

WORKING LANDS

Asset Profile: Agriculture

Working lands host cultivation and livestock activities. The majority of operations exposed to sea level rise on the Marin shoreline are ranches, dairies, and small produce farms. The parcels are concentrated in St. Vincent's, surrounding Bel Marin Keys, and in North Novato. The following are vulnerabilities these operations could face:

- Loss of vehicular access to and from sites and processing facilities during storms, and eventually, on a regular basis. Heavy vehicles may lose access as roadways become compromised by flooding.
- Flooding could reduce useable space more often and, in some locations, permanently.
- If operations maintain on site wells to care for their animals that are located in the exposed area, the water source could be vulnerable to saltwater intrusion and could become unusable without treatment.

As shown in [Table 40](#), the majority of flooded agricultural uses are on public land that is leased to ranchers for grazing. Under scenario 5, with 60 inches of sea level rise, just over 4,100 acres across 27 parcels could be vulnerable. With storm conditions, an additional 200 acres across twelve parcels could be vulnerable. Two of the largest property owners are the Corda and Silveira families; dedicated primarily to ranching. These are some of the last privately held operations on the Marin's eastern shore.

Table 40. Vulnerable Agricultural Parcels and Acreage (ac.) by Community

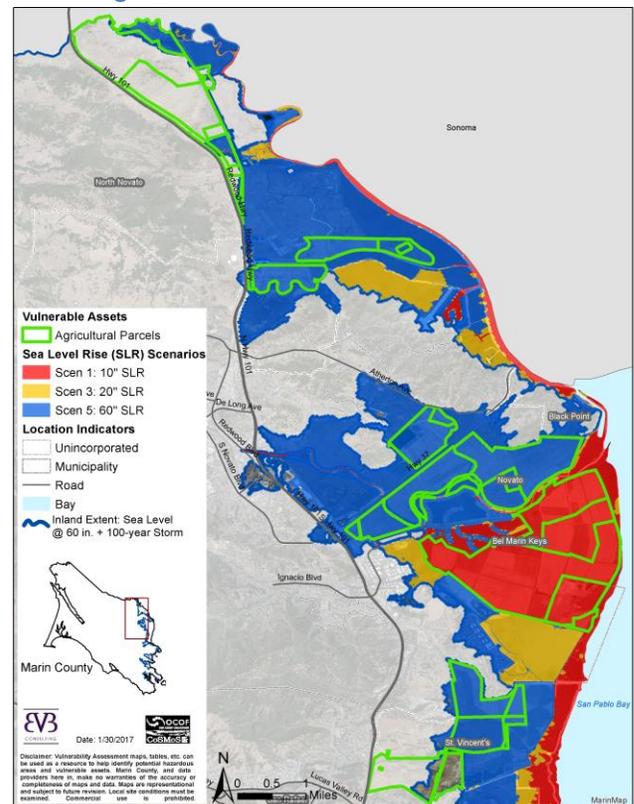
Term	Near		Medium		Long	
Scenario	1		3		5	
Location	#	Ac.	#	Ac.	#	Ac.
Bel Marin Keys	1	28	1	28	4	178
North Novato					7	510
St. Vincent's					5	460
Public Land	8	1,924	8	1,924	11	3,000
Total	9	1,952	9	1,952	27	4,148

Source: MarinMap, CoSMoS

IMPACTS AT-A-GLANCE: SCENARIO 6

4,150 agricultural acres (mostly ranch)	13 land owners
Site specific	Vehicular access
27 Parcels	Property owners Lessees

Map 35. Northern Study Area Vulnerable Working Lands



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Other Considerations

Economic

Vulnerable land based operations account for \$17,745,567⁷⁹ in assessed land and improvement value that could decrease as lands newly under water become waters of the State. If exporting agricultural goods becomes an ever increasing challenge on flooded roads, economic impacts could be incurred, including job losses, and at worst complete operation relocation or closure.

Environment

Intrusion of brackish water could change the ecological conditions of the ranchlands and ranch management practices. Invasive species are already a growing concern in the agricultural community, and warming conditions, with a weakening in the native flora, could increase the extent of some heat loving invasive plant species. In addition, as grazing land becomes more tidally influenced, the opportunity water quality contamination from manure and wading increases. If agricultural wells are in the exposed are, they could be vulnerable to saltwater intrusion. This could necessitate additional engineering or new water sources all together.

Social Equity

Employees of these operations could be disproportionately impacted if operations need to reduce labor. Losing agricultural businesses and jobs could have significant impacts on social outcomes.

Management

Agriculture is a highly regulated industry at nearly all levels of government. For example, at the federal level is the Clean Water Act (Sections 401 and 404)⁸⁰ and total maximum daily sediment loads that farmers must comply with to reduce erosion and sediment loads to creeks. In several cases, to comply and improve water quality, farmers have fenced off creeks from livestock wading, installed new stream crossings and restored riparian areas that could be compromised under these sea level

rise scenarios. Habitat changes prompted by sea level rise could require new conservation management plans and improvements in the coming decades to ensure water quality standards are upheld.

The Countywide Plan strongly supports continued diversified agricultural uses. The Agricultural Production Zone (APZ) and Agriculture, Residential Planned (ARP) districts are the zoning for most of the properties vulnerable in the study area.

⁷⁹ 2016 dollars

⁸⁰ US Environmental Protection Agency. Water: Clean Water Act. *Water Quality and 401 Certification*.
http://water.epa.gov/lawsregs/guidance/cwa/waterquality_index.cfm