinand Way ^L Gann Way ^L Gateway Ct ^L Greenham Ct ^L Hamilton Landing ^L Hangar Ave ^L Hayford Ct ^L Holliday Dr ^L Hospital Dr ^L Inyo Cir ^L Laconheath Ave ^L Lassen Ln ^L Lavenham Rd ^L Los Padres Cir ^L Manuel Dr ^L Maybeck St ^L Mildenhall St ^L Modoc Pl ^L Moore Rd ^L Palm Dr ^L Pizarro Ave ^L Plumas Cir ^L Presidio Dr ^L Renaissance Rd ^L Richardson Rd ^L Richardson Wy ^L Ripley Ln ^L S Palm Dr ^L San Pablo Ave ^L San Pablo Ct ^L Stern Dr ^L Stonetree Ln ^L Tahoe Cir ^L Trinity Dr ^L Vintage Wy ^L Wood Bridge Wy ^L	Roads in scenarios 1-5 Balboa Ct ^L Binford Rd ^L Donna St ^L El Arroyo Pl ^L El Granada Cir ^L Emerson Ave ^L Fairhaven Wy ^L Frosty Ln ^L La Crescenta Cir ^L Lea Dr ^L Leafwood Dr ^L Loleta Ln ^L Louis Dr ^L Palm Dr ^L Pamaron Wy ^L Rush Landing Rd ^L San Pablo Wy ^L Terminal Rd ^L Topaz Dr ^L Toyon Wy ^L Vera Cruz Ave ^L

M = Marin County; C = State of California; L = Local Municipality; P = Private. Source: MarinMap, CoSMoS

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Map 108. Novato Vulnerable Transportation Assets

Vulnerable Assets

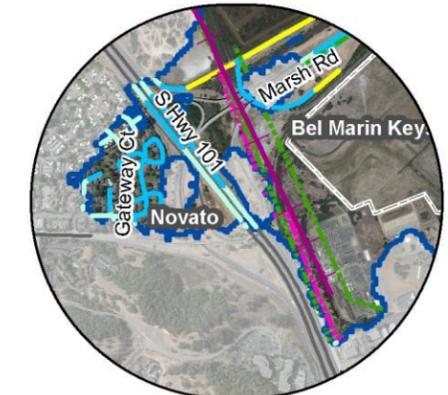
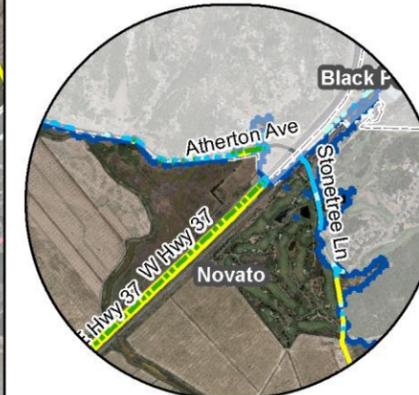
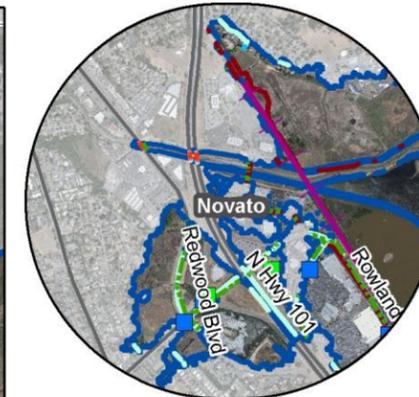
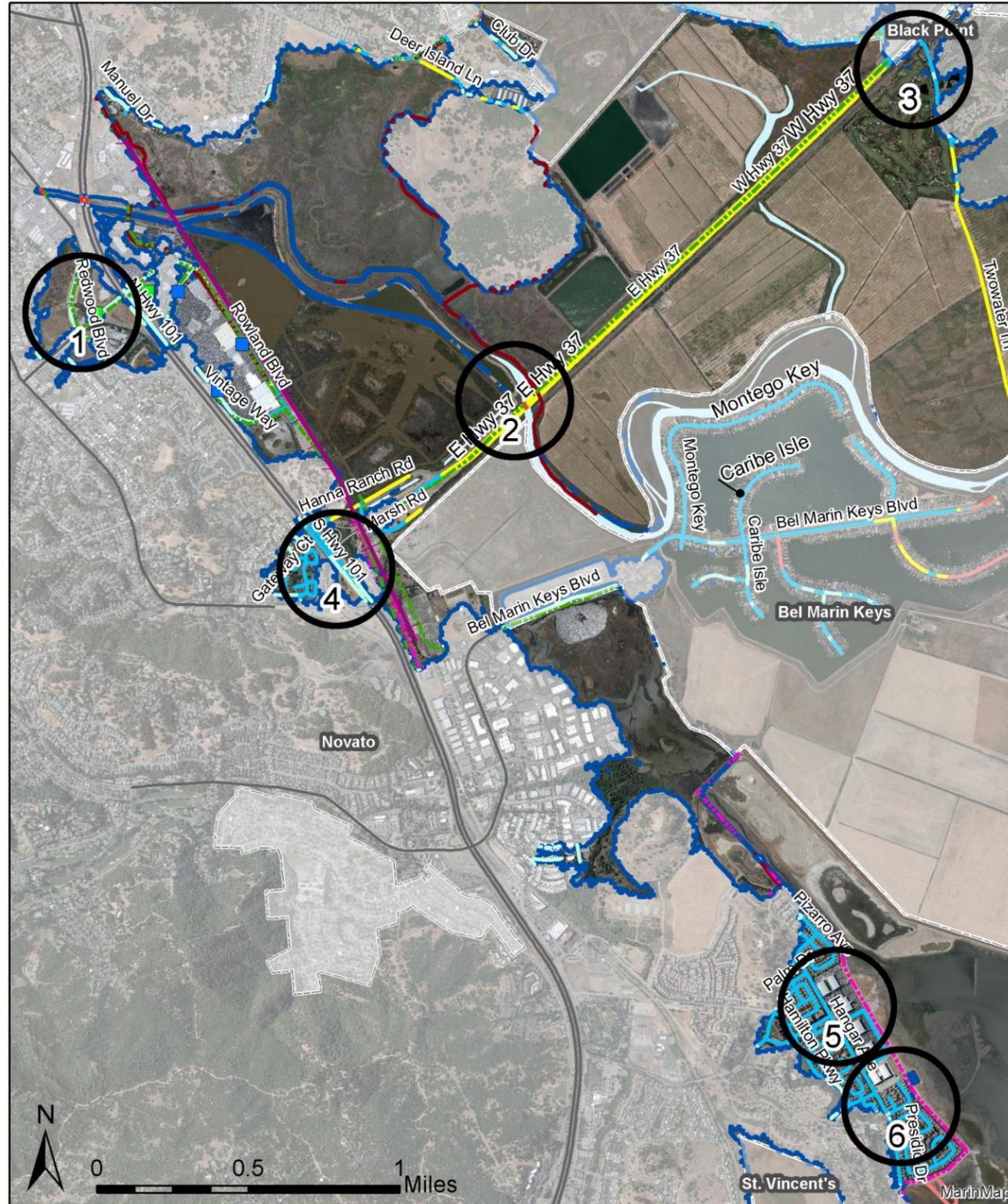
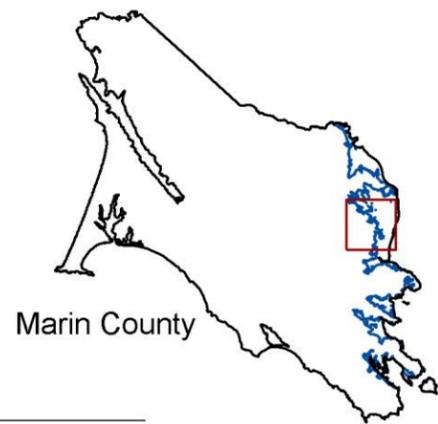
- GGT Bus Stop
- MT Bus Stop
- Bike path
- Bay Trail
- Trail
- SMART Track

Vulnerable Roads

- @10" Sea Level Rise (SLR)
- @10"SLR+ 100-year Storm Surge
- @20" Sea Level Rise
- @20"SLR+ 100-year Storm Surge
- @60" Sea Level Rise
- @60"SLR+ 100-year Storm Surge

Location Indicators

- Unincorporated
- Municipality
- Road
- Bay
- ~ Inland Extent: Sea Level @ 60"+100-year Storm



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Date: 3/30/2017



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Map 109. Novato Vulnerable Gas & Electric Asset

Vulnerable Assets

⊕ Solar Array

PG&E Assets

— Electric Transmission Line

— Natural Gas Pipeline

◆ Substation

▲ Transmission Tower

▭ PG&E Property

▭ PG&E Buildings

Location Indicators

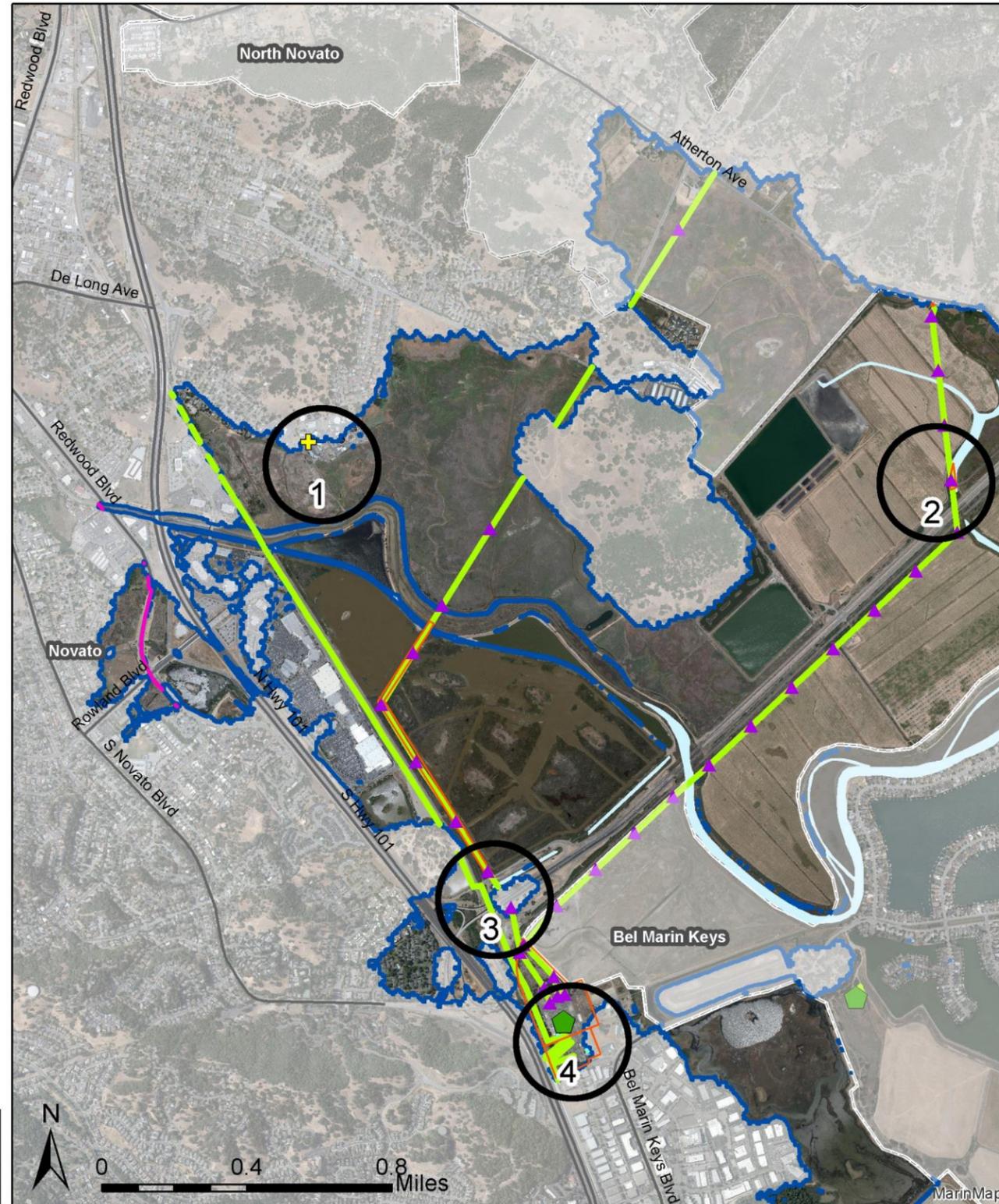
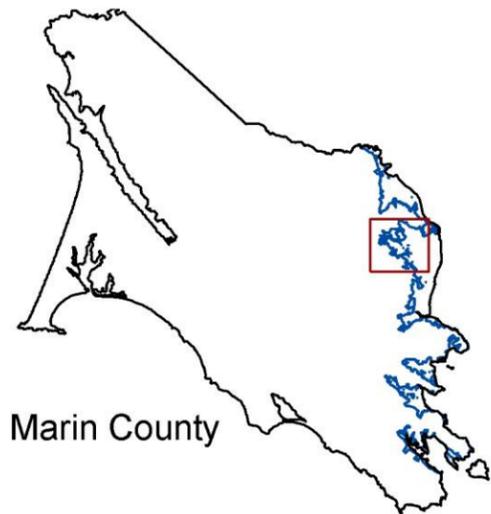
▭ Unincorporated

▭ Municipality

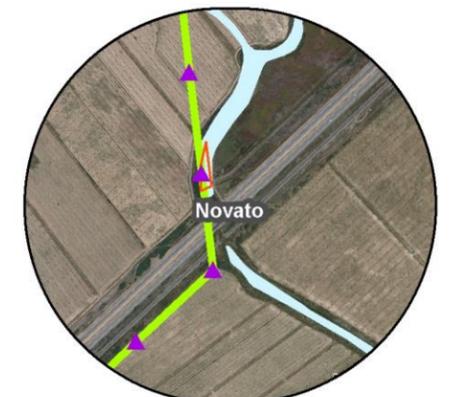
— Road

— Bay

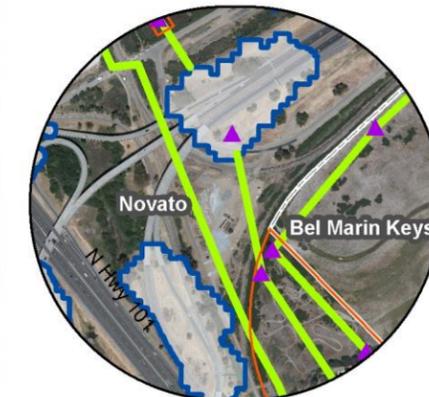
— Inland Extent: Sea Level @ 60"+100-year Storm



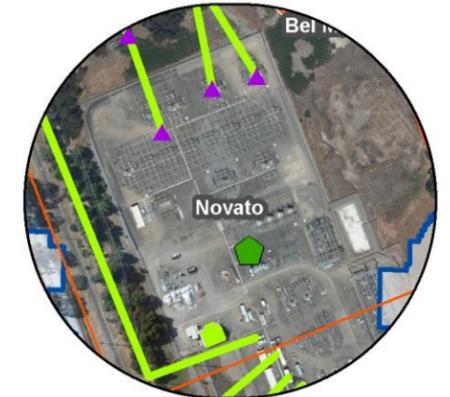
1: Novato Wastewater Treatment Plant



2: State Route 37



3: State Route 37 @ U.S. Hwy. 101



4: PG&E Substation

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Date: 4/1/2017

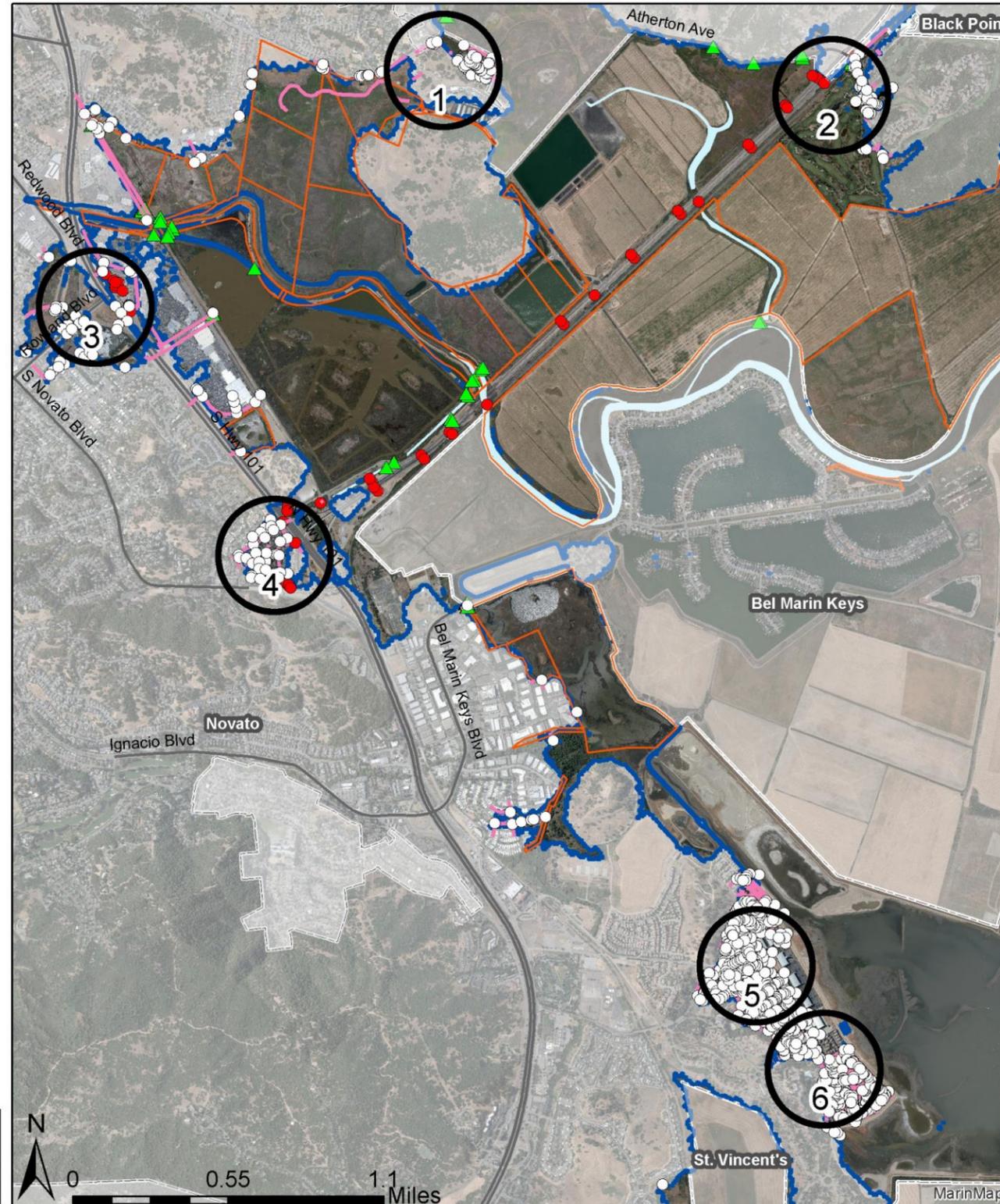


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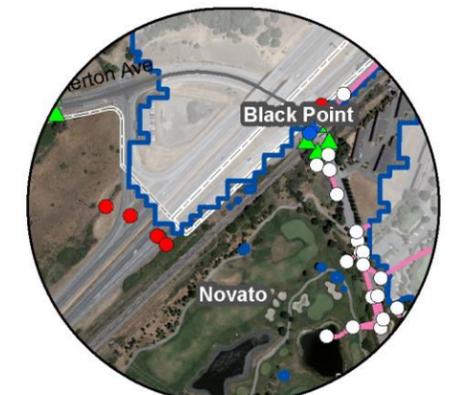
Map 110. Novato Vulnerable Stormwater Assets

Vulnerable Assets

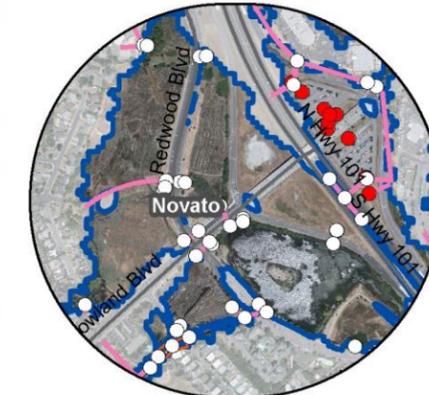
- Unspecified Node
 - ▲ Culvert
 - Pipe Inlet/Outlet
 - Pipe
 - ▭ Flood Control Parcels
- ### Location Indicators
- ▭ Unincorporated
 - ▭ Municipality
 - Road
 - Bay
 - ~ Inland Extent: Sea Level @ 60"+100-year Storm



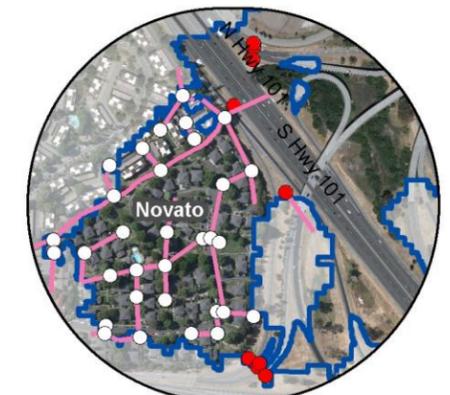
1: State Route 101 @ Rowland Blvd.



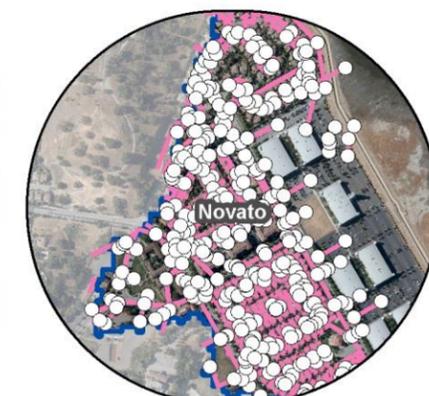
2: State Route 37 @ Atherton Ave.



3: State Route 101 @ Rowland Blvd.



4: Lynwood Hill area

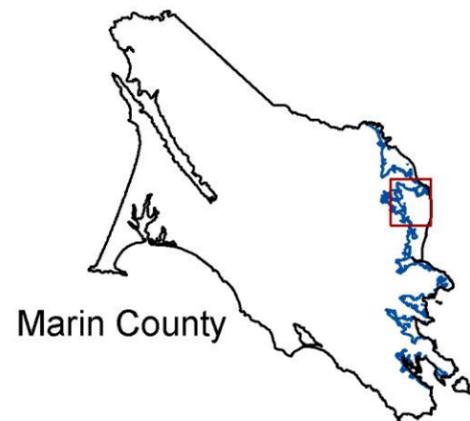


5: Northern Hamilton



6: Southern Hamilton

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Marin County



Date: 2/15/2017



Utilities

The primary utility issues in Novato are related to the Novato Sanitary District Wastewater Treatment Plant, North Marin Water District (NMWD) office and yard, and the PG&E transmission towers spanning across the Novato marshlands.

The Novato Sanitary District Treatment plant is vulnerable just before 3 feet of sea level rise. By scenario 5, the lower half of the plant is covered by tidal waters. Storm conditions may impact the plant sooner. The water will not likely be high enough to impact the process; however, electrical components may be lower and saltwater corrosion of the tanks and buildings could take a toll over time. Moreover, the highest high tides could reach even further into the facility. To read more about the NSD wastewater treatment plant see the Utilities Profile.

The North Marin Water District is vulnerable to sea level rise, storm surges, and rain events significant enough to back up Rush Creek. Other impacts could include corrosion and contamination of fire water reserves. For other issues related to NMWD see the Utilities Profile.

PG&E transmission towers in Novato's marshlands in Marin County's stormwater diked baylands and Bahia are already showing the effects of subsidence, with leaning towers and taut lines. As sea level rise continues, subsidence will worsen. In addition, the minimum height needed between the towers and the land surface could be flooded, bringing the electrical currents closer to the water.

Finally, Novato is vulnerable to similar issues as other low lying area in the study area such as:

- Underground pipes face compounding pressure forces from water and the road,
- Road erosion and collapse with underlain pipes,
- Saltwater inflow and infiltration causing inefficiencies in wastewater treatment,
- Continuously subsiding soils or fill, and
- Escalating activity, capacity demands, energy consumption, and wear and tear on pump stations in stormwater and wastewater systems,
- Aging individual site connections for water, sewer, and electrical, and
- Flood waters interrupting access for employees to reach work sites.

The maps on the previous pages illustrate vulnerable utility features. The areas in the call out

circles enable the reader to see areas that are difficult to see on the large scale map. The circles do not indicate that these areas are more vulnerable than others along the shoreline.

Working Lands

Most of the vulnerable working lands in Novato are leased out to ranchers for grazing. As this area floods more consistently, less grazing will be possible, and animal waste may enter into the bay when tides retreat.

Natural Resources

Several hundred acres of tidal and stormwater marsh lands could expect higher salinity concentrations and water levels. These occurrences could push marshlands inland where feasible. Scottsdale Marsh, the Bahia shoreline, and Deer Island are habitats that could be impacted.

The longfin smelt, Ridgway's Rail, tidewater goby, Steelhead trout, and salt marsh harvest mouse are the listed species recorded in this area according to the Natural Diversity Database. The smelt is listed as threatened on the California species list and a candidate for the federal list. The Ridgway's Rail, tidewater goby, and harvest mouse are federally listed.

Recreation

Some marsh pathways in the flood control lands could expect impacts in the near-term during average high tides. Most parks impacted in Novato are in the Hamilton area and include:

Scenario 5:

- Bahia Mini Parks
- Future Hamilton Rec Area
- Hamilton Airport Park
- Hamilton Amphitheater Park
- Slade Park
- Hamilton Community Center
- South Hamilton Park

Scenario 6:

- Scottsdale Marsh

In addition, Deer Island Park could become an island at average high tides, as opposed to seasonal high tides and stormwater coincidences.

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The Bay Trail could expect a high number of low lying segments underwater at MHHW. In addition, segments on the Hamilton levee could be vulnerable in the long-term to flooding and erosion.

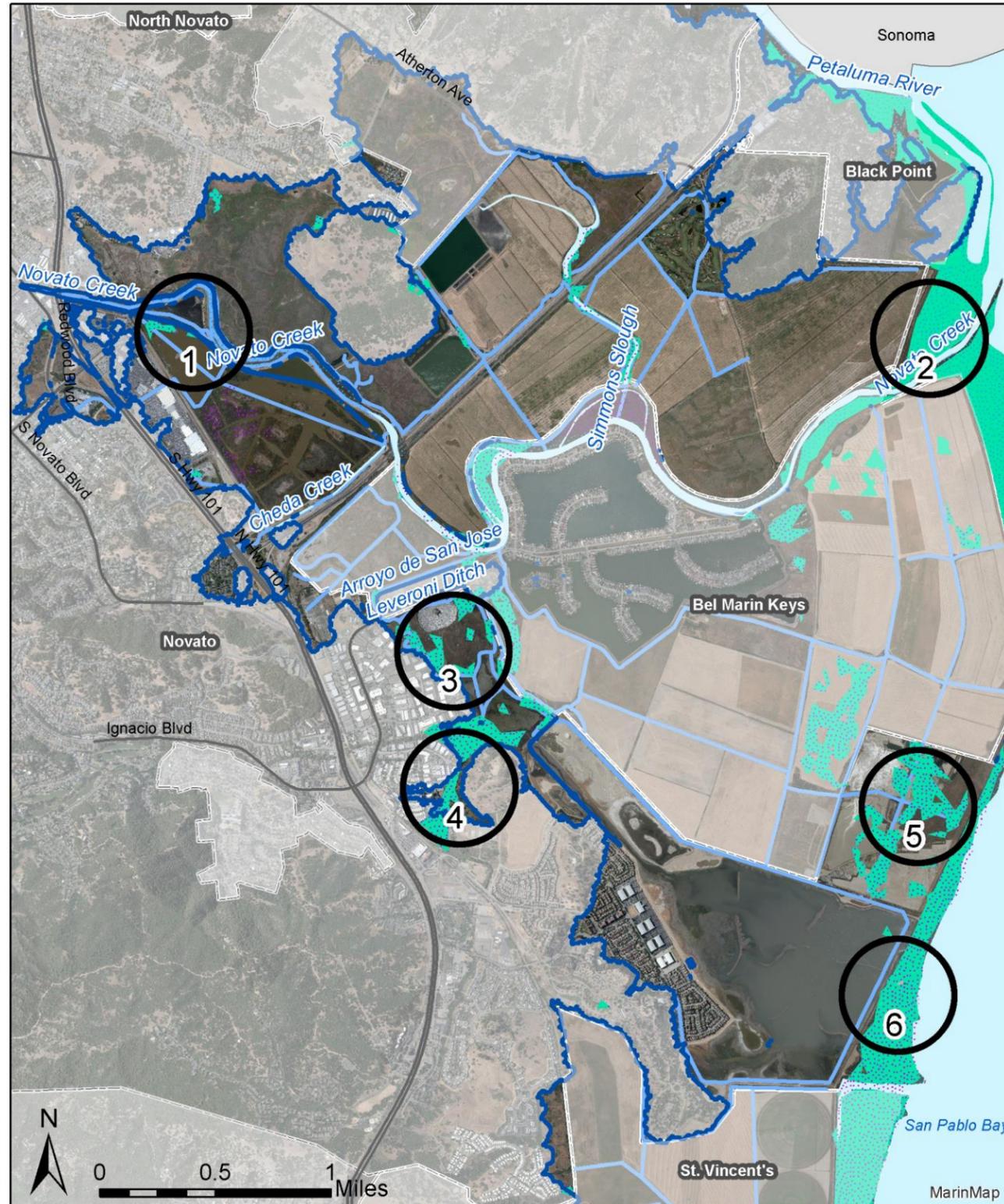
The maps on the following pages illustrate vulnerable natural resource, recreation, emergency and historic features. The areas in the call out circles enable the reader to see areas that are difficult to see on the large scale map. The circles do not indicate that these areas are more vulnerable than others along the shoreline.

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Map 111. Novato Vulnerable Natural Resource Assets

Vulnerable Assets

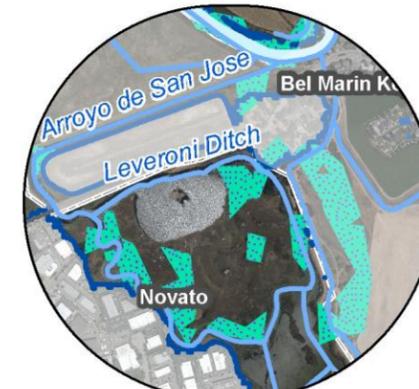
-  Streams
 -  Marsh
 -  Estuary
 -  Wetland
- Location Indicators**
-  Unincorporated
 -  Municipality
 -  Road
 -  Bay
 -  Inland Extent: Sea Level @ 60"+100-year Storm



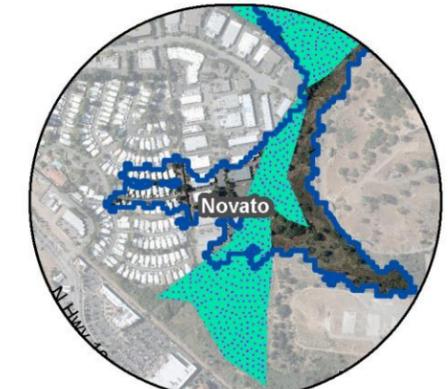
1: Novato Creek



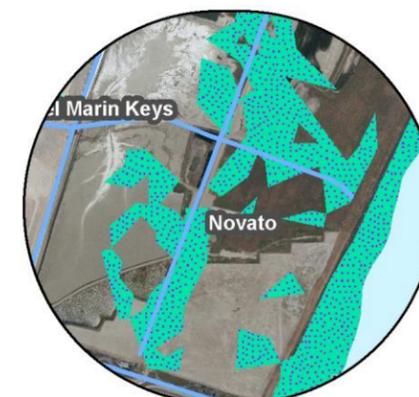
2: Novato Creek Estuary



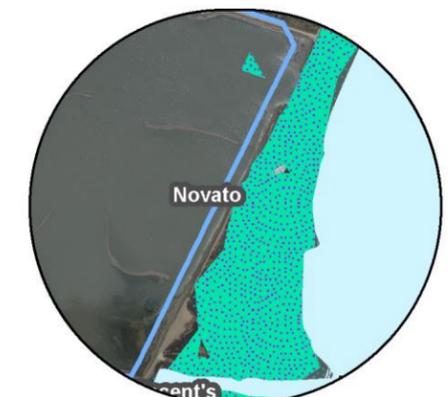
3: Leveroni Ditch



4: Arroyo de San Jose

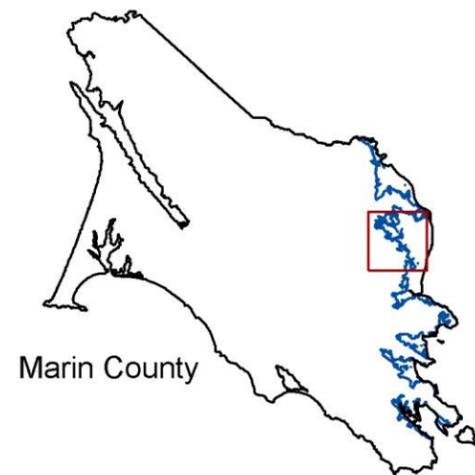


5: Northern Hamilton Wetlands



6: Southern Hamilton Wetlands

Disclaimer: Vulnerability Assessment maps, tables, etc. can be used as a resource to help identify potential hazardous areas and vulnerable assets. Marin County, and data providers here in, make no warranties of the accuracy or completeness of maps and data. Maps are representational and subject to future revision. Local site conditions must be examined. Commercial use is prohibited.



Date: 1/22/2017

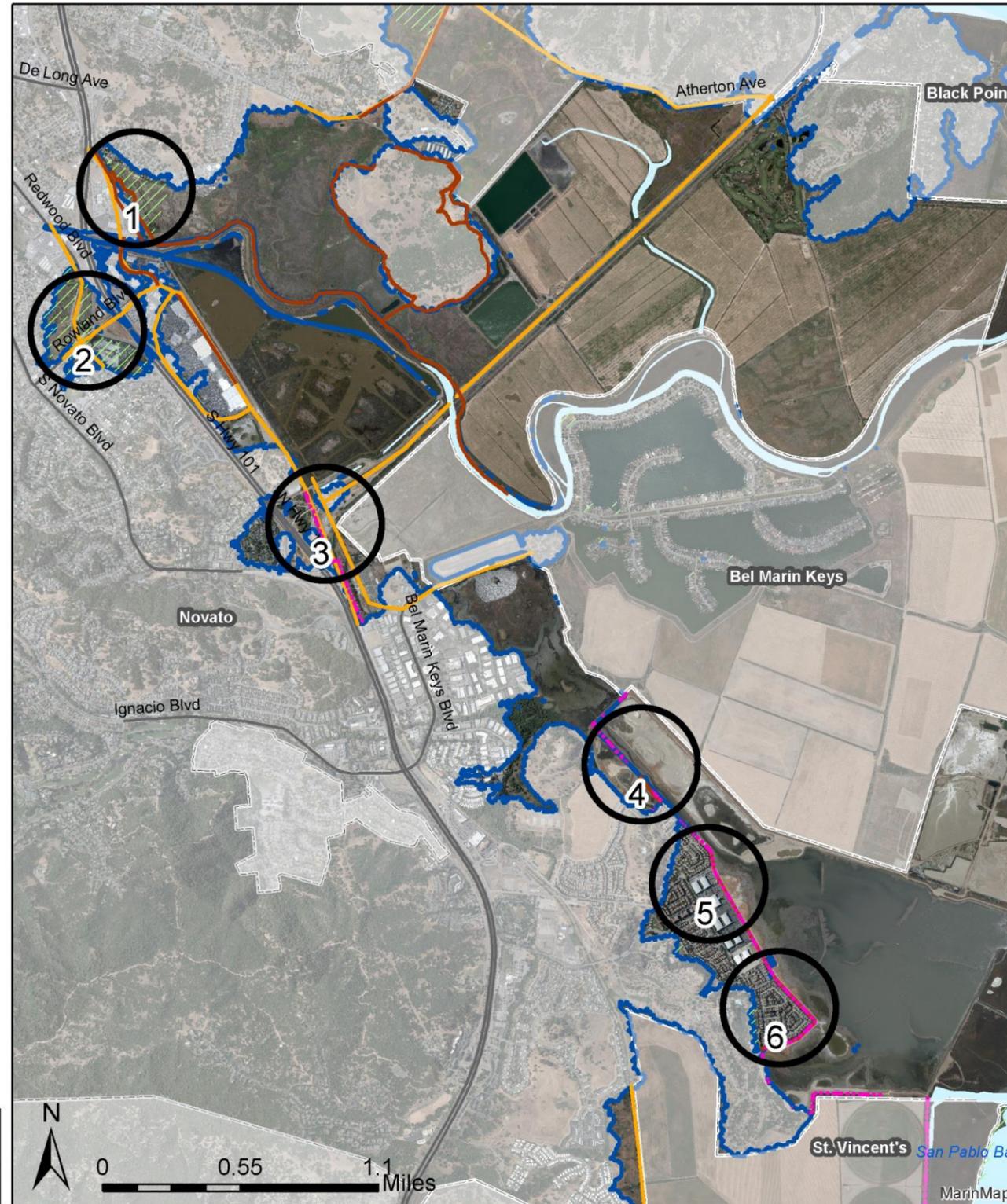


NOVATO

Map 112. Novato Vulnerable Recreation Assets

Vulnerable Assets

-  Bay Trail
 -  Trail
 -  Bikeway
 -  Park
- ## Location Indicators
-  Unincorporated
 -  Municipality
 -  Road
 -  Bay
 -  Inland Extent: Sea Level @ 60"+100-year Storm



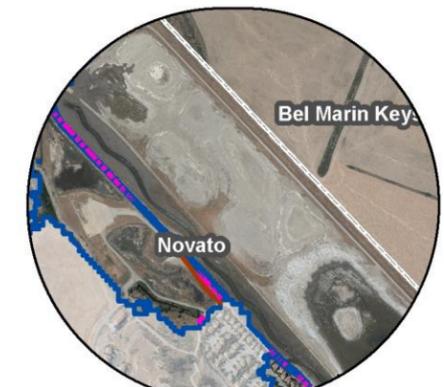
1: Slade Park



2: Scottsdale Marsh



3: State Route 37



4: Upper Hamilton Wetlands

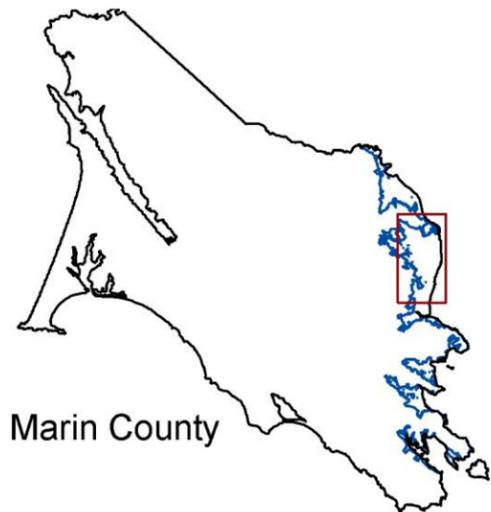


5: Middle Hamilton Levee



6: Lower Hamilton Levee

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Date: 1/25/2017





SMART Rail Bridge, Novato. Credit: Marin County DPW



Hamilton Field's Headquarters now serves as the Novato Arts center. Credit: Marin County CDA

Emergency Services

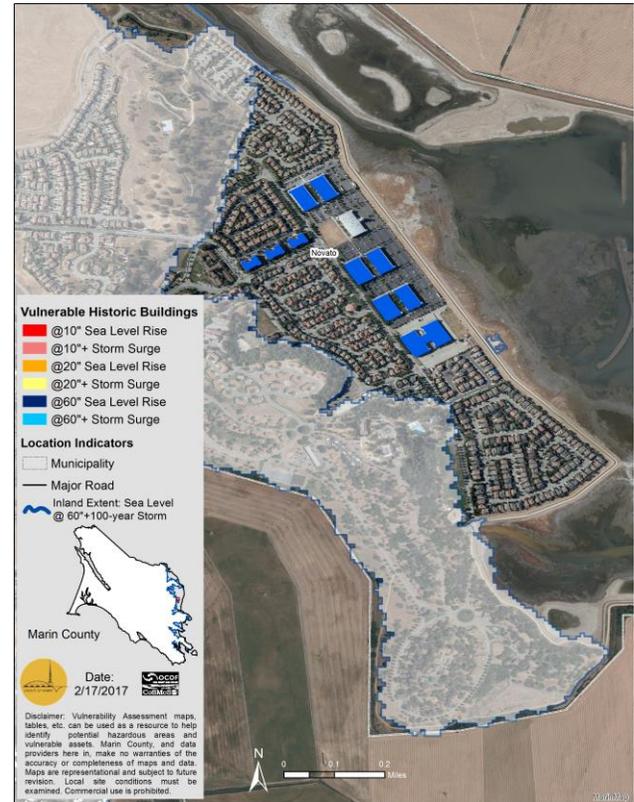
In addition to concerns for emergency vehicle access on flooded roads, the Novato Fire Station 62 could expect a high tide average of 5 inches of water in the medium-term and up to a foot of water in the long-term. In addition, the Novato Professional Firefighters Association Office is vulnerable in scenario 6.

Cultural Resources

In the 1930's, the 1,779 acre Hamilton Army Air Field was constructed as headquarters for the 1st Wing of the Air Force, one of only three such bases in the nation.²¹¹ The site was transferred to the US Navy, Army and Coast Guard in 1974, and is now part of Novato. Currently buildings house a variety of residential and commercial uses.

²¹¹ Maniery, M.L., and C.L. Baker. 1998. National Register of Historic Places Registration Form – Hamilton army Air Field Discontinuous Historic District.

Map 113. Novato Vulnerable Cultural Resource Assets



Source: CoSMoS, MarinMap, National Register of Historic Places Registration Form – Hamilton Army Air Field Discontiguous Historic District

The National Register of Historic Places Registration Form identifies 3 areas of the historic district.²¹² Of the three areas, Area C could be subject to average high tide flood depths of 2'5" to 10'4" by the long-term scenarios. All ten of its contributing resources could flood, including:

- Double hangars,
- Air Corps shops and hangar #9,
- Flagpole- 75 foot tall with plaque,
- Headquarters building,
- Officers' Barracks, and
- Electrical transformer vault.

Archaeological sites could be present in the exposure zones.

²¹² Ibid.

Table 118 ranks select vulnerable assets in Novato by onset and flood depth at MHHW. A 100-year storm surge would add an additional 1 to 3 feet of water to these properties. Note also, above average high tides could impact more properties than accounted for in this analysis.

Several assets could be impacted during the storm-surge scenario only, unlike the other that would subject to tidal and storm flooding. These are:

- Novato Corporate Yard,
- Las Robles Mobile Home Park,
- Novato Fire Association office, and
- NMWD administrative office and yard (with stormwater combination).

Table 118. Example Novato Vulnerable Assets by Sea Level Rise Onset and Flooding at MHHW

Asset	Scenario		
	Near-term	Medium-term	Long-term
	1	3	5
Scottsdale Marsh	Flooded at existing high tides		
Hamilton		3'8"-11'6"	9'-29'3"
NSD Wastewater treatment plant		2"-1'7"	5"-4'6"
Bay Trail		0-8"	0-12'7"
Vintage Oaks shopping center		3"-8"	7"-1'8"
Fire Station 62		5"	1'
S. Hamilton Park			11'6"
Deer Island			10'10"
Hamilton Pkwy.			4'8"-10'9"
Hamilton Amphitheater Park			10'6"
SMART Rail			0-9'8"
Rush Creek			8'10"
Hwy 37 West bound off ramp			2"-8'4"
Slade Park			8'
Hamilton Community Center			8'
Hwy 37 East bound			0-7'
Bahia Mini Parks			6'9"
Rowland Blvd.			0-2'7"
Hwy 101 North bound			0-2'
Hwy 101 South bound			0-1'9"
NMWD air valves			No data
NMWD fire water reserves			No data
Automated valve connecting NMWD & MMWD			No data
PG&E electrical transmission towers	In existing marsh areas		

Source: MarinMap, CoSMoS, Asset Manager Interviews