Environmental Resources 5

"Pleasure Point Coastline"

Environmental Resources

The natural environment is at the core of Santa Cruz County's identity. This chapter describes the existing natural setting in the Plan area, focusing on the regional context, biological and water resources, and climate change.

REGIONAL SETTING

The Transit Corridors Plan area is set within the larger environmental context of Santa Cruz County. As previously illustrated in Figure I-1 (Introduction Chapter), urbanized areas within the county are surrounded by large expanses of undeveloped land rich in biodiversity and scenic beauty. Within these areas are unique habitats that contain a large number of endemic plant and animal species found only in Santa Cruz County. Redwood forests, grasslands, wetlands, and other natural areas are of great ecological value to all County residents. Over the past 35 years, environmental resources within the County's rural and open space areas have been preserved and protected through a variety of means, including government and non-profit purchases and protection, a growth management program that includes a strong rural/urban boundary, and riparian, wetland, and sensitive habitat protection ordinances. The Transit Corridors Plan will consider this broader regional context when developing a vision for the future of urbanized areas within Santa Cruz County.

Redwood forests and open space areas in unincorporated Santa Cruz County.

Sensitive habitat areas around Soquel Creek (top) and Moran Lake (bottom).

BIOLOGICAL RESOURCES

While the majority of the Plan area is urbanized, there are a number of undeveloped areas that contain important biological resources. As shown in Figure NR-1, there are a number of areas identified as "critical to the county's biodiversity goals," as documented by the Land Trust of Santa Cruz County Conservation Blueprint.[1] These critical areas are primarily located in and around water features and within protected open space areas, and include wetland, riparian, grassland, intertidal, and forest habitats. Figure NR-1 also shows the large areas of mostly intact forest and grasslands immediately adjacent to the Plan area boundaries. The Plan area also supports habitat important to various protected plant and animal species such as Monarch butterflies, raptors, migratory birds, steelhead trout, and Coho salmon. These species are a cultural as well as biodiversity resource, as exemplified by birding excursions and migration festivals.

[1] *A Conservation Blueprint: An Assessment and Recommendations from the Land Trust of Santa Cruz County. Land Trust of Santa Cruz County. May 2011.*

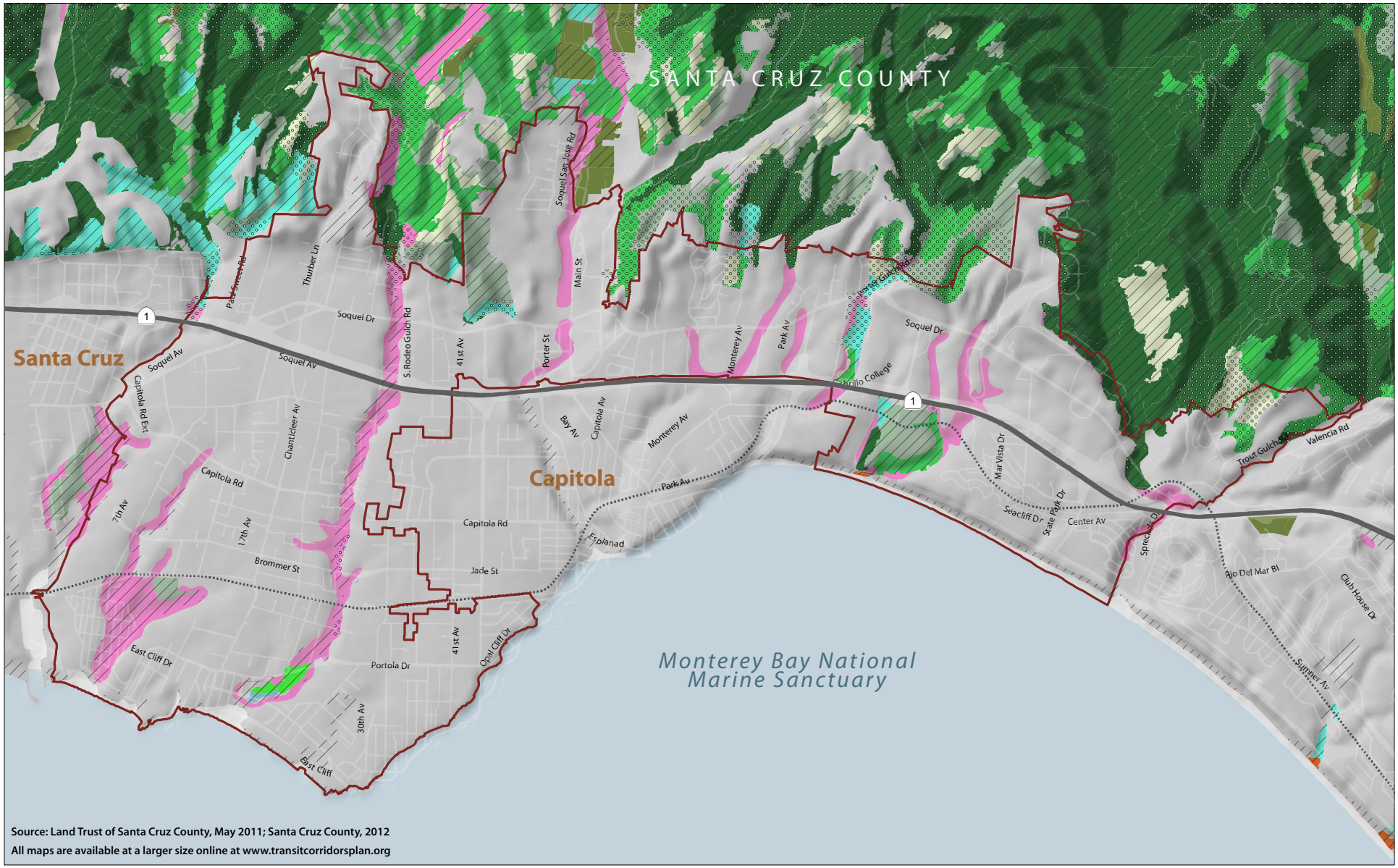
State Parks and State Beaches

The Transit Corridors Plan area is home to the following California State Parks and State Beaches:

- **Seacliff State Beach**
- **New Brighton State Beach**
- **The Forest of Nisene Marks State Park**

These parks and open spaces area play an important role in protecting im-portant habitat and natural resources. A number of areas critical to biodiver-sity goals as shown in Figure NR-1 are located within the parks and beaches.

Figure NR-1: Biological Resources



Source: Land Trust of Santa Cruz County, May 2011; Santa Cruz County, 2012
All maps are available at a larger size online at www.transitcorridorsplan.org

- Plan Area
- Rail Line
- Areas Critical to Biodiversity Goals
- Other Areas that can Contribute to Biodiversity Goals

Land Cover

- Conifer Forest
- Cultivated
- Dunes
- Grasslands
- Hardwood Forest
- Non-Native/Ornamental
- Riparian
- Shrubland
- Urban
- Wetlands

NORTH

Miles 0 0.5 1

Monterey Bay as seen from East Cliff Drive.

Land Trust of Santa Cruz County Conservation Blueprint

In May 2011 the Land Trust of Santa Cruz County published its Conservation Blueprint. This document recommends strategies and priorities to guide land conservation and environmental stewardship in Santa Cruz County over the next 25 years. The Blueprint draws upon extensive data, scientific experts, and public input to achieve goals in four main conservation areas: biodiversity, water resources, working lands, and recreation and healthy communities. The Blueprint contains maps of areas critical for biodiversity goals within Santa Cruz County, which are shown in Figure NR-1 of this report.

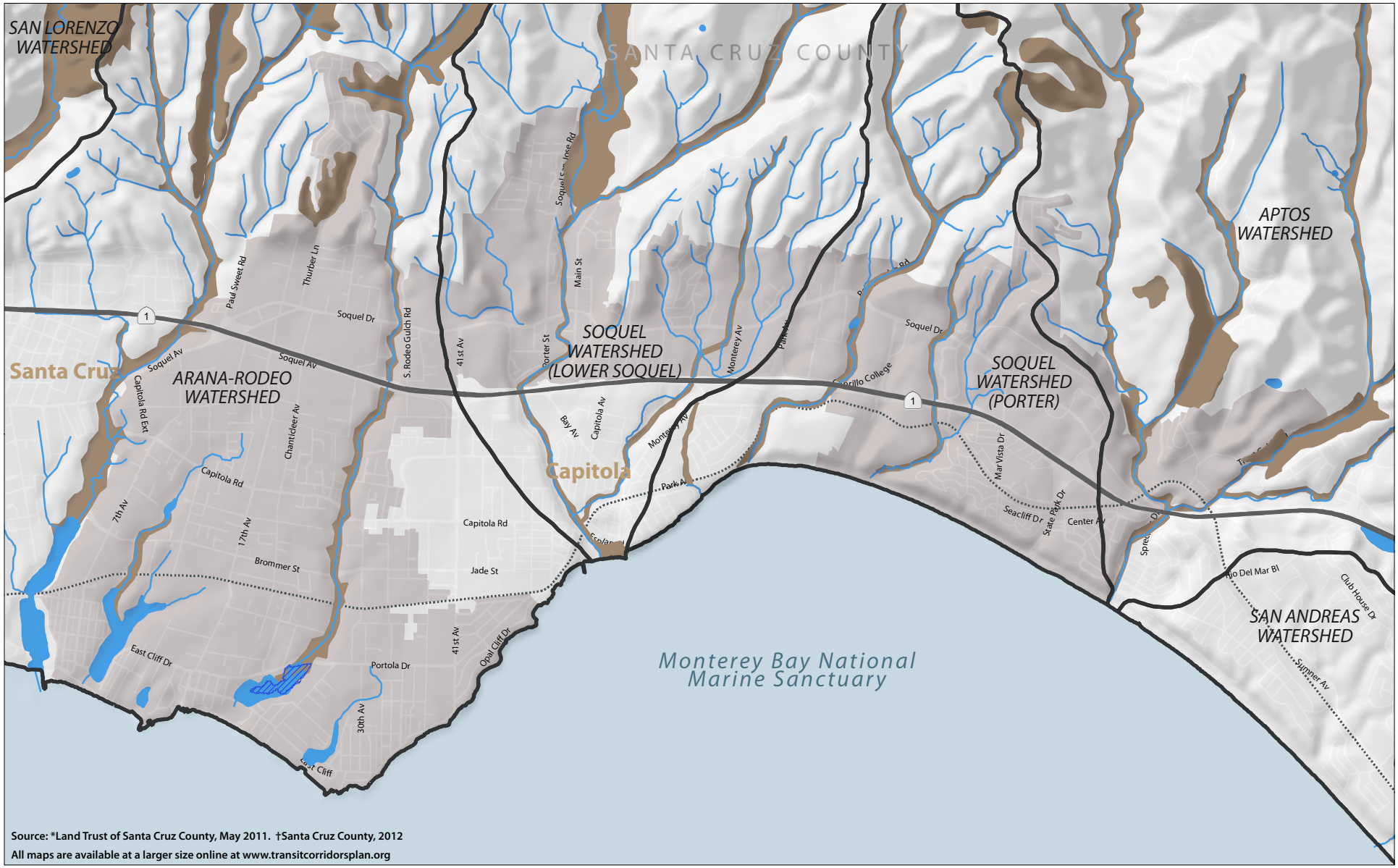
WATER RESOURCES

The Transit Corridors Plan area is adjacent the Monterey Bay National Marine Sanctuary. This area of the Pacific Ocean supports one of the world's most diverse marine ecosystems; it is home to numerous mammals, seabirds, fishes, invertebrates, and plants in a highly productive coastal environment.

Within the Plan area, important water resources include lakes streams, wetlands, and groundwater recharge areas. Figure NR-2 shows the location of these resources. Figure NR-2 also shows the boundaries of the watersheds within the Plan area. Watershed boundaries show the surface ar-

Rodeo Creek natural area.

Figure NR-2: Water Resources



Source: *Land Trust of Santa Cruz County, May 2011. †Santa Cruz County, 2012

All maps are available at a larger size online at www.transitcorridorsplan.org

Plan Area
Rail Line
Groundwater Recharge Areas*
Watersheds†
Water Bodies*
Streams†
Wetlands*

NORTH

Miles 0 0.5 1

eas within which all groundwater flows through the same creeks and streams and then out to the sea. Groundwater basins in the Plan area are overdrafted and water availability for both natural resources and public use is limited. Protection and enhancement of groundwater supply is a factor in development decisions.

NATURAL HAZARDS

Figure NR-3 identifies the location of key natural hazards within the Plan area. These hazards include liquefaction potential within riparian corridors, and flood hazards areas near to the coast and adjacent to creeks and other water bodies.

Figure NR-3 also shows the location of areas with high vulnerability to coastal erosion, which will be aggravated by future sea level rise. Climate change is expected to cause sea level rise and increased frequency and intensity of storm events. These changes will in turn increase hazards from cliff and sandy beach erosion in coastal areas.

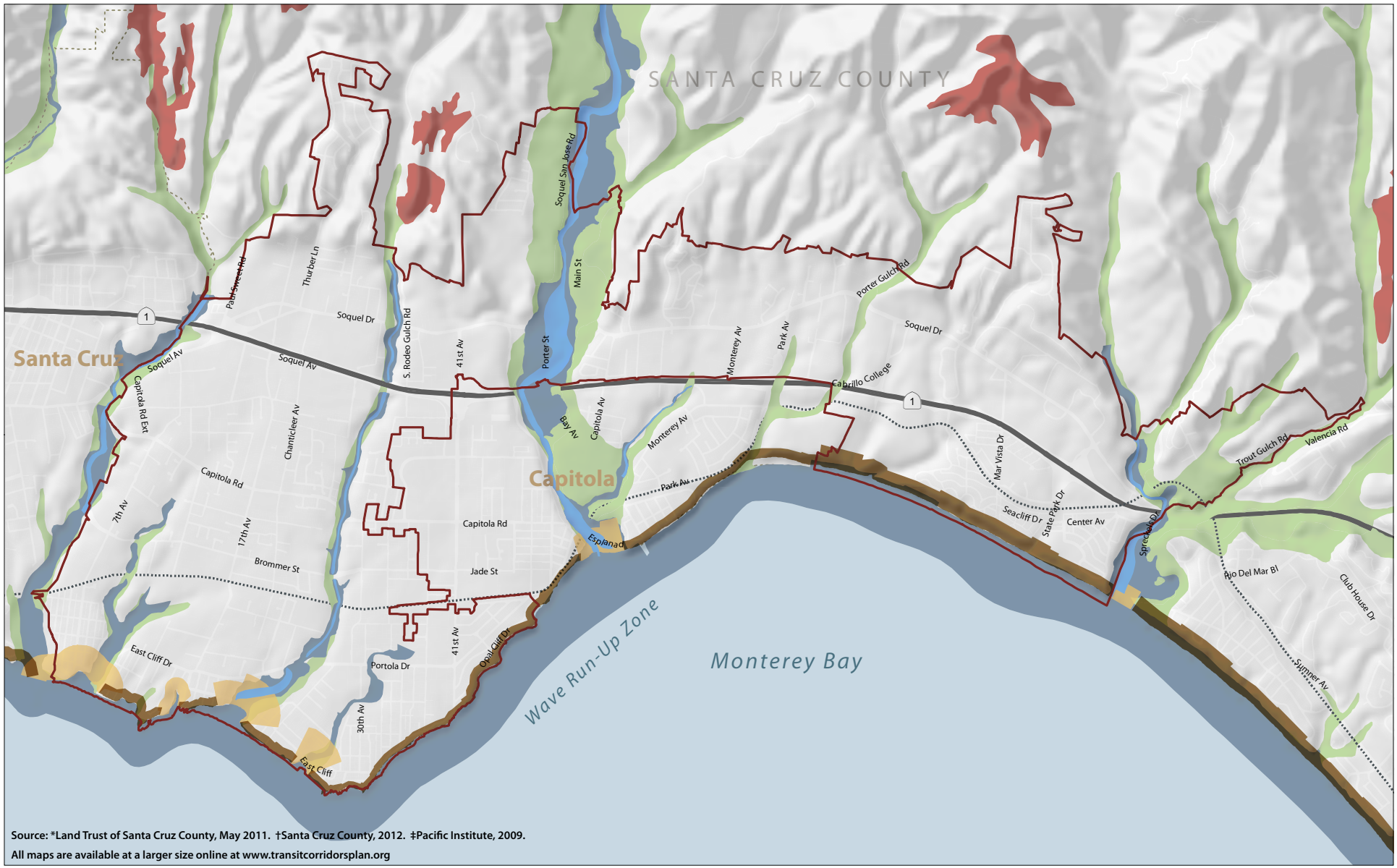
CLIMATE CHANGE

The California Global Warming Solutions Act of 2006 (AB 32) requires California to reduce statewide greenhouse gas emissions to 1990 levels by 2020, and to 20 percent of 1990 levels by 2050. Santa Cruz County is currently in the process of preparing a Climate Action Strategy (CAS) to contribute to this statewide effort. The preliminary draft CAS, published in April of 2012, reports the results of the greenhouse gas emissions inventory for the county, proposes targets for greenhouse gas reduction, and outlines strategies and implementing actions to achieve the targets. The CAS also describes current activities addressing adaptation to climate change and identifies next steps toward a complete vulnerability assessment and adaptation plan.

The draft CAS reports that Santa Cruz County has already met State greenhouse gas reduction targets for 2020 due to the closure of the Davenport cement plant. The CAS establishes a longer-range greenhouse gas reduction target of 42 percent of 2009 levels by 2035, and 64 percent of 2009 levels by 2050. To achieve these targets, the CAS establishes greenhouse gas reduction strategies that focus on transportation, energy, and solid waste. The transportation strategies include measures to coordinate land use and transportation policies in order to decrease reliance on the single-occupancy vehicle, increase use of transit, and support non-motorized forms of transportation such as walking and biking within the county.

The Transit Corridors Plan is closely related to the proposed CAS – the Plan will reinforce the goal of the CAS and will establish greater specificity on how updated land use and transportation policies will help to reduce greenhouse gas emissions. The Plan will contain specific development regulations and recommended infrastructure improvements that will implement the CAS strategies and increase transportation alternatives for Plan area residents.

Figure NR-3: Natural Hazards



Source: *Land Trust of Santa Cruz County, May 2011. †Santa Cruz County, 2012. ‡Pacific Institute, 2009.
All maps are available at a larger size online at www.transitcorridorsplan.org

Plan Area
Rail Line
Fire Hazard Areas*
100-Year Flood Zone†
Floodway†
Areas with potential hazards from sea level rise and bluff erosion‡
Areas with potential hazards from sandy beach erosion‡
Liquefaction Zone*

NORTH
Miles
0 0.5 1

Key Issues and Questions

The Transit Corridors Plan will address the following key issues and questions relating to natural resources:

- **Regional Setting.** The Plan area is surrounded by large expanses of highly valued open space and natural habitat. How can policies that apply within the Plan area help to protect and preserve these critical natural areas?
- **Biological and Water Resources.** The Plan area contains a variety of important biological and water resources. How can future development and changes in the Plan area best protect and preserve resources?
- **Climate Change.** The County is developing a Climate Action Strategy that calls for the coordination of land use and transportation policies to reduce greenhouse gas emissions. How can the Transit Corridors Plan best support this objective?