



THE LOST COAST RIVERS

The Eel, Bear and Mattole rivers meet the Pacific Ocean in a remote, sparsely populated coast. The landscape is characterized by broad and beautiful open spaces, rich ecosystems and a wild coastline. The estuarine environments of all three coastal rivers are nurseries for multitudes of wildlife: birds, fish, mammals, invertebrates, and microscopic organisms. The human population of this area has a strong, direct, and active commitment toward the maintenance and enhancement of the natural systems. Now and historically they are engaged in economies dependent on cooperation, self-sufficiency, and sustainability. Where saline ocean water meets fresh river water an "edge environment" rich in plants and animals is created. Local residents embrace life on that edge - living with dynamic storms, floods, extreme seismic activity and the modern threats and pressures of economic change, environmental degradation, and habitat loss. They still enjoy and count on a life marked with peaceful, rural tranquility, miles of open rangeland, lush pastures and fertile forests.



I. Resource Value Description

Natural

- The **Eel River delta** estuary remains open throughout the year. The wide river, which drains 3,600 square miles, meanders through pasturelands and forms a delta that includes sloughs, marshes and other tidal wetlands. The flood plain at the mouth covers 33,000 acres. Draining wetlands and using dikes to maintain land free from river and tidal flooding converted natural wetland to these rich pasture lowlands. The approximate limit of tidal influence is Fernbridge. The valued habitats are freshwater wetlands, salt marsh, slough, Sitka spruce forest, and coastal dune strands.
- The **Mattole and Bear River estuaries** remain open seasonally. In early summer a combination of sediment deposition from coastal longshore ocean currents, and decreased river flows cause a sandbar to build up which closes the rivers mouths and creates a coastal lagoon. Erosion of the sandbar by increased river flow in the rainy season and wave action cause the bar to be breached in the fall. The Bear River drains 128 square miles acres and the Mattole River drains 304 square miles. The mouth and lagoon type estuary of the Bear River is part of a ranch and entirely privately owned. The Mattole River estuary is entirely privately owned with the exception of Bureau of Land Management's beach camping area and trailhead for the Lost Coast Coastal Trail on the south side and BLM's Moore Hill property to the north.
- There are 24 miles of **undeveloped**, and primarily road-less, **coastline**. These are almost entirely held in private ownership by long-time ranching families. The towns of Ferndale and Loleta are located at the mouth of the Eel River and the town of Petrolia is located near the mouth of the Mattole River. The mouth of the Bear River lies between.
- The **coastal rivers** contribute soils, sediments, and woody debris to the ocean environment. All have valuable contributions of nutrients necessary for offshore, undersea habitat. Logs floating out to sea eventually sink to the ocean bottom, or float to remote islands and other continents. Hawaiian war canoes were carved from northcoast redwood trees.

Plants and Animals

- Estuarine wetlands lagoons, sloughs, salt marshes and riverine riparian areas provide seasonal habitat for many **migratory bird species** utilizing the Pacific flyway as well as numerous resident species (173 species identified). Listed species include: bald eagle, golden eagle, western snowy plover, California brown pelican, peregrine falcon, yellow warbler, golden cuckoo, long-eared owl, burrowing owl, white-tailed kite, willow fly catcher, Coopers hawk, sharp-shinned hawk, osprey.
- Estuarine river environment contains anadromous, freshwater, and marine **fish** (35 species identified). Listed species include: long fin-smelt, green sturgeon, coho salmon, chinook salmon, steelhead trout, summer steelhead, Pacific lamprey
- The estuary, lagoon and surrounding riparian areas are habitat for terrestrial, riverine and marine **mammals** [20 species identified] Listed species include the stellar sea lion
- The lower river environments host at least nine distinct **plant associations**, which draw their distinct character from the riverine and marine

influences. The estuary environment is endangered (over 75% in California destroyed by development and reclamation). It is an essential nursery habitat for hundreds of vertebrate and invertebrate species. Listed plant species include: beach layia, Western lily, pink sand verbena, Point Reyes birds beak, Humboldt owls clover,

Cultural

- The **Wiyot and Mattole people** lived in settlements along the Lost Coast near the coastal rivers and estuaries. Contact with Euroamericans began during the Gold Rush years in the early 1850s. Massacre, ill and unjust treatment were methods to remove native people from their homelands. Today there are two small Rancherias: the Bear River Band of Rohnerville Rancheria and the Table Bluff Reservation-Wiyot Tribe. Together they oversee and maintain historic, cultural areas of influence for the entire areas of the Lost Coast Coastal Rivers.

- **European settlers** drained, diked and leveed the Eel River Delta to create first croplands for farming. Following the development of the highway and railroad the delta was converted to rich pasture for dairy and beef cattle ranches. Similar settlement occurred in the Bear River and the lower Mattole River without reclamation of estuary land.

Recreation

- Waterfowl hunting, sport fishing, & crabbing.
- Boating, canoeing, kayaking
- **Auto tours** on quiet and lightly traveled county roads giving the motor-tourist opportunities to view nature
- Pastoral and natural landscape with high quality coastal light, a haven for **photographers and landscape painters**
- Bicycling, walking, and running on rural county roads for exercise and aesthetic pleasure
- Wildlife observation
- Bird watching by land and from watercraft
- Quiet, silence and extraordinary vistas serving **aesthetic and spiritual values**



Visual

- Vistas with panoramic views of the mouths of all **three-river systems**
- Open spaces with complete **ocean horizons** in view give dramatic sunsets
- **Unobstructed views** of open spaces, natural forest, river, grasslands, pastoral dairies, grazing animals and ranching landscapes
- Skies, marshes, islands, and fields teeming with resident and migrating **birds.**

II. Community Values

Land ownership

- There are 2,000 acres of public lands within the **Eel River Delta**. These are principally owned by California Department of Fish and Game with 150 acres in the Table Bluff Ecological Reserve and 1,850 in the Eel River Wildlife Area. Humboldt County owns Crab Park and leased Pedrazinni Park both limited in size to recreational boat launch sites.
- The **Bear River** is predominantly in private ownership, with 85% in small ownerships and 15% in industrial timberlands. The mouth and lagoon type estuary of the Bear River is part of a ranch and is privately owned.
- The **Mattole River** basin comprises 304 square miles with 1/3 of the landmass owned by residents, 1/3 by absentee owners, and 1/3 split between public land and private timber companies. The Mattole River estuary is entirely privately owned with the exception of Bureau of Land Management's beach camping area and trailhead for the Lost Coast Trail on the south side and BLM's Moore Hill property to the north.
- The **24 miles coastline** between the Eel and the Mattole includes grasslands, forests, and open spaces that are generally undeveloped. These are almost entirely held in private ownership and most in extensive acreage holdings stewarded by long-time ranching families. The Lost Coast Headlands project, combining former ranch land and the Centerville Naval Station will establish approximately 600 acres of coastal bluffs for public coastal recreation use while permitting traditional grassland grazing to continue.

Economics

- The Eel River Delta's lush pasture lands feed **dairy herds** and provide milk for the Humboldt Creamery Association line of milk products, Loleta Cheese Company, and is shipped out of the area for more cheese production. The dairy industry is the mainstay of the area.
- **Ranching and landowner** management of timberlands for beef and wood products are historically and presently a key element for sustainable economy in the lower Eel, Bear, and the Mattole River watersheds.
- **Outdoor recreation** is increasing as a source of revenue and employment.
- The "**Victorian**" **village of Ferndale**, offers multi-ethnic celebrations, civic sponsored public activities, the popular Humboldt County Fair, and is

a year round cultural attraction and destination for tourists. Ferndale and Petrolia provide services for tourists, sportsmen, and naturalists.

- The natural beauty, quiet, uncrowded living conditions, clean air, small town and rural character are attracting a growing number of residents whose **sources of income are from out of the area**: retirement pensions, investment portfolios, and businesses operated by telecommunication.

III. Opportunities and Threats

- The North Coast Regional Water Quality Control Board and the U.S. Environmental Protection Agency (EPA) have listed the Mattole River watershed as an **impaired water body for sediment and temperature**. 303(d) list of the Clean Water Act (1972)
- The **estuarine environments** of the Eel, Mattole, and Bear Rivers are critically stressed and endangered. Settlement, resource use patterns, and the constant downstream movement of sediment from upstream sources have dramatically impacted the estuary area. Their role as a nursery for numerous species plays a key role in the survival of related Northcoast economies. Further siltation, channelization of tributaries, destruction of riparian habitat, increased temperatures, and pollution place eco-system bio-diversity and the continued sustaining incomes of the resident human population at risk. The status of the wild chinook and coho recovery and other fisheries with high economic value: Dungeness crab, flounder, surf fish and herring will largely depend on how these environments are treated.
- All three estuarine systems are formed from coast range sources with steep headwaters' gradients, then slacking off in mid-reach, and lower mouth structures with very low gradients. Much of headwaters and mid-reach sediment production settles and is deposited at the mouths of these rivers. Following the post-war logging booms with the conversion of old-growth forests by tractor logging, the floods of 1955 and 1964 released huge volumes equal to thousands of year's worth of natural sediment production. **Huge bed loads** reduced the depth of the river, eliminating deep ponds, spread the river out, and destroyed river terraces and riparian habitat. All this contributed to dangerously raising water temperatures. The situation results in the current conditions where recovery remains in the balance of restoration, rehabilitation and conservation land use.
- **Local economies are being forced to restructure** due to price fluctuations, long downward trends in timber and beef price, foreign competition for lumber, environmental restrictions on land use and ocean fisheries. Employment is shifting from the once dominant wood products and fishery industries to the service and tourism sectors. Global and national market economies put many local landowners in precarious economic positions where selling parcels of land for residential values become viable and necessary.
- State, national, and international focus on maintenance of the North American temperate rainforest for climate control, regeneration of oxygen, maintenance of bio-diversity, and long-term sustainable economies has generated high public interest in the Northcoast forest's health and stability. The Eel, Mattole, and Bear River systems are increasingly subject to government scrutiny in response to such growing public concerns.

- **Pro-active initiatives** from industry and citizens groups in response to threats of increased regulation, habitat loss, and reduced quality of life are increasing conservation efforts. In all three watersheds high levels of activity are present from public non-profits organizations, land trust and restoration groups. Industrial timber companies and ranch and timberland owners are utilizing watershed analysis for planning with greatly increased concerns for environmental impacts and cumulative effects. Fisheries organizations are active in land-based environmental efforts related to the inter-related health of land and sea ecology.

IV. Conservation Actions

Current

- **Lost Coast Headlands:** Located in the landscape connection between the estuarine environments of the Eel River Delta and mouth of Bear River. The headlands include several coastal streams, lagoon environments, diverse wildlife habitat, scenic vistas, grasslands, ranches, and pocket beaches. \$2 million was appropriated from Proposition 12 money to the Coastal Conservancy to begin acquisitions for public coastal access and resource protection. Presently the 200-acre Lost Coast Ranch has been purchased by the Conservation Fund and deeded to Bureau of Land Management. The 40-acre Centerville Naval Facility is in the process of being transferred to BLM with assistance of Congressman Mike Thompson. Other properties are under contract or in negotiations. Guidelines for more public acquisition of easements or fee title include protection of the traditional use of grasslands for grazing livestock.

- Resource protections to **reduce and eliminate sediments sources** are proceeding in the lower Eel River, Bear River, and Mattole River watersheds. The 4,000 acre Hackett Ranch in the lower Eel watershed is selling a Conservation Easement to a consortium of public agencies with Pacific Forest Trust holding the easement and monitoring a conservation plan. State and federal funds dedicated for recovery of fisheries are being used to assist pro-active landowners in the Bear River watershed. Humboldt Resources Conservation District is pursuing solutions for environmental problems with the effects of flooding, dairy manure treatment, the blockage of Salt River and health of Eel River estuary. Mattole Restoration Council and Mattole Salmon Group assisted with California Department of Fish and Game, Wildlife Conservation Board, and private funds are being invested in restoration and rehabilitation of up slope, in stream reductions of sediment and greater protection of the estuarine habitat in the lower Mattole River watershed.

Prospective

- **Private landowner initiatives** are under way for conservation planning and action to promote and establish water quality, bio-diversity, and sustainable commercial use of resources. Citizen's organizations such as the Buckeye Conservancy, The Northcoast Regional Land Trust, and watershed restoration groups are promoting voluntary conservation action. Public and private investment that would give economic incentives for stewardship focusing on conservation easements would reduce sedimentation and pollution of estuarine environments.

- Perpetual protection of **North Fork Mattole Heritage Forests** and Prairies. The largest low elevation old growth Douglas-fir forest remaining in California (3,000 acres) is interlaced with prairies (2,000 acres) to form

a landscape mosaic typical of pre-settlement conditions. It teems with wildlife extirpated elsewhere. The present owner, Pacific Lumber Company, intend to clear-cut these forests during the next decade. This terrain is geologically unstable, naturally producing sediment. The outflow of the Upper and Lower North fork tributaries is released directly into the estuarine environment at the Mouth of the Mattole which is near threshold for survival of the fishery. Sudden release of more than the natural sediment levels could bring the Mattole River estuary to threshold for death of many species. Private or public purchase by fee title and/or conservation easements is an alternative to logging. Fee acquisitions could greatly reduce the threat of catastrophic loss of the wild salmon and other threatened species in the lower Mattole River watershed. The properties are adjacent to Humboldt Redwoods State Park and are linked and ecologically related to the other protected old growth forests in Mattole River watershed basins.

- **Eel River Wildlife Area** expansion by purchase of habitats contiguous with reserve but separated by sloughs. Restoration of coastal dune habitat and tidal restoration South of the Delta by Conservation Easement acquisition.

V. Potential Partners

Ancient Forest International
Assembly member Virginia Strom Martin
Bear River Band of Rohnerville Rancheria
Bear River Conservancy
Buckeye Conservancy
Bureau of Land Management
California Coastal Commission
California Coastal Conservancy
California Department of Conservation
California Department of Fish and Game
California Department of Forestry and Fire Protection
California Department of Parks and Recreation
Conservation Fund
Eel River Sawmills
Environmental Protection Information Center
Ferndale City Council
Fortuna City Council
Friends of Eel River
Humboldt County Farm Bureau
Humboldt County Fish and Game Advisory Commission
Humboldt County Resources Conservation District
Humboldt County Supervisor Jimmy Smith
Humboldt County Supervisor Roger Rodoni
Humboldt Creamery Association
Institute of Sustainable Forestry
Mattole Restoration Council
Mattole Salmon Group
Mid-Mattole Conservancy
Mill Creek Conservancy
Northcoast Regional Land Trust
Northcoast Water Quality Control Board
Pacific Lumber Company
Sanctuary Forest

Save the Redwoods League
Senator Wesley Chesbro
Sierra Pacific Company
Table Bluff Reservation - Wiyot Tribe
United States Congressman Mike Thompson
Upper Mattole River and Forest Cooperative
USDA/Natural Resources Conservation Service

VI. Linkages to other focus areas

- South: Mattole Watershed and the King Range Conservation Area
- North: Humboldt Bay and Headwaters Forest Preserve Area
- East: Humboldt Redwoods State Park and Lower Eel River, Grizzly Creek, & Van Duzen River
- West: Pacific Ocean, State Marine Reserves, And Federal Off Shore Monuments

VII. References:

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Coastal Wetlands Series #9. Prepared under contract with the California Coastal Zone Conservation Commission with funds granted by the National Ocean and Atmospheric Administration.