

TILLAMOOK COUNTY ZONING PLAN SUMMARY

TILLAMOOK COUNTY ZONING - EXCERPTS

TILLAMOOK COUNTY COMPREHENSIVE PLAN - EXCERPTS

ESTUARY MANAGEMENT UNITS MAP

CLATSOP COUNTY COMPREHENSIVE PLAN - EXCERPTS

MANZANITA COMPREHENSIVE PLAN - EXCERPTS



STATE OF OREGON  
Parks and Recreation Division

INTEROFFICE MEMO  
378-6378

TO: Files

DATE: November 26, 1986

FROM: Al Cook, Manager  
Planning & Grants *Al*

SUBJECT: Tillamook County Master Plans

On November 13, the Tillamook County Planning Commission approved our request for two plan amendments and a conditional use request all concerning our Tillamook County Master Plan.

The plan amendments served two purposes. First, it acknowledges the negotiations regarding DMD sites at Nehalem Bay. Second, the amendment adopted our master plan as part of the Tillamook County Comprehensive Plan.

The conditional use action allows us to carry out our development activities as found in the master plan over the next twenty years.

During the negotiations with Tillamook County, one item of confusion arose. The land use designation in our parks list generic types of land use. Some of these typical uses are not allowed in a Shorland Overlay zone. The county's recent approvals may be construed so as to allow these inconsistent types of uses. In order to allay this confusion, we will add the following language to the master plan in the general area of land use designations.

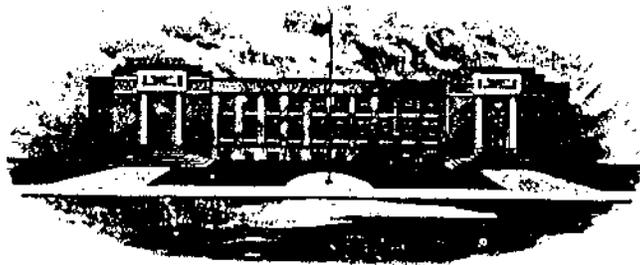
"The State Parks Division recognizes that Goal 17 may preclude some of these typical land use activities. This is reflected in the specific development proposal for each park in the project summary section."

AJC:lr  
1975D

cc: Nancy Gronowski ✓  
John Lilly  
Dave Talbot  
Larry Jacobson  
Darald Walker

*PS*  
*On November 26<sup>th</sup> the plan amendments were adopted by Tillamook County Board of Commissioners*  
*Al*

DEPARTMENT OF  
COMMUNITY DEVELOPMENT  
Vic Affolter, Director



201 Laurel Avenue  
Tillamook, Oregon 97141  
(503) 842-3408

Tillamook County  
Land of Cheese, Trees and Ocean Breeze

November 14, 1986

Al Cook  
State Parks and Recreation Division  
525 Trade St. S.E.  
Salem, OR 97304

Der Mr. Cook:

This letter is to confirm the action taken by the Tillamook County Planning Commission at their November 13, 1986 public hearing for requests to approve master plans for three State Parks and five State Waysides in Tillamook County.

The Planning Commission APPROVED the request (CU-86-44) to construct major recreational improvements at Oswald West, Nehalem Bay, and Cape Meares State Parks, subject to the following conditions:

- (1) The applicant shall seek a Plan Amendment to Nehalem Bay Dredge Material Disposal Plan to remove a priority dredge material disposal site from a designated PROTECTION land use class at Nehalem State Park.
- (2) State Parks shall minimize recreational access to known Snowy Plover nesting sites during the Snowy Plover breeding season, April through July.
- (3) Changes in the approved Master Plan that will either increase visitor capacity or increase off-site impacts shall be reviewed by the Department as set forth in Article VI of the Land Use Ordinance.

The Planning Commission at this hearing recommended approval to the Board of County Commissioners to amend the Nehalem Bay Dredge Material Disposal Plan (OA-86-9(32)) and to amend the Goal 17 (Coastal Shorelands) element of the Comprehensive Plan (OA-86-10(32)) to adopt the State Park and Wayside master plans. The public hearing before the Board of County Commissioners to consider the Comprehensive Plan amendments is scheduled for November 26, 1986.

Al Cook  
November 14, 1986  
Page 2

Please be advised that these decisions can be appealed within 10 days from the date of this letter by filing an appeal and filing fees with the Department of Community Development.

Sincerely  
TILLAMOOK COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

*Deborah Brooker*

Deborah Brooker  
Coastal Resource Planner

DB/bl  
cc: All concerned parties  
file

## TILLAMOOK COUNTY ZONING PLAN SUMMARY

All State Parks and waysides being studied in this master plan fall within the Tillamook County Recreation Management (RM) Zone, except for Neahkahnie-Manzanita, Rockaway Beach and Manhattan Beach State Waysides. (See appendix and specific parks for additional information).

Generally speaking, under the RM zone the following activities are allowed: minor betterments, repairs and rehabilitation of existing facilities are permitted and do not require any action by the county.

However, any construction which results in expansion of existing facilities, any increase in visitor use or off-site impacts requires the approval of the County Planning Commission. County approval is also required for construction of any major utility installation.

This need for county approval can be eliminated if the county approves the park master plan which shows the major changes and plans for future expansion.

In addition to the County RM zone, all parks and waysides except Rockaway Beach State Wayside are covered by the Shoreland Overlay Zone. The following uses are permitted:

### Shorelands Overlay:

propagation and harvesting of forest products consistent with the Oregon Forest Practices Act; public water dependent recreation developments; repair or improvement of existing State Park facilities.

Uses within the Shoreland Overlay Zone are subject to the provisions and standards of the underlying zone. Special consideration shall be given to the following:

- a. Riparian vegetation shall be protected and retained according to the provisions outlined in Section 4.080, Requirements for Protection of Water Quality and Streambank Stabilization.
- b. Development in flood hazard areas shall meet the requirements of Section 3.060, Flood Hazard Overlay Zone.
- c. Development in beach and dune and other geologic hazard areas shall meet the requirements of Section 4.070, Development Requirements for Geologic Hazard Areas.
- d. Structural shoreline stabilization shall meet the requirements of Section 3.140(7).
- e. Forestry operations shall be consistent with the protection of the natural values of major marshes, significant wildlife habitat and riparian vegetation. The State Forest Practices Act and Forest Practices Rules administered by the Department of Forestry shall be conducted in a manner as to protect the natural values of these

resources on commercial forest lands and other lands under the jurisdiction of the Forest Practices Act within coastal shorelands.

Some portions of other parks and waysides are affected by the following overlay zones and their restrictions.

Significant Wildlife Habitats:

Only low intensity uses and developments such as hiking trails or viewing platforms are permitted. Maintenance of existing drainage ways and drainage structures is permitted.

Exceptional Aesthetic Resource Areas:

Forest uses are limited to fire, insect and disease control, reforestation and hazard tree removal as long as the resource remains substantially unaltered. All buildings are conditional uses. Signs are limited.

Historic and Archaeologic Sites:

Development shall minimize site disturbance and shall not result in loss of archaeological or historic values.

Priority Dredged Material Disposal and Priority Mitigation Sites:

Uses shall not preclude the ultimate use of the site as a dredged material disposal or mitigation site. Structures shall be temporary. Fill and grading are not allowed.

Beach and Dune Areas Subject to Ocean Actions:

Uses are limited to those specifically authorized by an approved Goal 18 exception, or if adequately protected from the local hazards and designed to minimize adverse environmental effects.

## TILLAMOOK COUNTY ZONING - EXCERPTS

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### Section 3.040 Recreation Management Zone (RM)

- (1) **PURPOSE:** This zone is intended to be applied to public and private parks and day use facilities including those that contain significant natural or scenic values. These areas are intended to accommodate the type of recreational development that insures the maintenance of an area's natural values. The zone is not intended for intensive recreational developments that do not retain substantial open space on the property.
- (2) **USES PERMITTED OUTRIGHT:** In an RM zone the following uses and their accessory uses are permitted outright:
  - (a) general maintenance and operation of existing structures and facilities;
  - (b) recreational improvements and additions necessary to serve the same numbers and densities of visitors served by the existing facilities, providing that off-site impacts are not increased. These include facilities such as picnic areas, playgrounds, pavilions, maintenance buildings, tennis courts and swimming pools;
  - (c) dwelling or dwelling units for caretakers;
  - (d) residential quarters for staff needed to serve existing facilities.
  - (e) necessary utility lines, excluding power transmission lines;
  - (f) signs subject to Section 4.020;
  - (g) forest uses;
  - (h) aquaculture;
  - (i) fish and game management;
  - (j) farm uses.
- (3) **USES PERMITTED CONDITIONALLY:** In an RM zone the following uses and their accessory uses are permitted subject to the provisions of Article 6:
  - (a) campground and lodging facilities such as dormitories for visitors but not including commercial motels, hotels, or group cottages;
  - (b) meeting and recreational facilities that will increase visitor capacity or off-site impacts;
  - (c) retail facility including eating establishment designed to primarily serve those who visit the recreational development;
  - (d) marina or moorage;
  - (e) rock quarry;
  - (f) primary wood processing;
  - (g) sewage treatment plant;
  - (h) water treatment plant;
  - (i) utility substation and power transmission lines;
  - (j) tower for radio, television, wind generation and uses having similar impact;

- (k) hydroelectric power generating facilities;
- (l) golf course.
- (4) STANDARDS:
  - (a) Recreational developments shall retain substantial open space on the property.
  - (b) As part of a conditional use request, the Planning Department may approve master plans for a recreation area. Such approval would allow all uses provided in the plan. Minor changes in the plan which would not affect visitor capacity or off-site impacts may be approved by the Planning Director.
  - (c) The minimum lot size shall be 40 acres. The Planning Department may approve a smaller lot size according to the provisions of Article VI providing that forest values are maintained.
  - (d) If applicable, the standards and requirements of Sections 4.070, 4.080 and 4.090 shall be met.

Section 3.042 Recreation Natural Zone (RN)

- (1) PURPOSE: This zone is intended to be applied to public and private parks and day use areas that contain significant natural and scenic values. These areas are intended to accommodate the type of recreational development that insures the maintenance of an area's natural or scenic values.
- (2) USES PERMITTED OUTRIGHT: In an RN zone the following uses and their accessory uses are permitted outright:
  - (a) general maintenance and operation of existing structures and facilities;
  - (b) recreational improvements and additions necessary to serve the same numbers and densities of visitors served by the existing facilities providing that off-site impacts are not increased and areas exhibiting significant natural or scenic values are not disturbed;
  - (c) selective removal of trees damaged by windthrow or disease.
- (3) USES PERMITTED CONDITIONALLY: In an RN zone the following uses and their accessory uses are permitted subject to the provisions of Article VI and the standards in (4) below:
  - (a) recreational improvements and additions that will increase visitor capacity or off-site impacts provided that areas exhibiting significant natural or scenic values are not disturbed.
- (4) STANDARDS
  - (a) As part of a conditional use request, the Planning Department may approve master plans for a recreation area. Such approval would allow all uses provided in the plan. Minor changes

in the plan which would not affect visitor capacity, off-site impacts or natural or scenic areas may be approved by the Planning Director.

- (b) The minimum lot size shall be 40 acres. The Planning Department may approve a smaller lot size according to the provisions of Article VI providing that natural or scenic values are maintained.

#### SECTION 3.092 FRESHWATER WETLANDS OVERLAY ZONE (FW)

- (1) **PURPOSE AND AREAS INCLUDED:** The purpose of this zone is to protect significant areas of freshwater wetlands, marshes and swamps from filling, drainage or other alteration which would destroy or reduce their biological value. When required, the verification of zone boundaries shall be carried out in conjunction with the property owner and the Oregon Department of Fish and Wildlife.
- (2) **USES PERMITTED:**
  - (a) A forest operation for which notification is required by ORS 527.670(2) shall be governed by the Oregon Forest Practices Act which shall take into account the wetland values.
  - (b) Other uses and developments permitted outright or conditionally in the underlying zone shall be permitted if they will not result in filling, drainage, removal of vegetation or other alteration which would destroy or reduce the biological value of the wetland. Minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands shall be allowed where such an action has been fully coordinated with the Oregon Department of Fish and Wildlife and the Tillamook County Soil and Water Conservation District. Existing drainage ditches may be cleared to original specifications without review.
- (3) **STANDARDS:** The following standards shall be met in addition to the standards of the underlying zone.
  - (a) Where dwellings are permitted in the underlying zone, the density of allowed development shall be determined by the size of the entire parcel.

#### SECTION 3.090 SHORELAND OVERLAY ZONE(SH)

- (1) **PURPOSE AND AREAS INCLUDED:** the purpose of the Shoreland Overlay zone is to:
  - (a) provide for development, restoration, conservation or protection of coastal shorelands in a manner which is compatible with the resources and benefits of coastal shorelands and adjacent coastal water bodies.

- (b) protect identified priority dredged material disposal and mitigation sites from uses which would prevent their ultimate use for dredged material disposal or mitigation.

Included in this zone are:

- (a) lands which are contiguous with the ocean, estuaries and coastal lakes, and which contain the following features shown in the Tillamook County Comprehensive Plan:
    - (1) geologic or hydrologic hazards.
    - (2) riparian vegetation or other natural or man-made riparian resources necessary for shoreline stabilization or water quality maintenance.
    - (3) significant shoreland and wetland biological habitats.
    - (4) areas necessary for water-dependent and water-related uses.
    - (5) shoreland areas of exceptional aesthetic or scenic quality.
    - (6) coastal headlands.
  - (b) priority dredged material disposal (DMD-1) and mitigation (MIT-1) sites.
- (2) USES PERMITTED: Uses authorized by the underlying zone as outright or conditional uses are permitted except in the following locations:
- (a) Rural Shorelands in General:
    - (1) Rural shorelands are those areas within the Shorelands Overlay Zone that are outside of an urban growth boundary.
    - (2) Rural shorelands uses are single family dwellings on existing lots, parcels of units or land, farm uses, propagation and harvesting of forest products consistent with the Oregon Forest Practices Act, private and public water-dependent recreation developments, aquaculture, water-dependent industrial and commercial uses, and the replacement, repair or improvement of existing state park facilities.
    - (3) In the Farm (F-1), Small Farm and Woodlot 20 acre (SFW-20) and Recreation Management (RM) zones, uses other than rural shorelands uses are permitted only if no suitable non-shoreland locations exist within the parcel of land for which the use is being proposed. In evaluating the suitability of non-shoreland locations, consideration shall be given to the productivity of agricultural and forestry lands.
    - (4) In zones other than F-1, F, SFW-20, and RM; subdivisions, major and minor partitions, and uses other than rural shoreland uses located in areas that are not subject

to a committed lands exception in the Comprehensive Plan are permitted only if they satisfy a need which cannot be accommodated at other upland locations or in urban and urbanizable areas.

- (b) Significant Shoreland and Wetland Biological Habitats (identified in Section 3.2 of the Coastal Shorelands Element of the Comprehensive Plan.)
  - (1) Only low intensity uses and developments such as hiking trails and platforms for wildlife viewing or similar types of educational, scientific or recreational uses may be permitted providing that such uses and developments will not act as a barrier to or result in major disturbances or displacement of fish or wildlife species. Maintenance of existing drainageways and drainage structures is permitted.
  - (2) In significant wetland biological habitats, no development is allowed except for the placement of a floating or pile supported dock or a boat ramp using less than 50 cubic yards of fill to allow boat access to a coastal lake providing that such developments are placed to minimize impacts on wetland habitats.
- (c) Exceptional Aesthetic or Scenic Resources and Coastal Headlands (identified in Section 3.2 of the Coastal Shorelands Element of the Comprehensive Plan.)
  - (1) Rock quarries, mining and mineral extraction, industrial uses, communication and energy generation towers other than wind energy conversion systems, power transmission lines, landfills and airports are not permitted.
  - (2) In Cape Kiwanda State Park, Cape Lookout State Park, Nestucca Spit State Park and The Cascade Head Scenic Research Area, forest uses shall be limited to those allowed by the respective management plans for these areas. In other exceptional aesthetic or scenic resource areas or on coastal headlands, forest uses are limited to fire, insect and disease control, reforestation and hazard tree removal as long as the resource remains substantially unaltered.
  - (3) All buildings are conditional uses. They may be allowed only if they and the land preparation which precedes them preserves the natural topography and unique scenic features and does not substantially alter the scenic character or the natural vegetative cover of the area.
  - (4) Signs shall be constructed of wood and shall be limited to interpretive and directional signs having an area no greater than 16 square feet.

- (d) Historic and Archaeological Sites (identified in Section 3.2 of the Coastal Shorelands Element of the Comprehensive Plan.)
  - (1) Development in the vicinity of identified archaeological sites shall minimize site disturbances and shall not result in any loss of archaeological values.
  - (2) Development of historic sites shall not diminish historic values.
  - (3) Alterations to historic structures shall meet the requirements of Section 4.100.
- (e) Priority Dredged Material Disposal and Priority Mitigation Sites (identified by the symbols DMD-1 and MIT-1 respectively on the Estuary Zoning Maps.)
  - (1) Uses shall not preclude the ultimate use of the site as a dredged material disposal or mitigation site.
  - (2) Structures or other improvements shall be of a temporary nature, easily moved or of low value, so that demolition or removal of these structures can be easily accomplished in order to accommodate dredged material disposal or mitigation. On priority mitigation sites only structures or other improvements which can be completely removed from the site are allowed.
  - (3) Fill except to maintain or repair existing structures and facilities such as dikes is not permitted. In priority mitigation sites there shall be no land grading which will reduce the potential of using the site for mitigation.
  - (4) Dredged material disposal and mitigation actions are conditional uses subject to the standards in Section 3.140(4) and Section 3.140(12) respectively.
- (f) Beaches, active foredunes, other foredunes which are conditionally stable and are subject to ocean undercutting or wave overtopping, and interdune areas subject to ocean flooding.
  - (1) Residential developments and commercial and industrial buildings are permitted only on lots or parcels where development is specifically authorized by an approved Goal 18 exception contained in the County comprehensive plan.
  - (2) Beach front protective structures (sea walls, bulkheads, riprap and other revetments) are permitted only where a building, public facility or other structure existed on January 1, 1977, or where developments are authorized by (1) above.
  - (3) Other development shall be permitted only if it is:

- (a) adequately protected from any geologic hazards, wind erosion, undercutting, ocean flooding and storm waves or is of minimal value; and
    - (b) designed to minimize adverse environmental effects.
  - (4) Sand mining shall be permitted only in beach areas and only where a geological investigation establishes that a historic surplus exists at the site and that it can be removed without impairing the natural functions of the beach and dune system, water circulation and littoral drift. Compliance with ORS 390.275 shall also be required.
  - (g) Restoration actions (identified in Section 4.4 of the Estuarine Resources Element of the Comprehensive Plan) except for the restoration of riparian vegetation are conditional uses subject to the standards in Section 3.140(15).
- (4) STANDARDS: uses within the Shoreland Overlay Zone are subject to the provisions and standards of the underlying zone and of this section. Where the standards of the Shorelands Overlay Zone and the underlying zone conflict, the more restrictive provisions shall apply.
  - a. Riparian vegetation shall be protected and retained according to the provisions outlined in Section 4.080, Requirements for Protection of Water Quality and Streambank Stabilization.
  - b. Development in flood hazard areas shall meet the requirements of Section 3.060, Flood Hazard Overlay Zone.
  - c. Development in beach and dune and other geologic hazard areas shall meet the requirements of Section 4.070, Development Requirements for Geologic Hazard Areas.
  - d. Structural shoreline stabilization shall meet the requirements of Section 3.140(17).
  - e. Forestry operations shall be consistent with the protection of the natural values of major marshes, significant wildlife habitat and riparian vegetation. The State Forest Practices Act and Forest Practices Rules administered by the Department of Forestry shall be conducted in a manner as to protect the natural values of these resources on commercial forest lands and other lands under the jurisdiction of the Forest Practices Act within coastal shorelands.
- 5. ADMINISTRATIVE PROVISIONS
  - a. All applications for developments in the Shorelands Overlay Zone shall be reviewed for compliance with the requirements of the underlying zone and the requirements of the Shorelands Overlay Zone.

- b. All applications shall be accompanied by a plot plan identifying the location of the parcel and its boundaries, the location of existing uses on the property, the proposed location of developments and uses and the location of waterbodies, watercourses and wetlands in the vicinity of the proposed developments.
- c. In the following instances, public agencies shall be notified of applications for development in the Shorelands Overlay Zone.
  - 1. Significant Wetland Biological Habitats: The Oregon Department of Fish and Wildlife, Oregon Division of State Lands, Oregon Department of Land Conservation and Development, U.S. Fish and Wildlife Service, Environmental Protection Agency and U.S. Army Corps of Engineers shall be notified.
  - 2. Other Significant Shoreland Habitats: The Oregon Department of Fish and Wildlife, Oregon Department of Land Conservation and Development, and U.S. Fish and Wildlife Service shall be notified.
  - 3. Coastal Headlands and Exceptional Aesthetic and Scenic Resources: The Oregon Parks and Recreation Division and Oregon Department of Land Conservation and Development shall be notified.
  - 4. Historic and Archaeological Sites: The State Historic Preservation Office, Oregon Department of Land Conservation and Development and the curator of the Pioneer Museum shall be notified.
  - 5. Priority Dredged Material Disposal and Mitigation Sites: The Oregon Department of Fish and Wildlife, Oregon Division of State Lands, Oregon Department of Land Conservation and Development, Oregon Department of Economic Development, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Environmental Protection Agency, U.S. Army Corps of Engineers and the locally affected Port District shall be notified.
- d. Notification Procedure
  - 1. If a development application involves regulated activities (for definition see Section 3.120), notice will be mailed within 7 days of County receipt of the state or federal permit notice. The Planning Department shall consider any comments received no later than seven days before the closing date for comments on the state or federal permit notice.
  - 2. If a development application involves a conditional use or a variance, notification procedures shall be those of Articles VI or VIII respectively.

3. In all other instances, notice will be mailed within seven days of the receipt of a completed application. The Plan Department shall consider all comments received within ten days after notice has been mailed.

#### SECTION 3.100 ESTUARY ZONES

1. GENERAL USE PRIORITIES AND AREAS INCLUDED: general priorities, from highest to lowest, for uses within all estuary zones shall be:
  - a. uses which maintain the integrity of the estuarine ecosystem.
  - b. water-dependent uses requiring an estuarine location, as consistent with the overall Oregon Estuarine Classification.
  - c. water-related uses which do not degrade or reduce the natural estuarine resources and values.
  - d. non-dependent, non-related uses which do not alter, reduce or degrade the estuarine resources and values.

Estuary Zones shall be applied to all estuarine waters, intertidal areas, submerged and submersible lands and tidal wetlands up to the line of non-aquatic vegetation or the Mean Higher High Water (MHHW) line, whichever is most landward.

The application of a particular type of estuary zone within a given estuary is dependent upon the classification of the estuary under L.C.D.C. Rule No. OAR 660-17-010, and the criteria outlined in individual zone descriptions in Section 3.102 to 3.110.

Estuary Classification: Development. Estuaries: Nehalem, Tillamook. Permitted Zones: Estuary Development (ED), Estuary Conservation 2 (EC2), Estuary Conservation 1 (EC1), Estuary Conservation Aquaculture (ECA) and Estuary Natural (EN).

Estuary Classification: Conservation. Estuaries: Nestucca, Netarts, Neskowin Creek, Sutton Creek. Permitted Zones: Estuary Conservation 2 (EC2), Estuary Conservation 1 (EC1), Estuary Conservation Aquaculture (ECA) and Estuary Natural (EN).

Estuary Classification: Natural. Estuaries: Sandlake, Salmon River. Permitted Zone: Estuary Natural (EN).

2. USES PERMITTED OUTRIGHT (P): the following uses are permitted outright within all estuary zones:
  - a. maintenance and repair of existing structures or facilities not involving a regulated activity. (See Section 3.120). For the purpose of this ordinance, "existing structures or facilities" are defined as structures or facilities in current use or good repair as of the date of adoption of this ordinance (including structures or facilities which are in conformance with the requirements of this ordinance and non-conforming structures or facilities established prior to October 7, 1977).

- b. Dike maintenance and repair for:
  - 1. existing serviceable dikes (including those that allow some seasonal inundation; and
  - 2. dikes that have been damaged by flooding, erosion or tidegate failure where the property has not reverted to estuarine habitat; and
  - 3. dikes that have been damaged by flooding, erosion or tidegate failure where the property has reverted to estuarine habitat only if the property is in the Farm, F-1, zone and it has been in agricultural use for 3 of the last 5 years and reversion to estuarine habitat has not occurred more than 5 year prior.Tillamook County will rely on the U.S. Army Corps of Engineers and the Division of State Lands to determine whether an area has reverted to estuarine habitat.

For the purpose of this subsection, agricultural use means using the area for pasture several months of the year or harvesting this area once a year.

- c. low-intensity, water-dependent recreation, including but not limited to fishing, crabbing, clamming, wildlife observation, swimming and hunting.
- d. low-intensity marine research and education.
- e. grazing of livestock.
- f. fencing, provided that it is not placed across publicly-owned intertidal areas so as to restrict public access to, or recreational boating access across said lands and intertidal areas.
- g. passive restoration.

### SECTION 3.102 ESTUARY NATURAL ZONE (EN)

- 1. **PURPOSE AND AREAS INCLUDED:** the purpose of the EN Zone is to provide for preservation and protection of significant fish and wildlife habitats and other areas which make an essential contribution to estuarine productivity or fulfill scientific, research or educational needs.

Except where a goal exception has been taken in the Tillamook County Comprehensive Plan, the EN Zone includes the following areas:

- a. **Development and Conservation Estuaries:** major tracts of tidal marsh, intertidal flats and seagrass and algae beds. The "major tract" determination is made through a consideration of all of the following four criteria: Size; habitat value; scarcity and degree of alteration.
- b. **Natural Estuaries:** the EN Zone includes all estuarine waters, intertidal areas, submerged or submersible lands and tidal wetland areas.

2. **USES PERMITTED WITH STANDARDS:** the following uses are permitted subject to the procedure of Section 3.120 and the standards in Section 3.140.
  - a. maintenance and repair of existing structures or facilities involving a regulated activity.
  - b. navigational aids.
  - c. vegetative shoreline stabilization.
  - d. tidegate installation in existing functional dikes.
  - e. temporary dikes for emergency flood protection.
  - f. mooring buoys
  - g. aquaculture facilities limited to temporary or easily removed bottom or in the water column structures (stakes, racks, trays, longlines, or rafts) or ground culture aquaculture.
3. **USES PERMITTED CONDITIONALLY:** the following uses may be permitted subject to the procedures of Section 3.120 and Article 6 and the standards in Section 3.140.
  - a. water-dependent portions of fish release and recapture facilities which do not require dredging or fill and water intake facilities for out-bay aquaculture.
  - b. structural shoreline stabilization, limited to riprap.
  - c. water, sewer, gas or communication lines.
  - d. electrical distribution lines and line support structures.
  - e. Type I active restoration.
  - f. temporary low water bridge.
4. **REGULATED ACTIVITIES:** the following Regulated Activities are permitted subject to the procedure of Section 3.120 and the standards of Section 3.140.
  - a. regulated activities for the purpose of on-site maintenance and repair of existing structures or facilities, limited to:
    1. dredging for on-site maintenance of:
      - a. drainage tiles.
      - b. drainage ditches.
      - c. tidegates
      - d. bridge crossing support structures.
      - e. water, sewer, gas or communication lines.
      - f. electrical distribution lines.
      - g. outfalls.
    2. fill or riprap for on-site maintenance of:
      - a. dikes.
      - b. bridge crossing support structures or other land transportation facilities.
  - b. riprap for structural shoreline stabilization or protection of utility lines allowed by this zone.
  - c. piling installation for:
    1. navigational aids.

2. aquaculture facilities
- d. dredging for installation of:
  1. water, sewer, gas, or communication lines.
  2. water intake facilities.
  3. electrical distribution lines.
  4. tidegates in existing functional dikes adjacent to EN zones.
- e. Regulated Activities in conjunction with an approved Type I Active Restoration project.

#### 5.4 RECREATION AND RECREATIONAL FACILITIES

1. Maintenance and repair of existing docks, moorages, marinas and other recreational facilities shall be permitted within all estuary zones, and within Water-Dependent Development (WDD) zones and other shoreland areas.
2. Low-intensity water-dependent recreation shall be permitted within all estuary zones, and within Water-Dependent Development (WDD) zones and other shoreland areas.
3. To preserve significant fish and wildlife habitat and provide for continued biological productivity, recreation in Estuary Natural (EN) and Estuary Conservation Aquaculture (ECA) zones shall be limited to low-intensity water-dependent recreation. Recreational facilities shall not be permitted.
4. Recreational facilities in estuarine waters, intertidal areas and tidal wetlands shall be limited to water-dependent facilities, and shall be sited, designed, constructed and maintained to ensure that adverse impacts on the following estuarine qualities are avoided or minimized to be consistent with the resource capabilities and purposes of the area:
  - a. aquatic life and habitat;
  - b. bird and wildlife habitat;
  - c. fish transit and migration routes;
  - d. riparian vegetation
  - e. water quality;
  - f. hydrographic characteristics.
5. Water-dependent recreational facilities in Estuary Conservation 2 (EC2) and Estuary Conservation 1 (EC1) zones shall be permitted only if consistent with the resource capabilities of the area and long-term use of renewable resources, and if they do not cause a major alteration of the estuary.

6. The siting of recreational developments and areas where recreational activities are focused within the shoreland area shall comply with the following conditions:
  - a. areas of concentrated public access and recreational development which experience heavy use should, where appropriate, include auxiliary facilities such as parking and sanitation;
  - b. parking areas should be located away from the waterfront with access to beach and waterfront areas provided by walkways and other methods;
  - c. the design and siting of high intensity recreational facilities should account for possible adverse impacts on adjacent or nearby private property.

## TILLAMOOK COUNTY COMPREHENSIVE PLAN - EXCERPTS

The following portions of the Tillamook County Comprehensive Plan apply to State Parks Planning.

### TILLAMOOK COUNTY RECREATION POLICIES

#### Recreation Development in General

- (1) A modest amount of public outdoor recreational development shall be encouraged in Tillamook County.
- (2) Community service agencies shall make every effort to plan well in advance for the seasonal impacts of growing population of recreationalists.
- (3) Imaginative efforts shall be directed towards the development of a more diversified tourist industry.
  - (a) Efforts shall be made to attract additional resort development of the type which encourages greater spending by visitors.
  - (b) Tourist serving facilities allowing year-round use shall be developed and advertised.
- (4) Further land acquisitions in the County by public agencies, for the purpose of park development, shall be generally discouraged.
- (5) The County shall discourage the conversion of prime agricultural land into developed recreation areas.
- (6) Community action programs, in cooperation with the school systems, shall be established to deal with the need for youth recreation centers. Similar programs shall be established for the provision or improvement of indoor recreation facilities for general public use.
- (7) The County shall consider establishing an activity director or coordinator who would work with various agencies and organizations in an effort to secure better recreational programs for County residents during months of inclement weather.
- (8) Tillamook County shall establish priorities for future improvement or development of County-operated recreation facilities.
- (9) Equitable in-lieu-of tax payments shall be sought by the County where appropriate in any further land acquisitions proposed by other public agencies.
- (10) Careful coordination of recreation development plans between local, state, federal and private agencies shall be encouraged.

## TILLAMOOK COUNTY COMPREHENSIVE PLAN

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### Comprehensive Plan Coordination Policy

The following coordination policy has been approved by LCDC.

State Parks are required to go to the appropriate county for a conditional use permit if any changes within a park will do the following:

1. has an impact on natural areas or values.
2. causes increased visitation.
3. has an impact on adjacent landowners.
4. causes a shift of use within the park even though it does not create overall increased use.

Minor repairs, betterments and rehabilitation work do not require a conditional use permit.

### Element 16 - Estuaries

Park lands and facilities which abut the Nehalem Bay Estuary are affected by the requirements of Goal 16 - Estuaries.

The area along the bay side of the spit at Nehalem is classified as Estuary Natural in Management Unit 7. The only alteration allowed in that area is the existing park boat ramp. This area was designated as a wetland of importance in the Nehalem Wetlands Review. Fish, waterfowl and shore birds use this area. The area south of the park boat ramp has been identified as a potential oyster culture area by the Oregon Department of Fish and Wildlife.

The salt marsh area in the northeast section of the park is classified as Estuary Natural in Management Unit 8. It has been identified as an area needed for scientific research or educational needs. This area is also designated as a wetland of importance and is used by waterfowl and shorebirds.

### Element 17 - Shorelands

All the State Parks being studied in this master plan are affected by this goal.

### Areas of Exceptional Aesthetic or Scenic Quality

These areas are the same as those identified in the "Visual Resource Analysis of the Oregon Coastal Zone", (OCC & DC, 1984) except as noted below.

Between Oceanside and the community of Cape Meares, areas of exceptional aesthetic or scenic quality are those areas west of the beach zone line and the headland of Cape Meares.

Within Oswald West, Nehalem Bay and Cape Meares State Parks, areas of exceptional aesthetic or scenic quality are limited to the coastal headlands and the undeveloped portions of sand spits. Oswald West is listed as an area of exceptional aesthetic or scenic quality.

#### Coastal Headlands

The extent of areas considered to be coastal headlands are defined as follows:

All lands west of Highway 101 which are west of the line connecting the following points:

Oswald West - At Cape Falcon, a line connecting the southerly extent of beach sands (bs) at Cove Beach with the northern extent of marine terraces (Qmt) at Neahkahnie Beach.

Cape Meares - At Cape Meares, a line connecting the most westerly point of contact between the Astoria formation (Tma) and the Miocene volcanic rocks (Tmv) on the north side of Cape Meares with the point on the south end of Cape Meares where Cape Meares begins to jut out into the ocean.

Oceanside Beach - At Maxwell Point, a line connecting Short Creek north of Maxwell Point with the point of contact between the stable dunes (sd) and the Miocene volcanic rocks (Tmv) south of Maxwell Point.

The Tillamook County Comprehensive Plan identifies the following special areas within the Shorelands element.

Coastal Headlands - see previous listing.

Areas of Exceptional Aesthetic or Scenic Quality - see previous listing.

Areas necessary for water-dependent or water related uses:

- Oswald West State Park
- Neahkahnie Beach State Wayside
- Nehalem Bay - boat ramp
- Nehalem Bay State Park
- Cape Meares State Park
- Maxwell Point

Significant Shoreland and Wetland Biological Habitat:

- Oswald West
- Nehalem Bay - Snowy Plover habitat on spit (ODFW)
- Cape Meares - wildlife refuge and osprey nest

Historic sites:

- Oswald West
- Nehalem Bay - Beeswax Shipwreck
- Cape Meares - lighthouse, ocotopus tree, cape

## Protection of Natural Values

Tillamook County has developed findings for the protection of natural values in significant shoreland resource areas. They are as follows:

### Findings for Compatibility of Low-Intensity Uses with the Protection of Natural Values of Significant Shoreland Resources:

Tillamook County finds that:

- a. Uses and activities which are consistent with the protection of the natural values of significant shoreland resources are those uses which do not require developed facilities,<sup>1</sup> and which can be accommodated without adverse impact to an area or its resources;
- b. The following uses and activities are consistent with the protection of natural values of major marshes, significant wildlife habitat, coastal headlands, exceptional aesthetic resources and historical or archaeological sites:
  1. recreational uses such as hiking, fishing, hunting, photography, wildlife observation, sightseeing or beachcombing which can be conducted with only minor alteration (such as foot trails, simple interpretive devices or viewpoint signs) to an area or its resources;
  2. grazing and other farm uses (excluding farm structures) which do not require a building, development or mobile home or recreational vehicle placement permit from Tillamook County or a Division of State Lands or U.S. Army Corps of Engineers permit;
  3. research or educational activities which maintain or enhance the natural characteristics of an area or its resources;
  4. harvesting wild crops.
- c. The following forest management activities are considered to be low-intensity activities within coastal headlands, exceptional aesthetic resources and significant historical and archaeological sites:
  1. fire, insect and disease control, reforestation and hazard tree removal, consistent with the Oregon Forest Practices Act, as long as the resource remains substantially unaltered.

<sup>1</sup> "Facility is defined as a group or combination of structures that is built, installed or established to serve a particular purpose.

Policies for Protection of Natural Values of Significant Shore Resources:

- a. Shoreland development shall be sited and designed to be consistent with the protection of the natural values of identified major marshes, significant wildlife habitat, coastal headlands, exceptional aesthetic resources and significant historic and archaeological sites within the shorelands planning boundary identified in the Tillamook County Comprehensive Plan.
- b. Forestry operations within coastal shorelands shall be consistent with the protection of the natural values of major marshes, significant wildlife habitat and riparian vegetation. The State Forest Practices Act and Forest Practices Rules administered by the Department of Forestry shall be used to protect the natural values of these resources on commercial forest lands and other lands under the jurisdiction of the Forest Practices Act within coastal shorelands.

Element 18 - Beaches and Dunes

This element of the Tillamook County Comprehensive Plan focuses on the hazards associated with beach and dune areas, including erosion, flooding, groundwater drawdown or pollution, and sliding.

Since sand, the principle element of beaches and dunes, is easily eroded by wind or water all beaches and dune areas are to some degree unstable for any kind of permanent construction.

Development and Recreation Tolerance

Beaches and dunes have varying degrees of tolerance for development and recreational activities.

These are briefly summarized below:

Beaches

- Development - no tolerance
- Recreation - high tolerance for all kinds of recreation

Active Foredunes

- Development - low tolerance except in conditionally stable areas, which should still be treated with caution.
- Recreation - pedestrian recreation of low impact.  
No ORV use.

Recently Stabilized Foredunes

Development - low tolerance, as in active foredunes  
Recreation - same as active foredunes.

Open Dune Sand

Development - no tolerance.  
Recreation - high tolerance for all kinds of recreation.

Open Dune Sand Conditionally Stable

Development - low tolerance for low levels of development  
Recreation - pedestrian recreation of low impact. No ORV use.

Younger Stabilized Dunes

Development - moderate to high suitability for development with caution.  
Recreation - no ORV use.

Older Stabilized Dunes

Development - high tolerance for urban development.  
Recreation - moderate to high tolerance for all recreation forms.

Wet Deflation Plains

Development - no tolerance.  
Recreation - no ORV use.

Wet Interdune

Development - low tolerance levels in certain areas.  
Recreation - no ORV use.

County policies which may have an impact in park land use and development activities are as follows:

2.4 Policies

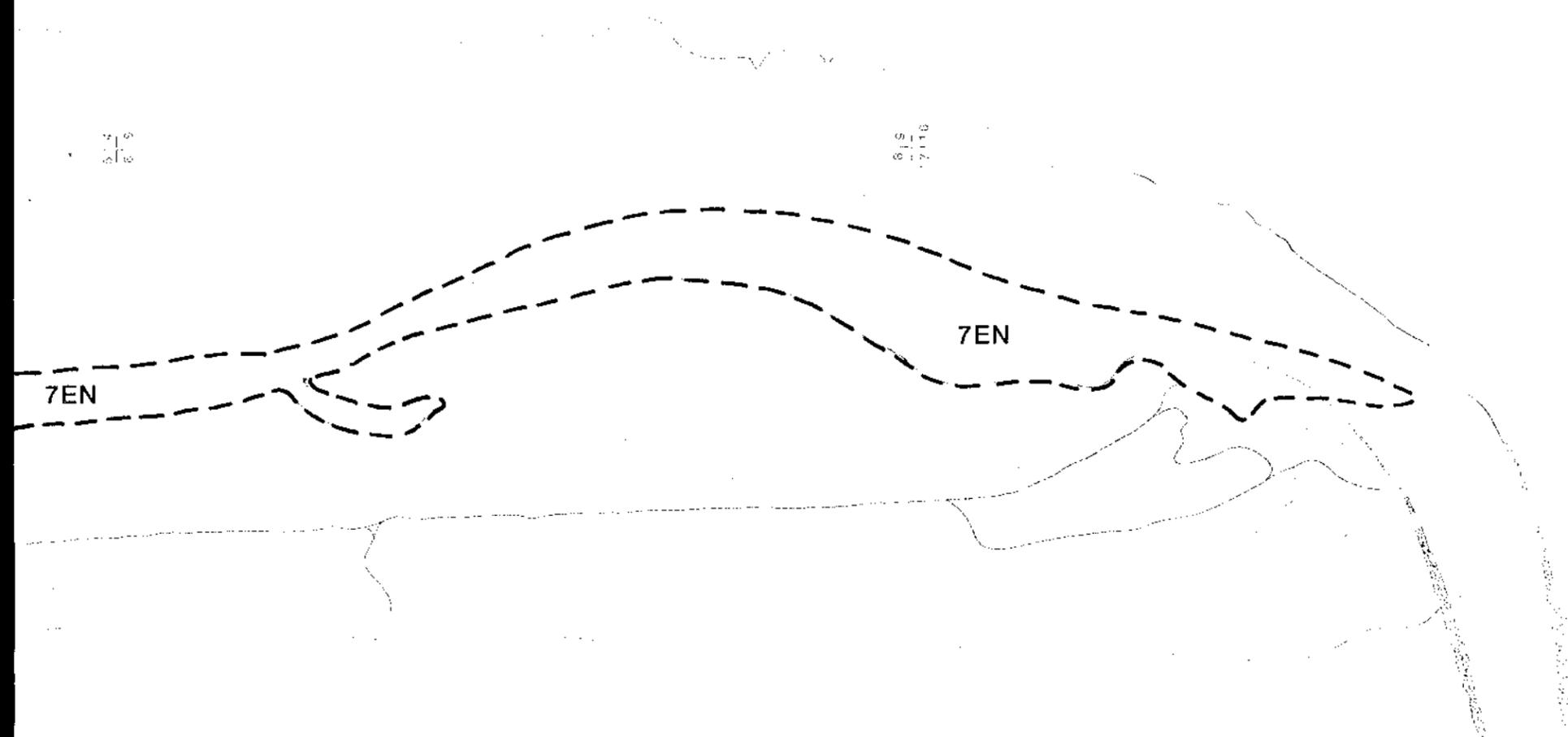
2.4a All decisions on land use actions in beach and dune areas other than older stabilized dunes shall be based on the following specific findings unless they have been made in the comprehensive plan:

- a. the type of use proposed and the adverse effects it might have on the site and adjacent areas;
- b. temporary and permanent stabilization programs and the planned maintenance of new and existing vegetation;
- c. methods for protecting the surrounding area from any adverse effects of the development; and

- d. hazards to life, public and private property, and the natural environment which may be caused by the proposed use.
- 2.4b Development in beach and dune areas shall comply with the requirements of the Flood Hazard Overlay zone.
- 2.4c Grading and vegetation removal shall be the minimum necessary to accommodate the development proposed. Removal should not occur more than 30 days prior to the start of construction. Open sand areas shall be temporarily stabilized during construction and all new and preexisting open sand areas shall be permanently stabilized with appropriate vegetation.
- 2.4d Excavated, filled or graded slopes shall not exceed 30 degrees unless adequate structural support is provided. Clearing of these slopes shall be minimized and temporary and permanent stabilization measures shall be applied to safeguard the slope from erosion and slumping.
- 2.4e Cluster development in dune areas is strongly encouraged. Development shall occur on the most stable portion of the site.
- 2.4f To maintain aesthetic value and visual integrity of beach and dune areas subject to new development, service lines shall be placed underground in new subdivisions.
- 2.4g Residential, commercial and industrial buildings shall be prohibited on active foredunes, on other foredunes which are conditionally stable and that are subject to ocean undercutting or wave overtopping, and on interdune areas (deflation plains) that are subject to ocean flooding except on lots where such development is specifically authorized by Section 5. Other development in these areas shall be permitted only if the findings required in policy 2.4a are presented and it is demonstrated that the proposed development:
  - a. is adequately protected from any geologic hazards, wind erosion, undercutting, ocean flooding and storm waves; or is of minimal value;
  - b. is designed to minimize adverse environmental effects.
- 2.4h Foredunes shall be breached only on a temporary basis in an emergency (e.g., fire control, cleaning up oil spills, draining farm lands, and alleviating flood hazards), and only if the breaching is consistent with sound principles of conservation. Policy 2.4a shall apply.

- 2.4i Removal or grading of sand on the foredune is prohibited except in areas subject to an exception to Goal 18 implementation requirement 6 and only if necessary as part of an approved plan for development or to remove sand which is accumulating around existing structures. Removal shall be the minimum necessary to accomplish the purpose and shall be stabilized according to good conservation practice.
- 2.4j Tillamook County strongly urges the Department of Land Conservation and Development to initiate a study of dune management for view maintenance and authorize such dune management according to sound standards of conservation.
- 2.4k Trails to and from the beach should be clearly marked with signs to reduce the number of people meandering through the dunes looking for access to the beach, trespassing on private property and breaking down sensitive plant communities in the process. In areas of high pedestrian traffic or great fragility, elevated boardwalks are suggested as an effective means of traffic containment.
- 2.4l Because of the sensitive nature of active and conditionally stable dunes, vehicular traffic and recurring pedestrian and equestrian traffic should be limited to improved roads and trails.
- 2.4m Tillamook County shall continue to participate in the joint management program for off-road vehicle use and associated activities in the Sand Lake area.

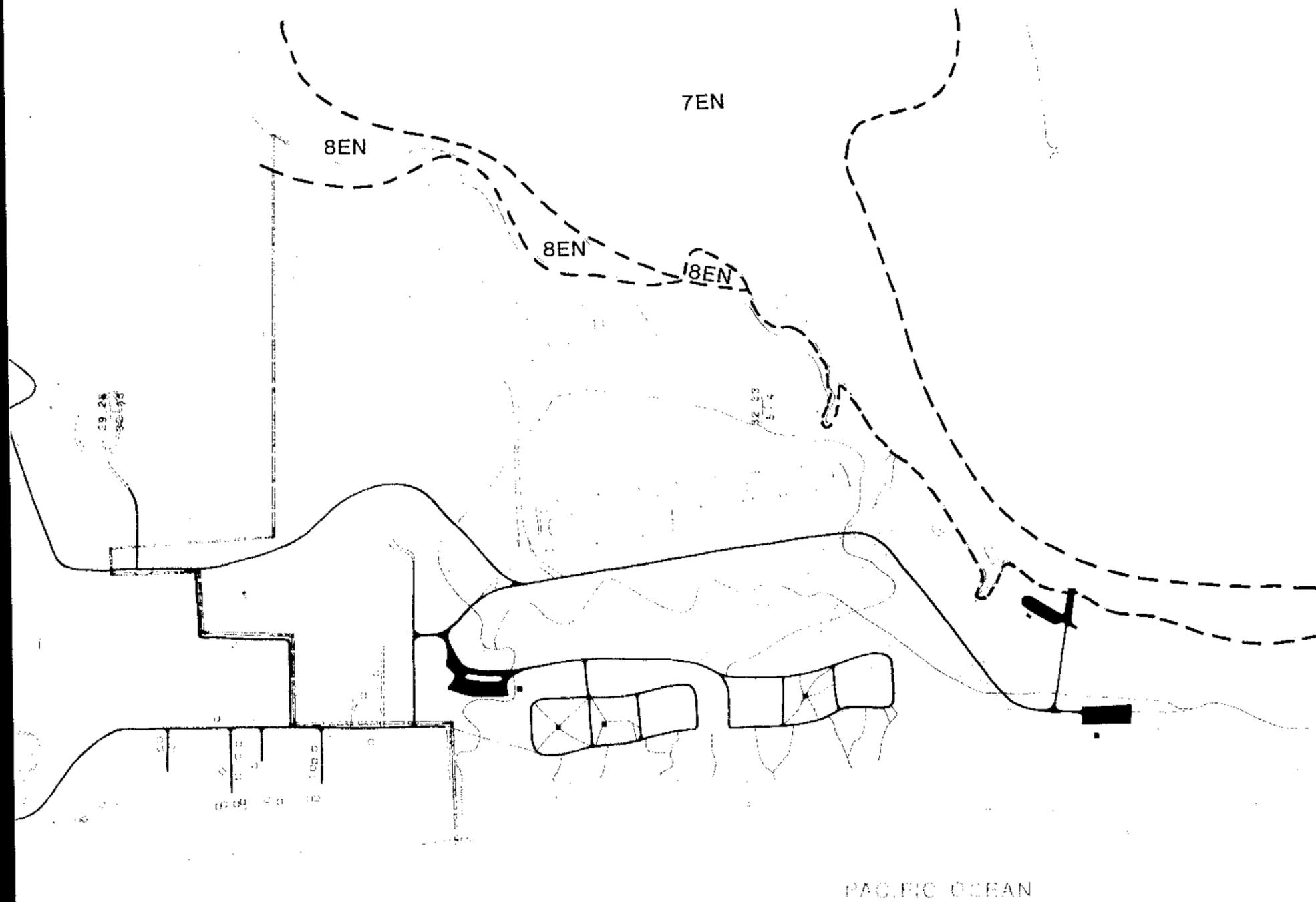
NOTE: For Management Units For Remainder Of Estuary.  
See Tillamook County Comprehensive Plan.



### ESTUARY MANAGEMENT UNITS

- 7EN -- Estuary Natural
- 8EN -- Estuary Natural

### NEHALEM BAY STATE PARK



CLATSOP COUNTY COMPREHENSIVE PLAN - EXCERPTS

The following portions of the Clatsop County Comprehensive Plan apply to those portions of Oswald West State Park which are in Clatsop County.

Section 3.594. Recreation Management Zone (RM).\*

Section 3.595. Purpose. This zone is intended to be applied to existing public and private parks particularly those that contain significant natural values. These areas are intended to accommodate the type of recreational development that insures the maintenance of the site's natural values.

Section 3.596. Development and Use Permitted. The following developments are permitted under a Type I procedure subject to the applicable development standards:

1. General maintenance and operation of existing recreation facilities.
2. Recreational improvements and additions necessary to serve the same visitor capacity served by the existing facilities, provided that off-site impacts are not disturbed.

Section 3.597. Conditional Development and Use Permitted. The following developments may be permitted under a Type II procedure and Sections 5.010 to 5.025 subject to applicable criteria and development standards and site plan review:

1. Recreational improvements and additions that will increase visitor capacity, off-site impacts, or impact areas exhibiting significant natural values.

Section 3.598. Development and Conditional Development and Use Standards. The following standards are applicable to permitted and conditional developments in this zone:

1. As part of either a permitted or conditional use request, the Planning Director may approve master plans for an entire recreational area. Approval of a master plan would allow all uses provided in the master plan without further review. Minor changes in the master plan which do not increase visitor capacity, or have off-site impacts, or affect areas with significant natural values, may be approved by the Planning Director under a Type I procedure. Major changes to the master plan including alterations that would increase visitor capacity, off-site impacts, or areas with significant natural values shall be subject to a Type II procedure.

\*Amended 83-17, dated September 30, 1983.

Section 4.080. Shoreland Overlay District (/SO).\*

Section 4.082 Purpose. The purpose of this district is to manage development uses and activities in coastal shorelands in a manner consistent with the resources and benefits of coastal shorelands and adjacent estuarine aquatic areas.

Section 4.084 Designation of Shorelands Overlay District. This district overlay refers to areas described in the Estuarine and Coastal Shoreland Element of the comprehensive plan and designated on official Clatsop County Zoning Maps. Included in this overlay district are:

- (1) Shorelands which are directly affected by hydraulic action of estuarine waters, or in turn limit, control, or affect the characteristics of estuarine waters, including areas of the 100 year floodplain, areas of geological instability in or adjacent to the shoreland boundary, and sedimentation sources.
- (2) Natural or man-made riparian resources, especially vegetation which functions to stabilize the shoreline or maintain water quality.
- (3) Areas of significant shoreland and wetland biological habitats, including feeding areas, nesting sites, and important fish and wildlife habitat.
- (4) Areas necessary and appropriate for water-dependent and water-related uses, including port facilities and navigational structures, areas suitable for aquaculture, and existing land uses and public facilities.
- (5) Areas of exceptional aesthetic or scenic quality.
- (6) Areas of recreational importance or public access.
- (7) Location of archaeological or historic importance.

Section 4.086 Categories of Coastal Shorelands. There are two categories of Coastal Shorelands as described below:

- (1) Those shorelands described in the Estuarine and Coastal Shoreland Element of the Comprehensive Plan as:
  - (a) Significant, non-estuarine marshes;
  - (b) Riparian resources;
  - (c) Significant fish and wildlife habitat;
  - (d) Exceptional aesthetic resources;
  - (e) Historic and archaeological sites.
- (2) All shorelands which do not fall within 1 (a)-(e) are the second category of coastal shorelands. This constitutes most of the coastal shorelands in the County.

Section 4.088 Development Uses and Activities Permitted Within Category 1 Coastal Shorelands. Only the following uses and activities are permitted under a Type 1 procedure (Section 2.110) within shorelands defined in Section 4.086 (1) (a)-(e):

- (1) Low-intensity, water-dependent recreation.
- (2) Existing and compatible farm uses and activities, excluding structures.

\*Amended 83-17, dated September 30, 1983.

- (3) Forest operations only if natural values of the resource are protected, as determined by administration of the Oregon Forest Practices Act, where applicable, otherwise as determined by the Department under a Type II procedure.
- (4) Research or educational activities which maintain or enhance the natural characteristics of the area and its resources.
- (5) Navigational aids, such as channel range markers, requiring minimal structures and maintenance.
- (6) Vegetative shoreline stabilization.
- (7) Maintenance and repair of existing and servicable dikes.

Section 4.090 Development Uses and Activities Permitted Within Category 2 Coastal Shorelands. Within coastal shorelands defined in Section 4.086 (2) the following uses and activities are permitted if otherwise allowed in the underlying zone, and subject to the procedural requirements and standards of the use in the underlying zone:

- (1) Uses allowed in Section 4.088 above,
- (2) Single-family dwelling,
- (3) Home occupation,
- (4) Cottage industry in an existing building,
- (5) Signs

Any other uses within Category 2 Coastal Shorelands are only allowed under a Type IV procedure upon findings that such uses satisfy a need which cannot be accommodated at other upland locations or in urban or urbanizable areas and that the use is compatible with the objectives of the comprehensive plan to protect riparian vegetation and wildlife habitat.

Section 4.092 Placement of Structures.

- (1) For parcels totally within the Coastal Shoreland Boundary, structures shall be sited according to lot line setbacks and Riparian Vegetation Standards in S4.500 et seq.
- (2) For parcels partially within and partially outside of the Coastal Shorelands Boundary, structures shall be located outside the Boundary. This requirement may be waived by the Planning Director only upon a showing that the portion of the site outside the Boundary cannot accommodate the use or is of such value for resource purposes that the use would impact resource productivity less if located within in Coastal Shorelands.

Section 4.094 Land Divisions.

- (1) Land divisions in the EFU, AF-20, F-38 and F-80 zones are permitted subject to the requirements of the base zone.
- (2) Land divisions in areas built and committed to nonresource use are permitted subject to the requirements in the base zone.
- (3) Land divisions in areas other than (1) and (2) above are permitted only if they satisfy a need which cannot be accommodated at other upland locations or in urban or urbanizable areas.

Section 4.095. State and Federal Permits. Applicants for developments which require a state or federal permit shall submit to the Planning Director a copy of: the completed permit application, other supporting material provided to the permit granting agency and a set of findings which demonstrate the development would be consistent with the Comprehensive Plan and this Ordinance. This information shall be subject to the Consistency Review procedure set forth in Section 5.120.

ARTICLE 4. SPECIAL DISTRICTS

Section 4.000. Flood Hazard Overlay District (/FHO).

Section 4.010. Purpose. This district is intended to identify and recognize those sections of the county subject to the hazards of periodic flooding and to establish special standards and regulations to reduce flood damage or loss of life in those areas. This district shall apply to all areas of special flood hazards within the unincorporated areas of Clatsop County as identified on Flood Insurance Rate Maps (FIRM) and Flood Boundary and Floodway Maps.

Section 4.012. Development and Use Permitted. Development permits shall be subject to the standards of Section S3.650 and be processed as a Type I procedure. Any conditional development and use allowed in the underlying zone may be permitted within the boundaries of this special district under a Type II procedure, unless a Type III procedure is required in the underlying zones, subject to applicable development and use standards and site plan approval.\*

Section 4.014. Development and Use Standards. The following standards are applicable to permitted and conditional development and use in this district.

1. General Standards for Flood Hazard Reduction, Section S3.652.
2. Special Standards for all Areas of Special Flood Hazards, Section S3.654.
3. Specific Uses and Standards for Floodways, Section S3.656.
4. Specific Standards for Coastal High Hazard Areas (V Zones), Section S3.658.
5. Specific Standards for Areas of Shallow Flooding (AO Zone), Section S3.660.
6. Other standards applicable to any permitted or conditional development and use allowed in the underlying zone.

Section 4.016. Warning and Disclaimer of Liability. The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on engineering and scientific considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes such as ice or log jams and other sources of temporary impoundment.

\*Amended 82-11, dated April 14, 1982.

This Ordinance does not imply that land outside the regulatory floodway or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create a liability on the part of Clatsop County or by an officer, or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made thereunder.

Section 4.018. Procedures. Application for a development permit shall be made to the Planning Director and shall include a site plan and other information which includes:

1. Elevation in relation to mean sea level of the lowest floor including basement, of all structures as certified by either a registered engineer, surveyor or architect.
2. Elevation in relation to mean sea level to which any proposed non-residential structure shall be flood-proofed as certified by either a registered engineer, surveyor or architect.
3. Attach the appropriate affidavits or certification as required by the provisions of this Ordinance.
4. Description of the extent to which any water course will be altered or relocated as a result of proposed development.
5. Other such information as is needed to determine conformance with this Ordinance.

The Planning Director shall:

1. Review all development permit requests to determine that the requirements of this Ordinance have been satisfied.
2. Review all development permits to determine that all necessary permits have been obtained by the applicant from those federal, state or local governmental agencies from which prior approval is required.
3. Review all development permits to determine if such development is located within the floodway. If the proposed development is to be located in the floodway a certification shall be obtained in accordance with Section .
4. The applicant shall be responsible for notifying the Federal Insurance Administration prior to any alteration or relocation of a water course.
5. Where interpretation is needed regarding the boundaries of the areas of special flood hazard, the Planning Director will make the necessary interpretation. The person contesting the location of the boundary or other decision shall be given a reasonable opportunity to appeal the interpretation as provided in this Article.

6. When base flood elevation has not been provided, the applicant shall obtain, review and reasonably utilize any base flood data available from a federal, state or other source, in order to administer the provisions of Section 4.018. The Planning Director shall review this data.

The Planning Director shall submit the annual report required by the FIA to that agency and any other designated state coordinating agency.

The Building Official shall:

1. Review all building permits to determine compliance with this Ordinance.
2. Verify and record the actual elevation (in relation to mean sea level) of the lowest floor, including basement, of all new or substantially improved flood-proofed structures.
3. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved structure has been flood-proofed.
4. Maintain for inspection the affidavits of certification required for this Ordinance.
5. All records pertaining to the provisions of this Ordinance shall be maintained in the Department of Commerce, Building Codes Division in the Clatsop County Courthouse and shall be open for public inspection.

#### Section 4.020. Variances.

1. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.
2. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
4. Variances shall only be issued upon:
  - a. a showing of good and sufficient cause,
  - b. a determination that failure to grant the variance would result in exceptional hardship to the applicant, and

- c. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
5. Any applicant to whom a variance is granted shall be given written notice of the required lowest floor elevation stated in feet below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
6. Variance Time Limit. Authorization of a variance shall be void after six months unless the new construction, substantial improvement or approved activity has taken place. However, the Planning Commission may, at its discretion, extend authorization for one additional six month period upon request.

# OVERLAY ZONES



**SHORELAND OVERLAY**  
West of line, includes  
100 year flood plain.



**BEACHES and DUNES  
OVERLAY**  
West of existing vegetation  
line.



P  
A  
C

ARCH CAPE

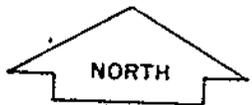
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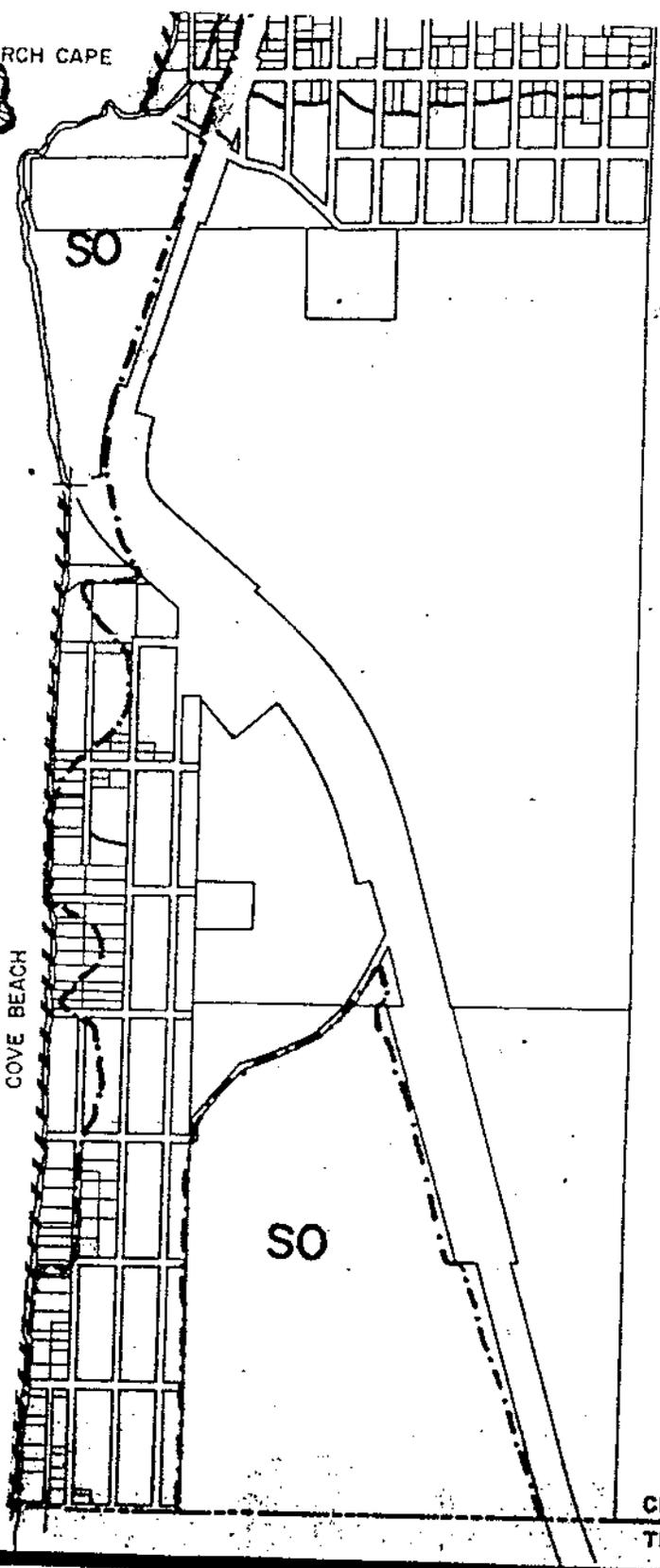
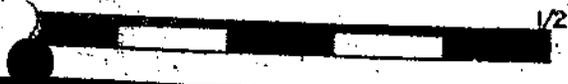
COVE BEACH

SO

SO



SCALE IN MILES



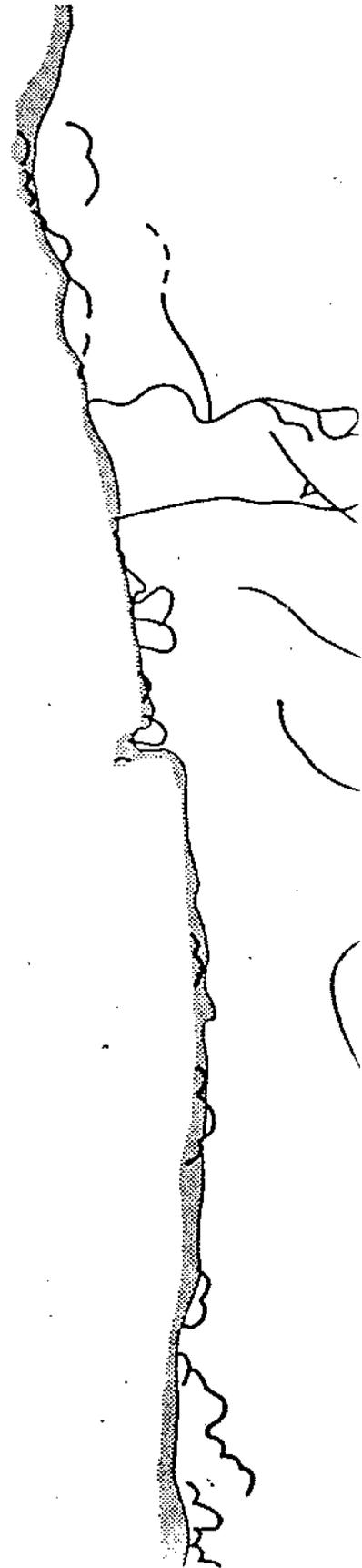
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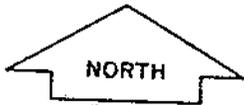
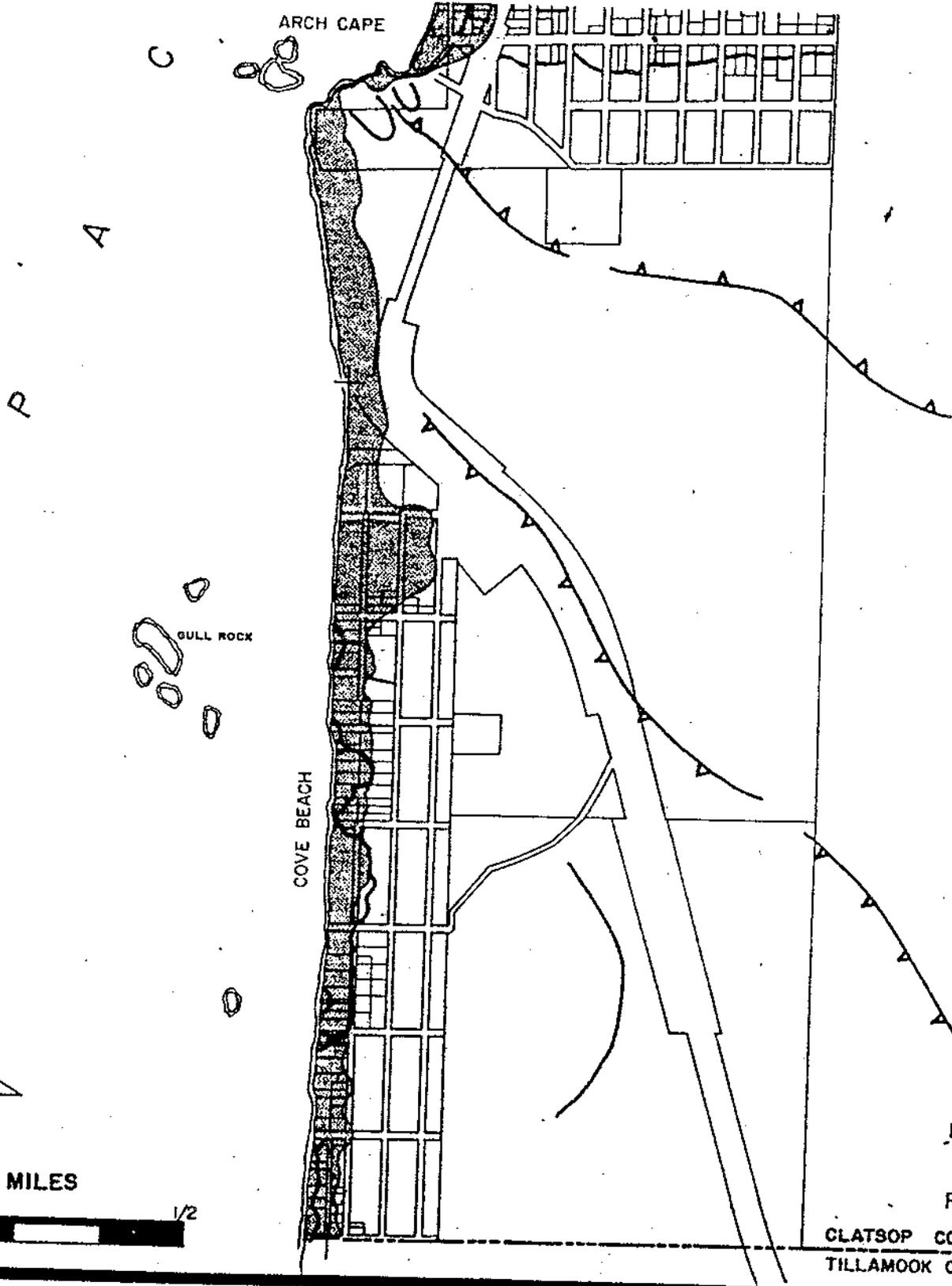
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CLATSOP CO.  
TILLAMOOK CO.

# HAZARDS

- ACTIVE SLIDES
- △ △ INACTIVE SLIDES
- 100 YEAR FLOOD PLAIN





SCALE IN MILES

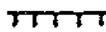
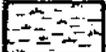
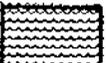


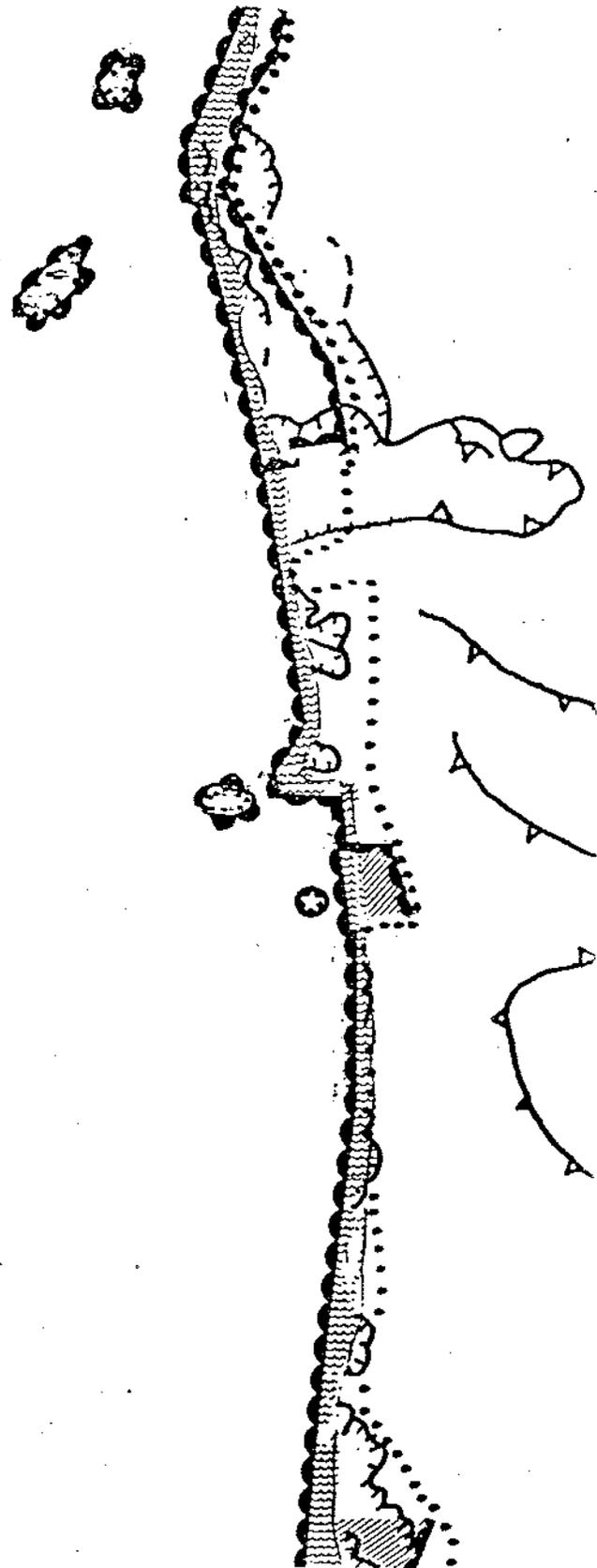
FIGURE

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CLATSOP CO.  
TILLAMOOK CO.

# GOAL 17: COASTAL SHORELANDS

-  Active Slides
-  Inactive Slides
-  Areas of significant shoreland and wetland biological habitat.
-  100 Year Flood Plain
-  Exceptional aesthetic or scenic quality
-  Area needed for water dependent and water related uses.
-  Historic Site
-  Coastal Headland
-  Recreational Importance
-  Coastal Shoreland Boundary including area and flood plain west of dotted line.



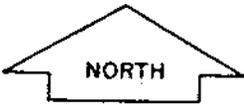
P  
A  
C

ARCH CAPE

ARCH CAPE  
TUNNEL

GULL ROCK

COVE BEACH



SCALE IN MILES

1/2

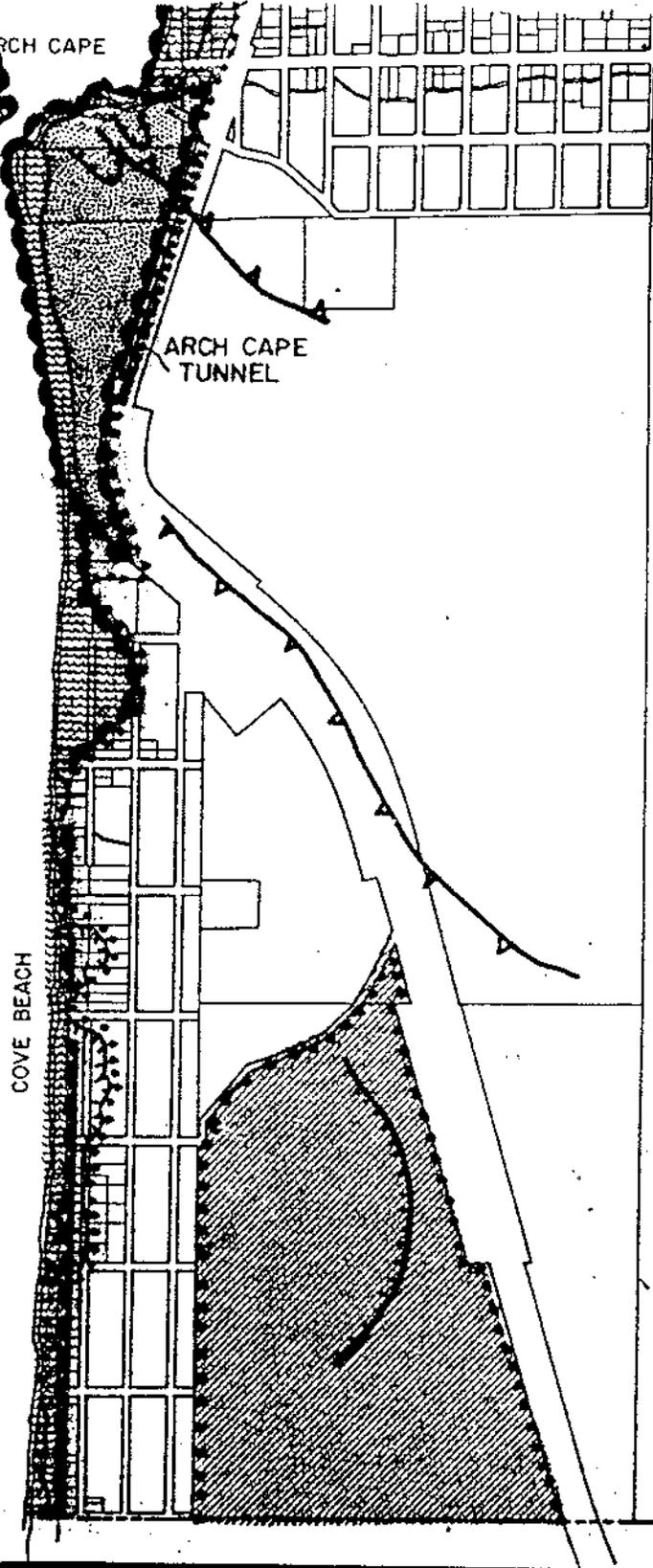
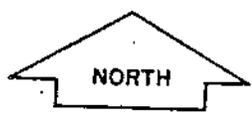
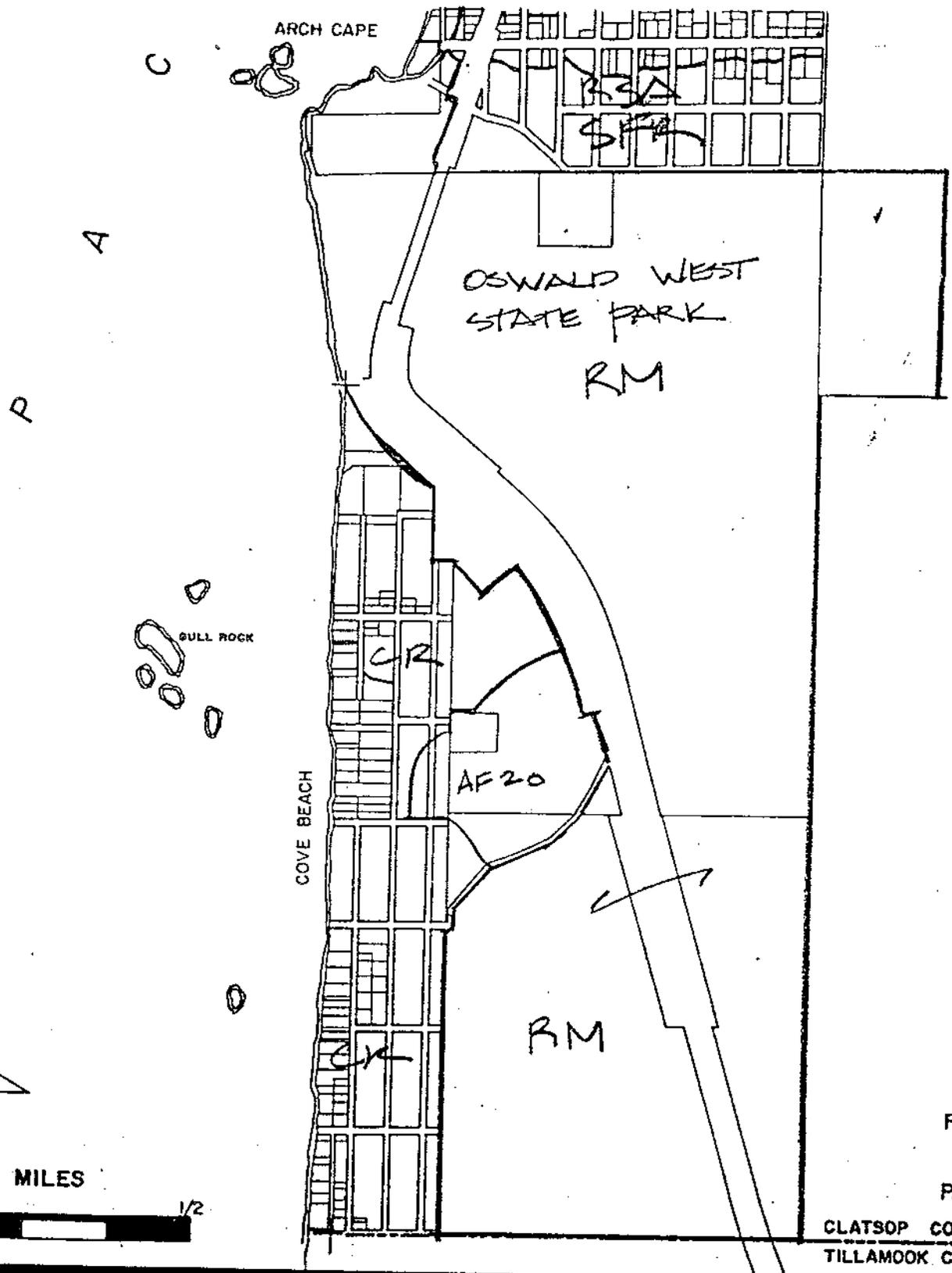


FIG.

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TILLAMOOK CO.



SCALE IN MILES



FIG:  
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CLATSOP CO.  
TILLAMOOK CO.

LAND FORMS AND GEOLOGY

SOILS

WATER FEATURES

VEGETATION

WILDLIFE

HISTORY AND ARCHEOLOGY

THE NATURE CONSERVANCY REPORT

APPENDIX

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TILLAMOOK COUNTY COASTAL STATE PARKS



## LAND FORMS AND GEOLOGY

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### Physiographic Province

The state parks on the coast of Tillamook County fall within the area known as the Coast Range Province. This province extends from the middle fork of the Coquille River in southern Oregon into the Willapa Hills of southwestern Washington.

The Coast Range Province is generally made up of broad coastal terraces, many of which are wooded. At the immediate shoreline are often broad sandy beach and dune regions separated from each other by basalt headlands. There are also frequent offshore islands and rocks as well as numerous estuaries, marshes and wetlands along the coast.

Active dunes often occur adjacent to bay or river mouths. Many of these dune areas have been stabilized by European beachgrass, a species recently introduced to the Oregon coast for dune stabilization. Prior to the introduction of the European beachgrass, the Oregon dunes were fairly open and generally unstable. However, the ability of the beachgrass to hold and bind the dunes has changed this situation.

The dunes fall into a variety of classifications including active, stabilized, wet, deflation plains and wooded. These different dune types result from interactions between wave action, wind, sand, moisture and vegetation.

The geologic features of the north coast have been affected by, and closely tied to, the action of the Pacific Ocean over the years. The seasonal changes of the currents and the periodic rising and falling of the sea level have acted with other geologic forces to create the present landscape.

Sedimentary, volcanic and metamorphic geologic features are all evident on the coast. Older metamorphosed materials have been overtopped with alternating layers of sedimentary and volcanic deposits.

Uplift of the Coast Range and subsequent erosion have contributed some of the sedimentary materials found at the coast while the rising and falling of sea level has added marine sedimentary material.

Periodic volcanic activity created many of the prominent headlands formed from layers of basalt found on the coast.

Millions of years ago continental glaciation cycles caused fluctuations in sea level. Since that time when the greatest amount of land was submerged, there has been a slight uplift of the coast. Evidence of this is seen in the 150 foot high wave-cut terrace which is visible in many places along the coast.

Over the years, the level of the ocean has risen causing the mouths of the rivers at sea level to be submerged or "drowned." The bays and estuaries along the coast were formed when rivers deposited alluvial materials in the drowned mouth areas. In recent times, i.e., within the last 3,000 - 6,000 years, the shoreline has remained relatively stable.

Differences in hardness of geologic materials are responsible for the irregular and scenic coastline of Oregon. Softer materials have eroded away leaving more resistant ones still standing. Many headlands on the north coast are remnants of hard basaltic rock from lava flows millions of years ago. Cape Falcon and Cape Meares are both basaltic formations. Much of Neahkahnie Mountain is also of this basaltic material with some sedimentary rock.

Examples of the variety of geologic materials found on the coast are seen near Neahkahnie Mountain. The mountain itself consists of a large igneous (volcanic) mass along with other kinds of volcanic rock types closer to the peak. Just north of the mountain there are a series of sandstone and siltstone beds surrounded by more masses of intrusive igneous rock.

Generally speaking, wave erosion by longshore currents is working to straighten the Oregon coast. Steep, rocky cliffs supply materials which are transported up and down the coast forming the beaches and sand spits found along the coast.

There are two longshore currents flowing in opposite directions which act on the Oregon coast. They are the south-flowing California current which is close to shore during the summer and the north-flowing Davidson current which is closer to the shore during the winter. The Davidson current erodes the shore during winter storms and transports materials northward and away from the shore. During the summer, the California current brings this material back and rebuilds the eroded beaches.

In many cases this longshore transportation is interrupted by headlands and jetties which isolate and contain the loose material.

#### Impacts of Geology on Coastal Recreation

Since the geology of coastal areas is a dynamic and not a static factor, it is important to understand the ongoing processes and plan accordingly.

Geologic hazards such as unstable dunes, landslide areas and areas subject to flooding will be avoided when planning for recreation development. Geology is a prominent factor in the scenic landscape and will be protected from erosion and misuse. It is also a factor which can be used for education and interpretation. Geologic formations can be used as subjects for brochures, exhibits and explanatory signs.

### Dune Types of the Coast

#### Foredunes

The present day foredune is a result of the introduction of European beach grass. This grass has become naturalized, forming a nearly continuous barrier ridge along the shore. It grows inland in areas of continuous sand deposition from the edge of the high tide line. As sand builds along the base of the plant, new roots and shoots grow from the stem joints. More sand is trapped and the process repeats. These dunes reach a maximum height of 25'-30' depending on local conditions.

The foredune acts as a shock absorber, protecting the inland areas from the full effects of ocean storms. However, the dunes may be damaged and the subsequent damage to the inland areas can be great. For this reason, excavation or construction in the foredune area will not be allowed.

Foredunes vary from pronounced ridges in central and south Oregon to broad gentle foredunes in Clatsop County.

Foredunes may be active or conditionally stable.

Active foredunes possess insufficient vegetative cover to retard wind erosion. These dunes are typically evolving toward a conditionally stable state. Active foredunes are most numerous in central and north coast areas.

Vegetation on active foredunes is almost exclusively European beach grass.

Conditionally stable foredunes have sufficient vegetation cover to retard the erosional effects of the wind. These dunes are prone to reactivation if the vegetation cover is disturbed.

Vegetation on conditionally stable foredunes has less of the European beach grass which prefers areas of sand deposition. The protected environment on the crest and lee sides of the dunes is usually covered with beachpea, coast

strawberry and seashore lupine. Later successional species may include salal, kinnikinnick and some shore pine.

#### Interdune Forms

A deflation plain is a broad plain which develops immediately inland from the foredune and is wind scoured to the level of the summer water table. During the winter heavy precipitation causes standing water in these areas.

Old inactive deflation plains can occur inland from the foredune area. These are commonly occupied by forest communities and the water table is often still quite high.

Surface stabilized dunes are dunes of any form which possess a weakly developed thin soil and underlying unconsolidated sands.

These dunes have been stable with vegetation long enough for soil to start forming. These dunes are wind stable as long as the soil is not seriously disturbed since the underlying sand is prone to reactivation.

Older sand dunes are dunes of any form which possess both a deep, well-developed soil and moderately cemented underlying sand. Relatively deep soil has formed and the underlying sands have some stability. When excavated, sloughing and land sliding may be common. There may be layers of loose sand in with the semi-cemented material.

Frequently coastal climax forests occur here. The forest may have less shore pine, and the forest canopy may be dense with a less dense shrub layer. Some grass areas may be found as well.

These areas are suitable for recreation and residential development if care is used. Sloughing is common if the area is excavated and septic tanks frequently fail.

Of the many types of dunes which are present on the Oregon coast, most are represented within the state parks which we are studying.

## LAND FORM AND GEOLOGY SOURCES

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SOILS

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TILLAMOOK COUNTY COASTAL STATE PARKS

## SOILS

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Within the parks that we are studying on the north coast, there are found at least two different major kinds of soils.

Generally speaking, soils differ for many reasons including geology, the parent material, the climate, landforms, biotic factors and time. The element most responsible for soil differences here is the original or parent material from which the soil is derived.

Soils derived from igneous materials are found at Oswald West and Cape Meares.

Soils derived from marine sediments are found at Nehalem Bay State Park. These soils vary from semi-consolidated soils to loose non-vegetated sand dunes. Since these soils are very unstable and erodable if existing vegetation is removed or disturbed, great care must be taken when working in and around these soils.

These soils also tend to drain excessively and to be infertile due to their high inert mineral composition and low organic content.

### Land Capability

Soil characteristics such as depth, texture, wetness, slope, hazard conditions, structure, water-holding capacity and permeability are used to group soils into one of eight land capability groups. These eight groups are used to designate the kinds of uses for which the land is most suited.

Lands in class I - IV are suited for cultivation while lands in classes V - VIII are best suited for range, forestry, wildlife habitat and water supply. Frequently there are hazards associated with lands in classes V - VIII. These are designated by letters such as "e" for erosion, "w" for wetness, "s" for soil limitation and "c" for climate limitations.

All the lands which are being studied in this master plan are either VI, VII or VIII. They all have severe limitations or hazards which make them unsuited for cultivation. In addition to these conditions, the soils at Oswald West and Cape Meares are subclassified "e" due to erosion problems.

SOILS - SOURCES

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Beaches and Dunes of the Oregon Coast, Oregon Coastal Conservation and Development Commission, 1975.

Coastal Reconnaissance Study, U. S. Army Corps of Engineers, 1974.

Sand Dunes Map, Tillamook Co., Oregon.  
USDA, Soil Conservation Service, June, 1974.

WATER FEATURES

TILLAMOOK COUNTY COASTAL STATE PARKS

## WATER FEATURES

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All the parks being studied have one large and obvious water feature in common, the Pacific Ocean. The ocean is responsible for the physical form of these parks and waysides and continues to exert a major influence through the wind and waves, daily tides and frequent storms. The ocean also exhibits a stabilizing influence on these parks, since it helps keep temperatures moderate year-round. The surface temperature of the ocean only varies between 45° and 55°F over the course of a year.

Occasionally there are freak "sneaker" waves which wash up high on the beach and rarely, seismic sea waves called tsunamis occur. These can have severe consequences on surrounding land and structures.

Often storms generate high waves but these are fairly predictable, although they can still be quite destructive. A combination of strong winds, high tides and a tsunami could have severe consequences.

### Surface Water

Small streams and drainages occur in many of the parks and waysides. Intermittent flooding may occur in these streams, primarily in the winter months of December, January and February. The flooding is caused by the seasonally heavy precipitation and run-off.

### Ground Water Resources

The geology of the area determines to a large extent the amount of groundwater present in the area. Areas where the uplands are either volcanic rock or marine sedimentary rock are less likely to have ample groundwater resources.

The heavy rainfall found in this region contributes to fairly rapid recharge of groundwater resources. Wells developed in dune fields usually produce water that is acceptable in odor, color, taste and temperature. However, these wells also have the greatest risk for contamination because of the porosity of the upper layers of ground and the possibility of intrusion of salt water into the well.

WATER FEATURES - SOURCES

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Coastal Reconnaissance Study  
Corps of Engineers 1974

"Natural Area Features of the Coastal Tillamook County State  
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Data Base Survey - Natural Heritage Program  
The Nature Conservancy

Tillamook County Comprehensive Plan

National Wetlands Inventory  
US Department of the Interior  
Fish & Wildlife Service

VEGETATION

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TILLAMOOK COUNTY COASTAL STATE PARKS

## VEGETATION

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### Native Vegetation

An ecological zone is a specific habitat made up of interrelated parts. The climate, the soils, the plants, animals and insects are all part of an ecological zone. Soils and climate help in determining which plants grow and thrive. Plants in turn are one of the factors which determine the kinds of animals found in the zone. Within each ecologic zone is found a major plant community made up of specific types and species of plants which grow in those habitat conditions.

Due to the unique habitats and environmental factors found along the coast, there are many diverse vegetation communities. Major communities are found in areas such as dunes, estuaries, tidal flats, coast headlands, and coastal forested areas.

Without the stabilizing influence of the coastal vegetaton, the severe conditions of winds and waves would cause barren, eroded areas of blowing sand. There would be nothing to stop the sand until it came to rest at the base of the Coast Range. Fortunately, there is enough moisture and moderate temperatures to allow plants to survive here. The vegetation stabilizes the sand and also changes its composition by adding decayed vegetation matter to it. Gradually the sand becomes more soil-like, supporting a more diverse range of plants and increasing the stability of the area.

Each different geomorphic feature, such as a sand dune or a headland, has a certain soil group commonly associated with it and also typical ecological habitats where certain plants and animals are usually found.

The broad category of sand dune contains a number of diverse habitats within it. The following habitats are common.

Foredunes	Shore pine/rhododendron
Moving dunes	Shore pine/salal
Deflation plains	Willow/sedge marshes
Stabilized dunes	Coastal lake
Sitka spruce/salal	

Within each of these habitats is a particular variety of plants and animals which depend on this habitat for food and shelter.

### Sand Dunes

Although the sand dunes offer a relatively harsh and inhospitable environment, there are plants which can survive the winds, salt spray and shifting sands. Some plants even thrive under these conditions. One species which grows particularly well in the coastal dunes is an introduced species--European beach grass (*Ammophila arenaria*). This species, which puts down long rhizomes enabling it to bind the sand, continues to grow new shoots from its crown as blowing sand is trapped around it. This process forms the typical foredunes now found along most areas of the coast.

It is only in recent times that these foredunes have become common. Prior to the massive beach stabilization projects undertaken in the 1930's, most of the dunes of the Oregon coast consisted of loose, open, unstable sand.

A listing of native plants usually found on the dunes is included at the end of this section.

### Deflation Plains

In addition to causing the formation of the foredunes along the coast, the European beach grass has also indirectly caused the formation of the deflation plains found behind the foredunes. These deflation plains are caused by winds which come over the foredunes and scour the sand down to a level where the ground moisture binds the sand particles together.

Vegetation found in deflation plains is considered to be successional since it changes from a sand dune to a shore pine forest.

The deflation plain plant community begins as either a grass, rush or sedge dominated community, depending on the amount of standing water found during the year. These grass, rush or sedge communities gradually evolve into low scattered shrubs, then taller shrub thickets and finally to a shorepine forest.

Although dunes tend towards stability, stable areas can become destabilized if the surface is disturbed and the area can revert to blowing sand. Caution must be used in any proposed development in a dune area and certain areas should not be disturbed at all.

In many cases if the dunes remain stable, sitka spruce and Douglas fir will become dominant over the shore pine.

The coastal plain is another physiographic feature which can be broken down into a number of different habitats including:

Mature conifer	Headland shrub
Immature conifer	Cedar swamp
Alder salmonberry	Willow/sedge marshes
Riparian alder	Skunk cabbage marshes
Riparian hardwood	Headland prairie
Coastal lake	Wet pastureland

#### Headland Communities

Most areas of the north Oregon coast are dominated by coniferous forests. However, exposed portions of headlands are frequently dominated by herb and shrub communities. Only one study of such a headland area has been done and it appeared that the headland was being gradually invaded by Sitka spruce. Plants typically found on the headlands are listed at the end of this section.

Included in the physiographic feature "Basaltic headland" are the following habitats:

Mature conifer	Headland shrub
Immature conifer	Headland prairie
Alder/salmonberry	Skunk cabbage marshes
Riparian alder	Mountain river

Not all of these habitats are included in the areas under consideration in this study.

#### Coastal Forests

The most prominent tree along the Oregon coast is Picea sitchensis, Sitka spruce. The area in which Picea sitchensis predominates is generally a zone only a few miles wide near the coast, between the Coast Range and the ocean. Generally, the zone is less than 500 feet in elevation, but in some cases where mountains are very close to the ocean, the zone may extend to 2000 feet.

The area where Picea sitchensis thrives is one of the most moderate climates found anywhere. Ranges in temperature and precipitation are small and the climate is generally damp and mild. Since the forest soils are rich in organic matter and nitrogen and typically acidic, the result is a very dense and productive forest area.

Other trees commonly found in the *Picea sitchensis* zone include *Tsuga heterophylla* (Western hemlock) and *Thuja plicata* (Western red cedar). On disturbed sites *Alnus rubra* (red alder) is common, and *Pinus contorta* (shore pine) is found near the ocean.

Mature forests typically have dense understories of smaller plants such as shrubs, ferns and herbs. A list of plants typically found in understories is included at the end of this section.

Immature coniferous forests are young stands of conifers found on sites disturbed because of logging or fire. Typically, many small trees are found on these sites competing for light and nutrients. The dense shade reduces the number of shrubs and herbs found on these sites. The actual composition of these immature conifer forests varies widely and may even include some hardwoods.

In areas where the dominant trees have been disturbed, there is a strong tendency for dense shrub communities to develop. In some cases, where forest areas have been disturbed, the coniferous trees have been replaced by nearly pure stands of *Alnus rubra* (alder). *Alnus rubra* is noteworthy for its ability to improve soils by fixing nitrogen in significant amounts.

Coniferous forest regeneration often occurs where seedlings sprout along rotting logs called "nurse logs." Some of the thousands of seedlings survive and their roots eventually reach down to the soil.

#### Tideland Communities

A large variety of tideland communities exists along the north coast of Oregon. Marshes, estuaries, wetlands and tide flats all have their own unique plant communities. The frequency of inundation by salt water, degree of submergence, the soil type, and the exposure to weather are among the factors affecting which plants will grow in any given environment. The higher the degree of salinity of the water, the smaller the numbers of plants that can grow in these wetlands. Little research has been done on these plant communities, but different species of plants grow in the low marsh than in the high marsh zones.

Among the more common low marsh plants are pickleweed, salt grass, seaside arrow grass, and Lyngbye's sedge. High marsh plants include saltwort, tufted hairgrass, lilaepsis, and common spike rush.

#### Wetlands, Rivers and Lakes

In addition to water-related communities characterized by some degree of salinity, there are also fresh water vegetational communities. Swamps, marshes and streams are among these. Great varieties of plants can be found in these communities. Conifers, hardwoods, willows, rushes, sedges, grasses, herbs, and ferns are all found in these areas.

## VEGETATION SOURCES

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Beaches & Dunes Handbook, Oregon Coastal Zone Management Assoc., Inc.

Beaches & Dunes of the Oregon Coast, OCC & DC, 1975.

Franklin & Dyrness. Natural Vegetation of Oregon and Washington, 1973.

Intertidal Salt Marshes of Oregon, OSU Extension Service, Marine Advisory Program, SG63, January 1981.

Maser, Mate, Franklin & Dyrness. Natural History of Oregon Coast Mammals, 1981.

Native Plant Society of Oregon, personal communication.

## VEGETATION - TYPICAL COASTAL PLANTS

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### Sand Dune Plants

Abronia latifolia - yellow sand verbena  
Ammophila arenaria - European beach grass  
Carex macrocarpa - bigheaded sedge  
Colamagrostis nutkaensis - pacific reedgrass  
Convolvulus soldanella - beach morning glory  
Cotula coronopifolia - brass buttons  
Elymus mollis - sea lyme-grass  
Festuca rubra - red fescue  
Fragaria chiloensis - coast strawberry  
Franseria chamissonis - silver beachweed  
Glehnia leiocarpa - beach silvertop  
Juncus falcatus - sickle-leaved rush  
Juncus lescuri - salt rush  
Lathyrus japonicus - beachpea  
Lathyrus littoralis - gray beachpea  
Lupinus littoralis - shore lupin  
Plantago maritima - seaside plantain  
Poa macrantha - seashore bluegrass  
Polygonum paronychia - nailwort knotweed  
Potentilla anserina - silver weed

### Grass Community

Ammophila arenaria - European beach grass  
Fragaria chiloensis - coast strawberry  
Hypochoeris radicata - false dandelion  
Lupinus littoralis - shore lupine  
Sisyrinchium californicum - yellow-eyed grass

### Rush Community

Juncus falcatus - sickle-leaved rush  
Juncus nevadensis - brown-headed rush  
Trifolium wormskjoldii - spring-bank clover

### Sedge Community

Carex hindsii - Hinds sedge  
Carex obnupta - slough sedge  
Gentiana sceptrum - king's gentian  
Potentilla pacifica - pacific silverweed  
Ranunculus flammula - creeping buttercup

### Low Shrub Community

Gaultheria shallon - salal  
Myrica californica - wax myrtle  
Salix hookeriana - coast willow  
Vaccinium ovatum - evergreen huckleberry

### Tall Shrub Community

All of the above plus  
Pinus contorta - shorepine (seedlings)

### Shorepine Forest

Carex obnupta - slough sedge  
Gaultheria shallon - salal  
Myrica californica - wax myrtle  
Picea sitchensis - sitka spruce  
Pinus contorta - shorepine (dominates)  
Salix hookeriana - coast willow  
Vaccinium ovatum - evergreen huckleberry

### Tideland Plants

Cuscuta salina - marsh dodder  
Distichlis spicata - seashore saltgrass  
Glaux maritima - sea milkwort  
Grindelia stricta - Oregon gum plant  
Jaumea carnosa - jaumea  
Juncus baltica - baltic rush  
Juncus effusus - common rush  
Puccinellia pumila  
Salicornia virginica - glasswort, pickleweed  
Scirpus americanus - 3 square  
Scirpus pacificus - Pacific coast bullrush  
Triglochin maritima - 3-ribbed arrowgrass

### North Oregon Headlands

Achillea millefolium - yarrow  
Agrostis idahoensis  
Angelica lucida  
Anthoxanthum odoratum  
Artemisia suksdorfii - suksdorf sagebrush  
Bromus sitchensis  
Carex obnupta - slough sedge

Dactylis glomerata  
Elymus glaucus  
Equisetum telmateia - giant scouring rush  
Festuca rubra - red fescue  
Galium aparine - bed straw  
Heracleum lanatum - cow parsnip  
Holcus lanatus  
Lupinus littoralis - shore lupine  
Marah oreganus - wild cucumber  
Plantago lanceolata - black plantain  
Polystichum munitum - sword fern  
Pteridium aquilinum - western bracke  
Ranunculus occidentalis - field buttercup  
Rosa nutkana - common wild rose  
Rubus parviflorus - thimbleberry  
Rubus spectabilis - Salmonberry  
Solidago canadensis - common goldenrod  
Stachys mexicana - great hedge nettle

#### Coastal Forest Understory Plants

Athyrium filix-femina - lady fern  
Blechnum spicant - deer fern  
Disporum smithii - fairy lanterns  
Dryopteris austriaca - wood fern  
Gaultheria shallon - salal  
Maianthemum dilatatum - lily-of-the-valley  
Menziesia ferruginea - Fool's huckleberry  
Montia sibirica - candy flower  
Oplopanax horridum - devil's club  
Oxalis oregana - redwood sorrel  
Polystichum munitum - sword fern  
Rhododendron macrophyllum - western rhododendron  
Sambucus racemosa var. arborescens - red elder berry  
Tiarella trifoliata - three leaved coal-wort  
Vaccinium ovatum - evergreen huckleberry  
Vaccinium parvifolium - red huckleberry  
Viola glabella - wood violet  
Viola sempervirens - evergreen violet

## VEGETATION OF TILLAMOOK COUNTY

11-5-77 Ann Kowalishin  
Native Plant Society of Oregon

### Neahkahnie Area Oswald West Park to Falcon Point

Angelica species  
Athyrium felix-femina - Lady Fern  
Artemesia douglasii - Mugwort (Falcon Point)  
Baccharis pilularis - (Falcon Point)  
Blechnum spicant - Deer Fern  
Botrichum multifolium - Grape Fern  
Cascara  
Chemaphila species - Prince's Pine  
Digitalis species - Foxglove  
Gaultheria shallon - Salal  
Goodyera oblongifolia - Rattlesnake Plantain  
Lonicera involucrata - Twinberry  
Menziesia ferruginea - False Azalea  
Moneses uniflora  
Oxalis oreganis - Wood sorrel  
Picea sitchensis - Sitka spruce  
Polypodium glycyrrhiza - Licorice Fern  
Polypodium schooleri - Leatherleaf licorice fern  
Polystichum munitum - Swordfern  
Prunella vulgaris - Selfheal  
Senecio jacobina - Tansy  
Tiarella trifoliata - Foam flower  
Tolmiea menziesii - Piggy-Back Plant  
Trillium species  
Tsuga heterophylla - Western Hemlock  
Vaccinium ovatum - Coast Huckleberry  
Vaccinium parvifolium - Red Huckleberry

### Short Sands Beach State Park - Oswald West State Park

7-29-79 Ann Kowalishin  
Native Plant Society of Oregon

Hwy. 101, Tillamook County, Oregon - cool, moist forest by seashore  
Sitka spruce and Western Hemlock are dominant forest trees, along with  
Gaultheria shallon, Vaccinium occidentalis

Alnus rubra - Red Alder  
Anaphalis margaritacea - Pearly-Everlasting  
Arctium minus ora lappa - Common Burdock; Great Burdock  
Athyrium Felix-femina - Lady fern  
Blechnum spicant - Deer fern  
Digitalis purpurea - Foxglove

Equisetum - Horsetail  
 Galium oregonum - Oregon Bedstraw  
 Gaultheria shallon - Salal  
 Heracleum lanatum - Cow-parsnip  
 Lapsana communis - Nipplewort  
 Lysichitum americanum - Skunk cabbage  
 Maianthemum dilatatum - False Lily-of-the-Valley  
 Mentha species - Mint  
 Monotropa uniflora - Indian Pipe  
 Montia sibirica var sibirica - Miner's Lettuce  
 Oenanthe sarmentosa - Water Parsley  
 Oxalis oregana - Wood sorrel  
 Picea sitchensis - Sitka Spruce  
 Polystichum munitum - Sword fern  
 Prunella vulgaris - Self heal  
 Pteridium aquilinum var pubescens - Bracken  
 Ranunculus species - Buttercup  
 Sambucus racemosa var arborescens - Red Elderberry  
 Sullivanita oregana - Saxifragaceae, found on moist rock wll along  
 upper trail, west side of highway. White  
 petals  
 Thuja plicata - Western Red Cedar  
 Tiarella trifoliata var trifoliata - Trefoil Foamflower  
 Tsuga heterophylla - Western Hemlock  
 Vaccinium membranceum - Huckleberry  
 Vaccinium ovatum - Evergreen Huckleberry  
 Vaccinium parvifolium - Red Huckleberry

#### Neakhane Dunes

Ammophila arenaria - European Beach Grass  
 Anaphalis margaritacea - Pearly-Everlasting  
 Cardionema ramosissima - K.C.K.  
 Cytisus scoparius - Scotch Broom  
 Elymus mollis - American Dunegrass  
 Fragaria chiloensis - Coastal Strawberry  
 Glehnia leiocarpa - Beach Silver-Top  
 Hypochaeris radicata - Spotted Cat's-Ear  
 Lathyrus japonicus - Beach Pea  
 Lathyrus littoralis - Grey Beach Pea  
 Leontodon nudicaulis species taraxacoides - Hairy Hawklist  
 Lupinus littoralis - Seashore Lupine  
 Pinus contorta - Coast Pine  
 Polygonum paronychia - Beach Knotweed  
 Tanacetum camphoratum - Seaside Tansy  
 Tanacetum vulgare - Common Tansy

#### Dump

Abronia lapifolia  
 Arctostaphylos columbiana - Bristly Manzanita  
 Boschniakia hookeri - Ground Cone

WILDLIFE

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TILLAMOOK COUNTY COASTAL STATE PARKS

## WILDLIFE

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A wide variety of habitats and environments are present within the state parks and waysides of Tillamook County. Four major habitat types found along the coast are here, and within these are found other smaller habitat types. The major habitats are offshore areas, estuaries, bodies of fresh-water and uplands.

### Offshore Habitat

The offshore habitat includes the entire area of the ocean up to the shoreline at high tide. Specific habitats include the ocean, various benthic (bottom dwelling) communities, coastal islands and reefs, rocky intertidal areas, kelp beds and sand beaches. Many of these are of little importance to the master plan, but some will be considered since they need to be protected and preserved.

Coastal islands and reefs occur offshore from many state parks and waysides. These areas are heavily utilized by seabirds for nesting and resting areas. All of these islands have been declared to be federal refuges. Birds which typically use the islands include gulls, cormorants, puffins and murre. Often these islands are also used by seals and sea lions as "haul-out" areas where the animals rest and sun themselves.

These areas are critical for the nesting and raising of young. Generally, they are fairly inaccessible and humans have had little adverse impact on this habitat. The primary use that people have for these islands is for observing and photographing wildlife from the shore.

Rocky intertidal areas are found between extreme high and extreme low tide. This is an area extremely rich in the number and variety of animals to be found there. Typically, mussels, starfish, sea urchins, chitons, limpets, abalone, barnacles, and crabs. As the tide comes in, fish come in to feed. Birds and sea mammals such as seals and sea lions also use this area. Many of these intertidal areas are easily accessible and can be damaged by overuse or by pollution. Efforts must be taken to educate the public concerning the vulnerability of these sites. These areas are used by people for collecting shells and food fish as well as for educational and scientific purposes. This rich and diverse habitat is quite small and must be protected.

Sand beaches make up the majority of Oregon's coast line. Except for razor clams and sea gulls, very few animals use this habitat. Snowy plovers' if present, use the upper, drier, open sand portion of the beach where drift logs

have piled up, providing some protection. Generally, sand beaches are where most coastal recreation activities take place. Swimming, sunbathing, picnicking and clam digging have little or no effect on this habitat.

### Estuaries

Estuaries are among the most critical of the world's habitats. This area where fresh and salt-water related fish and animals meet is one of the richest and most diverse habitats to be found anywhere. Unique conditions found only in estuaries provide food and shelter for many species of animals including salmon, sole, shrimp, herring, clams, oysters and crabs. Unfortunately, estuaries are very vulnerable to abuse and need a great deal of protection. Many smaller habitats are found within an estuary.

Submerged lands are those areas located below the mean low tide which are almost never exposed. This area is the main channel to the sea, providing passage for fish and people alike.

Coastal tidelands are those areas which are periodically exposed between mean high and mean low tides. Clams, oysters and crustaceans are among the main users of this area. Some fish feed in the area and a number of waterfowl can be found here. The tidelands are the source of nutrients which support the rest of the food chain in the estuary. Since these lands are rare and valuable, it is especially important that they be protected.

Another rare and valuable habitat is the eel-grass beds which offer protection to the young of many species of fish.

### Freshwater Habitat

Included within the freshwater habitat classification are all ponds, lakes, rivers, streams and swamps above mean high tide. With the exception of the marine animals, all other species of wildlife rely on freshwater as an integral part of their environment.

Within coastal lakes, ponds and swamps the following fish are found: bass, bluegill, sunfish, croppie, perch and bullhead. Also, minnows, carp and sculpin are frequently found here. Many mammals and amphibians also use the lakes and ponds.

Rivers and streams constitute the remaining important fresh water habitat. This is a key habitat for most fish and wildlife of the coastal uplands. Anadromous fish and trout are dependent on the streams for spawning areas and many species of water birds and mammals depend on these sources of fresh water.

It is important to keep streams and rivers as unaltered and natural as possible. Any development proposed for upstream areas should be carefully analyzed for potential impact on streams and rivers.

### Uplands

This habitat area includes all the inland area above the estuary level. Within it are found inland marshes, wet meadows, riparian vegetation, grasslands, a variety of coniferous and hardwood forests, agricultural and urban lands.

Grasslands and other open areas provide important forage lands for elk, deer, grouse and other small birds and animals.

The coastal shorepine/spruce habitat is a narrow band extending from the ocean shore to the foothills of the Coast Range. This area is used extensively by nongame birds and mammals. Mature stands of shorepine/spruce are of lower value to wildlife, but sites which have been disturbed and consequently taken over by shrubs and alder provide a lot of food and cover for wildlife.

Douglas-fir/trailing blackberry habitat is a habitat used by many big game animals as well as nongame birds and mammals. Mature Douglas-fir stands provide habitat for pileated woodpeckers, goshawks and the endangered spotted owls.

Since the coast of Oregon is within the North American Pacific Flyway, many migratory birds use the habitats within this area. Ducks, including pintail, teal, merganser, and widgeon, as well as swans, Canada and white-fronted geese are often seen in the lakes and marshes.

FISH AND WILDLIFE

Selected Fish and Wildlife Species of the Oregon Coastal Zone

Common Species Name	Environments			Common Species Name	Environments		
	Offshore	Estuarine	Freshwater		Offshore	Estuarine	Freshwater
<b>FISH:</b>							
Pink Salmon	X			Silver surfperch			X
Pilchard	X			Shiner perch			X
Pacific hake	X			Pile perch			X
Albacore	X			Surf smelt			X
Pacific halibut	X			Steelhead trout			X X
Pacific Ocean perch	X			Cutthroat trout			X X
Dover sole	X			Rainbow trout			X
Rex sole	X			Warm-water gamefish			X
Arrowtooth sole	X			<b>SHELLFISH:</b>			
Petrals sole	X			Red abalone			X
Flathead Sole	X			Rock scallop			X
Slender sole	X			Sea mussel			X
Butter sole	X			Razor clam			X
Octopus	X			Barnacles			X
Shrimp	X			Littlemeck clam			X X
Dungeness crab	X			Gaper clam			X
Pacific herring	X	X		Cockle clam			X
Northern anchovy	X	X		Butter clam			X
Rockfish	X	X		Softshell clam			X
Lingcod	X	X		Native oyster			X
English sole	X	X		<b>SEA MAMMALS:</b>			
Sand sole	X	X		Gray whale			X
Starry flounder	X	X		Sei shale			X
Shad	X	X		Steller sea lion			X
White seaperch	X	X		California sea lion			X
Walleye surfperch	X	X		Fur seal			X
Striped seaperch	X	X		Harbor seal			X X
Redtail surfperch	X	X		Sea otter			X X
Greenling	X	X					
Green sturgeon	X	X					
Wolf eel	X	X					
Chinook salmon	X	X	X				
Coho salmon	X	X	X				
Chum salmon		X					
White sturgeon		X					

Selected Fish and Wildlife Species of the Oregon Coastal Zone

Common Species Name	Environments				Common Species Name	Environments		
	Offshore	Estuarine	Freshwater	Upland		Estuarine	Freshwater	Upland
<b>FURBEARERS:</b>				<b>WATERFOWL:</b>				
Beaver		X	X	X	Black brant		X	X
Muskrat		X	X	X	Canada goose		X	X
River otter		X	X	X	Mallard		X	X
Mink		X	X	X	Pintail		X	X
<b>GAME ANIMALS:</b>								
Black-tailed deer		X	X	X	American widgeon		X	X
White-tailed deer		X	X	X	Shoveler		X	X
Black bear		X	X	X	Canvasback		X	X
Roosevelt elk			X	X	Merganser		X	X
Mountain lion			X	X	Coot		X	X
Squirrels			X	X	Common snipe		X	X
<b>SHORE BIRDS:</b>				<b>GAME BIRDS:</b>				
Western sandpiper	X	X			Mourning dove		X	X
Sanderling	X	X			Band-tailed pigeon		X	X
Gulls	X	X			Quail			X
Murres	X	X			Pheasant			X
Grebes	X	X			Grouse			X
Scoters	X	X						

Source: Thompson and Snow 1974

## WILDLIFE SOURCES

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STATE OF OREGON  
Parks and Recreation Division

INTEROFFICE MEMO

373-1654

TO: Files

DATE: March 21, 1984

FROM: Nancy Gronowski  
Landscape Architect *Nancy*

SUBJECT: Tillamook County Master Plan Wildlife Information

On Tuesday, March 20, 1984, I met with Tony Faast of the Oregon Fish and Wildlife Department and John Davies, former region biologist for the Tillamook area to discuss the wildlife considerations and concerns for the parks being studied in the Tillamook County Master Plan.

We discussed a number of general concerns for all state parks on the coast as well as some specific ideas for the parks under consideration.

In recent years, ODFW has come to look at state parks in a new light. As more and more areas on the coast are being logged, altered and developed, state parks are becoming oases for wildlife. ODFW has come to depend more and more on parks to provide habitat for all kinds of wildlife. Park lands are critical and unique and it is important to maintain these areas for wildlife habitat. ODFW also has concerns about our timber management policies, especially in old growth forests on the coast.

OSWALD WEST STATE PARK

This park is one of the most unique parks in the north Oregon coast because of its primitive and relatively inaccessible land. There are, within the park, a number of diverse habitats, dead and downed timber and old growth forest areas. ODFW would like to see the park remain much as it is now, but with the utilization of some management techniques to improve conditions for certain species.

Among these would be to maintain existing openings and meadows for elk habitat. Areas such as Elk Flats, where elk commonly browse, are becoming brushy and overgrown. Keeping these areas open and useable will enhance habitat for elk and provide opportunities for park visitors to view these animals.

Other animals for which more habitat can be provided are eagles and ospreys. Creating snags and leaving dead trees can provide nest sites for these birds. Openings and holes can also be provided in trees for owls and burrowing species of birds. Provisions of these kinds of habitats in the boundaries of our parks will act to increase the habitat available to these species.

#### CAPE MEARES STATE PARK

The concerns expressed for Os West State Park apply to Cape Meares. Additionally, this area provides a great deal of habitat for shore birds. Most of the habitat is well protected and needs no further management on our part.

#### NEHALEM BAY STATE PARK

This area is heavily used by shore birds and waterfowl. Also, the spit is used by Snowy Plovers, especially at the south end of the spit where the beach is broader and there is more loose sand. ODFW is concerned that we do not attempt to do more beach stabilization in that area than we have already done.

#### STATE WAYSIDES

Due to the heavy recreation use and small size of the waysides, ODFW has no particular concerns about these.

#### GENERAL COMMENTS

ODFW is very pleased to be working with State Parks in this phase of our planning work and hopes to continue this cooperation arrangement.

They may be able to provide us with other assistance as we begin to develop our parks. They have a program called Watchable Wildlife which promotes recreational viewing of wildlife. Through this program, they can provide some funding for signing and interpretation and devices such as nest boxes.

They can also help us obtain assistance in our wildlife inventory work by having OSU students do field work for us.

ODFW's habitat biologist has developed a list of recommended seeding and planting material which would be useful in habitat development. They will gladly supply us with that information.

Files-Tillamook Co. Master Plan Wildlife Information  
March 21, 1984  
Page 3

COMPLETION OF THIS WORK

Tony will have Doug Taylor, the present region biologist for the Tillamook area provide us with additional detailed data on the parks being studied. He will also have the region non-game biologist review those areas and make any additional comments about his concerns.

NG:aln  
1610C

cc: Joe Paiva  
Larry Jacobson  
Darald Walker

TABLE 8: CHECKLIST OF THE BIRDS OF THE TILLAMOOK BAY VICINITY

NOTE: The numerical figures following specific species indicate the following

- (1) Species considered to be declining in all or parts of its range have been placed on a "Bluelist of North American Species" by the National Audobon Society.
- (2) Species considered game birds by the Washington and/or Oregon State Game Departments.
- (3) Species included in one of the categories of concern by the International Union for Conservation of Nature and Natural Resources and United States Department of the Interior, Bureau of Sport Fisheries and Wildlife.
- (4) Species included in one of the categories of concern by the Oregon State University Agricultural Experiment Station.

ABUNDANCE STATUS

C - Common

U - Uncommon

R - Rare

SEASONAL STATUS

R - Resident; found all year

WV - Winter Visitor

SV - Summer Visitor

SR - Summer Resident

M - Migrant; seen only in transit

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Common Loon	R	Ocean, estuary, lakes	C
Arctic Loon	M	Estuary, ocean	U
Red-throated Loon (1)	M	Estuary, ocean	U
Red-necked Grebe*	WV	Lakes, rivers, estuary	U
Horned Grebe* (4)	WV	Lakes, rivers, estuary	C
Eared Grebe *	WV	Lakes, marshes, rivers	U
Western Grebe* (1)	WV	Lakes, estuary	C
Pied-billed Grebe*	R	Rivers, marshes, estuary	U
Black-footed Albatross	R	Ocean	C
Laysan Albatross	WV	Ocean	R

\*Species known to breed in the study area.

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Fulmar	WV	Ocean	C
Pink-footed Shearwater	M	Ocean	U
Pale-footed Shearwater	M	Ocean	U
New Zealand Shearwater	M	Ocean	R
Sooty Shearwater	M	Ocean	C
Slender-billed Shearwater	M	Ocean	U
Fork-tailed Petrel (1)(4)	R	Ocean, offshore rocks	C
Leach's Petrel	R	Ocean, offshore rocks	C
Brown Pelican (1)(3)(4)	WV	Ocean, estuary	C
White Pelican (1)(4)	WV	Lakes, marshes, salt bays, beaches	C
Double-crested Cormorant*(1)	R	Ocean, lakes, estuary	C
Brandt's Cormorant*	R	Ocean, offshore rocks, estuary	C
Pelagic Cormorant*	R	Ocean, offshore rocks, estuary	C
Great Blue Heron*(1)	R	Estuary, lakes, streams, marshes	C
Green Heron*	SR	Marshes, lakes, rivers	U
Common Egret(4)	R	Marshes, lakes	R
Snowy Egret	SR	Marshes, lakes, estuary	R
Black-crowned Night Heron* (1)	R	Marshes, estuary	U
American Bittern*	SR	Marshes	U
Whistling Swan	WV	Lakes, rivers, marshes	R
Canada Goose* (2)	WV	Lakes, rivers, fields, marshes	R
Black Brant (2)	WV	Estuary, open ocean	C
White-fronted Goose (2)	WV	Lakes, estuary	R
Snow Goose (2)	WV	Tundra (summer), marshes, grain fields, prairies, ponds, bays	U
Mallard* (2)	R	Lakes, rivers, estuary, fields	C
Gadwall* (2)	R	Marshes, lakes	U
Pintail* (2)	R	Lakes, ponds	C
Green-winged Teal* (2)	R	Marshes, estuary	C
Blue-winged Teal* (2)	R	Marshes, estuary	U
Cinnamon Teal* (2)	SR	Marshes, estuary	U
American Widgeon* (2)	WV	Marshes, lakes, fields	C
Shoveler* (2)	WV	Marshes, lakes, estuary	U
European Widgeon (2)	WV	Marshes, lakes, fields	U
Wood Duck* (2)	R	Lakes, streams	C
Redhead* (2)	WV	Estuary, ponds, lakes	R
Ring-necked Duck* (2)(4)	WV	Lakes, ponds	R

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Canvasback*	WV	Marshes, estuary, lakes	C
Greater Scaup (2)	WV	Lakes, estuary	C
Lesser Scaup (2)(4)	WV	Lakes, estuary	C
Tufted Ducks (2)	WV	Lakes, ponds	U
Common Goldeneye (2)	WV	Lakes, ponds, rivers	C
Barrows Goldeneye* (2)(4)	WV	Lakes	R
Bufflehead (2)(4)	WV	Lakes, estuary	C
Old Squaw (2)	WV	Ocean, lakes, estuary	
Harlequin Duck* (2)(4)	WV	Ocean, estuary	
King Eider	W	Coasts, ocean	U
White-winged Scoter	R	Ocean, lakes, estuary	C
Surf Scoter	R	Ocean, lakes, estuary	C
Common Scoter	R	Ocean, lakes, estuary	U
Ruddy Duck* (2)	R	Lakes, marshes, estuary	C
Hooded Merganser* (2)	R	Lakes, streams	U
Common Merganser* (2)	R	Streams, lakes, estuary	U
Red-breasted Merganser (2)	WV	Rivers, estuary	U
Turkey Vulture*	SR	Woodlands	U
Goshawk*	R	Forests, mountain woodlands	C
Sharp-shinned Hawk* (1)	R	Forests, woodlands	U
Cooper's Hawk* (1)	R	Woodlands	U
Red-tailed Hawk*	R	Woodlands, farm lands	C
Bald Eagle* (4)	R	Lakes, rivers, marshes	U
Marsh Hawk* (1)	R	Fields, marshes	R
Osprey* (1)(3)(4)	SR	Lakes, rivers	U
Peregrine Falcon*	R	Open woodlands-grasslands	R
Pigeon Hawk*(1)(3)(4)	R	Woodlands-grasslands	R
Sparrow Hawk* (1)	R	Open woodlands-grasslands	R
Blue Grouse* (2)	R	Forest	C
Ruffed Grouse* (2)	R	Mixed or deciduous woods	U
California Quail* (2)	R	Broken chaparral, woodland edges, coastal shrub, parks, estates, farms	C
Mountain Quail* (2)	R	Woodlots, forests	U
Ring-necked Pheasant* (2)	R	Agricultural areas	U
Sandhill Crane	R	Prairies, grain fields, marshes, summer mountain meadows, tundra	U
Virginia Rail*	R	Marshes	U
Sora*	SR	Marshes	U
American Coot* (2)	R	Lakes, estuary, marshes, fields	C
Black Oystercatcher*	R	Rocky coasts	U
Semipalmated Plover	M	Shores, tideflats	U
Snowy Plover* (1)(3)(4)	R	Sandy beaches, dunes	U
Killdeer*	R	Field, tideflats	C
American Golden Plover	M	Mudflats, shores	R
Black-bellied Plover	M	Mudflats, open marshes	
Surfbird	M	Rocky coasts, jetties	C
Ruddy Turnstone	M	Rocky shores	U
Black Turnstone	M	Rocky coasts	C
Common Snipe* (2)	R	Marshes, wet meadows	U
Long-billed Curlew (3)	M	Marshes	U

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Whimbrel	M	Mudflats, open marshes	U
Spotted Sandpiper*	R	Streams, marshes	U
Solitary Sandpiper	M	Streams, marshes	R
Wandering Tattler	M	Rocky coasts	U
Willet	M	Marshes, beaches	U
Greater Yellowlegs	M	Marshes, mudflats	U
Lesser Yellowlegs	M	Marshes, mudflats	R
Knot	M	Marshes, mudflats	R
Pectoral Sandpiper	M	Marshes, mudflats	R
Sharp-tailed Sandpiper	W	Grassy borders of salt marsh	U
Baird's Sandpiper	M	Mudflats	R
Least Sandpiper	WV	Marshes, tidal areas	U
Rock Sandpiper	W	Rocky shores	U
Dunlin	WV	Beaches, tidal flats	C
Short-billed Dowitcher	M	Mudflats	C
Long-billed Dowitcher	M	Mudflats	C
Stilt Sandpiper	WV	Shallow pools, ponds	U
Semipalmated Sandpiper	M	Beaches, mudflats	R
Western Sandpiper	M	Mudflats, beaches	C
Buff-breasted Sandpiper	W	Short grass, prairie fields	U
Marbled Godwit	M	Beaches, mudflats	U
Sanderling	M	Sandy beaches	C
American Avocet*	WV	Marshes, mudflats, alkaline lakes, ponds, coastal bays	C
Red Phalarope	M	Ocean	C
Wilson's Phalarope*	M	Marshes	R
Northern Phalarope	M	Ocean	C
Pomarine Jaeger	M	Ocean	U
Parasitic Jaeger	M	Ocean	U
Long-tailed Jaeger	M	Ocean	U
Skua	M	Open sea	U
Glaucous-winged Gull*	R	Estuary, garbage dumps, fields	U
Western Gull*	R	Estuary, ocean, lakes, islands	C
Herring Gull	WV	Estuary, ocean, lakes	C
California Gull*	R	Estuary, lakes, rivers	U
Ring-billed Gull*	R	Estuary, ocean, lakes	C
Franklin's Gull (4)	W	Prairies, marshes, lakes in winter coastal ocean	C
Mew Gull	WV	Estuary, ocean, rivers	U
Bonaparte's Gull	M	Ocean, estuary, lakes	C
Heerman's Gull	M	Ocean, estuary	C
Black-legged Kittiwake	MW	Ocean, estuary	U
Sabine's Gull	M	Ocean	U
Forester's Tern*		Marshes, (fresh & salt) lakes, bays, beaches, ocean	U
Common Tern	WV	Ocean	C
Arctic Tern	M	Ocean, lakes	U
Caspian Tern	M	Lakes, estuary, ocean	U

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Black Tern*	M	Lakes	R
Common Murre*	R	Ocean, estuary, offshore rocks	C
Pigeon Guillemot*	R	Ocean, estuary, offshore rocks	C
Marbled Murrelet*	R	Ocean, estuary	U
Ancient Murrelet* (1)	WV	Ocean, estuary	U
Cassin's Auklet*	R	Ocean, offshore rocks	C
Rhinoceros Auklet* (4)	R	Ocean	C
Tufted Puffin*	WV	Ocean, offshore rocks	U
Band-tailed Pigeon* (2)	R	Conifers, mixed woods	C
Rock Dove		Cities, farms, cliffs	U
Mourning Dove* (2)	R	Fields	U
Screech Owl*	R	Grassland, open woodlands	U
Great Horned Owl*	R	Fields, grassland, woodlands	U
Snowy Owl	WV	Dunes, fields	U
Pygmy Owl*	R	Brush, woodlands	U
Burrowing Owl* (1)(3)		Open grassland, prairies, dikes, desert, farms	C
Spotted Owl* (3)(4)	R	Woodlands, grasslands	R
Saw-whet Owl*	R	Mixed woods	U
Vaux's Swift*	SR	Mixed woods	C
Black Swift	M	Open sky, favors mountain country coastal cliffs	U
Rufous Hummingbird*	SR	Mixed woods, urban areas	C
Belted Kingfisher*	R	Streams, estuary	C
Common Flicker	R	Mixed woods	C
Pileated Woodpecker*	R	Conifers	U
Lewis' Woodpecker	R	All woods	U
Yellow-bellied Sapsucker	R	Mixed woods	U
Hairy Woodpecker*	R	Mixed woods	U
Downy Woodpecker	R	Deciduous woods	U
Alder Flycatcher*	SR	Wooded streams	U
Hammond's Flycatcher		High coniferous forest	U
Western Flycatcher*	SR	Deciduous woods, coniferous forests	U
Western Wood Pewee*	SR	Woodlands	C
Olive-sided Flycatcher*	SR	Open woods	C
Horned Lark	R	Open fields	R
Violet-green Swallow*	SR	Open woodland, adjacent to water, urban areas	C
Tree Swallow*	SR	Rivers, marshes	C
Bank Swallow*	SR	Around water	R
Rough-winged Swallow*	SR	Around water	R
Barn Swallow*	SR	Around water, open areas	C
Cliff Swallow*	S	Buildings	C
Purple Martin* (4)	SR	Open forests, farms, around water	U
Gray Jay*	R	Mountain conifers	U
Steller's Jay*	R	Conifers	C
Scrub Jay*	R	Brush, urban	U
Common Raven*	R	Mountains, rock scarps	U
Common Crow*	R	Open woods, farms	C

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Black-capped Chickadee*	R	Deciduous woods	C
Chestnut-backed Chickadee*	R	Conifers	C
Common Bushtit*	R	Deciduous woods	C
White-breasted Nuthatch*	R	Deciduous, mixed woods	C
Red-breasted Nuthatch*	R	Conifers, mixed woods	C
Brown Creeper*	R	Conifers, mixed woods	U
Wrentit*	R	Mixed woods, brush	C
Dipper*	R	Streams	U
House Wren*	SR	Deciduous woods, brush	U
Winter Wren*	R	Dense conifers, woods	C
Bewick's Wren	R	Deciduous woods	C
Long-billed Marsh Wren*	R	Fresh-water marshes	U
Robin*	R	Fields, residential	C
Varied Thrush*	R	Conifers, mixed woods	C
Hermit Thrush*	R	Deciduous woods, conifers	C
Swainson's Thrush*	SR	Conifers, mixed woods	C
Mountain Bluebird		Open terrain with scattered trees	U
Townsend's Solitaire*	WV	Conifers	C
Golden-crowned Kinglet*	R	Conifers	C
Ruby-crowned Kinglet	WV	Mixed woods	U
Water Pipit (4)	M	Fields, mudflats	C
Bohemian Waxwing (4)		Boreal forests, musket	
Cedar Waxwing*	R	Open woods, urban	C
Northern Shrike	WV	Fields	U
Loggerhead Shrike	SR	Fields	U
Starling*	R	Open fields, farms	C
Hutton's Vireo*	R	Conifers, mixed woods	U
Solitary Vireo*	SR	Deciduous woods, mixed	U
Red-eyed Vireo*	SR	Deciduous woods	R
Warbling Vireo*	SR	Deciduous woods	C
Orange-crowned Warbler*	SR	Brush, low shrubs	C
Nashville Warbler*	SR	Brushy slopes	U
Yellow Warbler*	SR	Stream bottoms	U
Myrtle Warbler	WV	Streams	C
Audobon's Warbler*	R	Mixed woods, conifers	C
Black-throated Gray Warbler	SR	Mixed woods	U
Townsend's Warbler*	WV	Conifers	U
Hermit Warbler*	SR	Conifers	C
MacGillivray's Warbler*	SR	Mixed woods, brush	
Yellowthroat*	SR	Fresh-water marshes	C
Wilson's Warbler*	SR	Deciduous and mixed woods	C
House Sparrow*	R	Residential, farms	C
Western Meadowlark*	R	Fields	C
Yellow-headed Blackbird*	SR	Marshes	R
Red-winged Blackbird*	R	Marshes, fields	C
Bullock's Oriole*		River, groves, open oak	C
Brewer's Blackbird	R	Fields, farms	C
Brown-headed Cowbird*	SR	Fields, farms	C
Western Tanager*	SR	Conifers, mixed woods	C
Black-headed Grosbeak*	SR	Deciduous woods	C
Lazuli Bunting*	SR	Brush, stream bottoms	U

NAME	SEASONAL STATUS	PREFERRED HABITAT	ABUNDANCE
Evening Grosbeak*	R	Conifers, deciduous woods	C
Purpose Finch*	R	Conifers, deciduous woods	U
House Finch*	R	Residential, farms	U
Pine Siskin*	R	Conifers, mixed woods	C
American Goldfinch*	R	Fields, farms	C
Lesser Goldfinch*	R	Fields, farms	C
Red Crossbill*	R	Conifers	U
White-winged Crossbill*	R	Undergrowth, weedy thickets	C
Rufous-sided Towhee*	R	Brush	C
Dark-eyed Junco	M	Brush, mixed woods	R
Chipping Sparrow*	SR	Open areas with trees	C
White-crowned Sparrow*	R	Willows, open brush	C
Golden-crowned Sparrow	WV	Weed patches, brush	C
White-throated Sparrow	M	Open brush	R
Fox Sparrow*	R	Brush	C
Lincoln's Sparrow*	M	Wet meadows	R
Song Sparrow*	R	Brush	C
Pine Grosbeak	R	Conifer forests, mixed woods, fruiting trees	C
Lapland Logspur		Tundra fields, prairies	U
Snow Bunting	W	Tundra, prairies, fields, shores	U

SOURCE: Final EIS, Operation and Maintenance of Jetties and Dredging Projects in Tillamook Bay Estuary, U. S. Army Corps of Engineers, December, 1975

TABLE 9: MAMMALS, AMPHIBIANS, REPTILES OF TILLAMOOK COUNTY

SPECIES	ESTIMATED ABUNDANCE	TYPICAL OR PREFERRED HABITAT
<u>MAMMALS</u>		
Townsend vole	Common	Meadows
Mountain pocket gopher	Common	Meadows
Camas pocket gopher	Common	Meadows
Roosevelt elk	24,380	Mixed conifers
Beaver	Common	Riparian
River otter	Common	Riparian
Shrewmole	Common	
Long-legged bat	Common	
Western big-eared bay	Common	
Raccoon	Common	Riparian
Short-tailed weasel	Common	
Long-tailed weasel	Common	
Mink		
California sea lion		
Spotted Skunk		
Red fox		
Gray fox		
Northern sea lion		
Bushy-tailed woodrat		
White-footed vole	Rare	
California red-backed vole		
Long-tailed vole		
Muskrat	Common	
Pacific jumping mouse		
Harbor seal	Common	
Elephant seal	Rare	
Townsend mole		
Pacific shrew		Meadows
Marsh shrew		Deciduous mixed
Dusky shrew		Deciduous mixed
Big brown bat		Riparian
Mountain lion	40	Snag
Chickaree	Uncommon	Snag
Northern flying squirrel	Uncommon	Mature conifer
Western gray squirrel		Mixed conifer
Red-tree mouse		Mature conifer
Fringed bat	Rare	Snag
Silver-haired bat		Snag
Black bear	1,550	Douglas fir
Marten	Rare	Mature conifer
Striped skunk	Common	Meadows
Little brown bat		Snag
Yuma bat		Snag
California bat		Snag
Long-eared bat		Snag
Hoary bat		Deciduous, mixed

SPECIES	ESTIMATED ABUNDANCE	TYPICAL OR PREFERRED HABITAT
Fringed bat	Rare	
Pacific mole	Common	Douglas fir
Trowbridge shrew	Common	Douglas fir
Vagrant shrew	Common	Douglas fir
Coyote	Common	Douglas fir
Bobcat	Common	Douglas fir
Snowshoe hare	Common	Douglas fir
Brush rabbit	Common	Douglas fir
Mountain beaver	Common	Douglas fir
California ground squirrel	Common	Douglas fir
Townsend chipmunk	Common	Douglas fir
Porcupine	Common	Douglas fir
Oregon mole	Common	Douglas fir
Black-tailed deer	35,737	Douglas fir
<u>AMPHIBIANS</u>		
Northwestern salamander		
Olympic salamander		
Rough-skinned newt		
Dunn's salamander		
Mary's Peak salamander	Rare	
Pacific treefrog		
Red-legged frog		
Pacific giant salamander		Mature conifer
Western toad		Meadows
Tailed-frog	Uncommon	Riparian
Western red-backed salamander	Common	
Oregon salamander	Common	
Clouded salamander	Common	
Bullfrog	Common	Riparian (lakes)
<u>REPTILES</u>		
Rubber boa		Meadows
Sharp-tailed snake	Rare	Meadows
Racer		Meadows
Gopher snake		Meadows
Ring-necked snake		Meadows
Western pond turtle		
Common gartersnake		
Western fence lizard		
Western skink		
Northern alligator lizard		
Northwestern gartersnake		



Department of Fish and Wildlife  
COLUMBIA REGION

July 8, 1982

Nancy Gronowski  
Dept. of Transportation  
525 Trade St. S.E.  
Salem Or. 97310

Dear Ms. Gronowski:

The following areas are sensitive wildlife habitats  
in the designated area.

- Nestucca Spit - Snowy Plovers nest on open sandy  
areas above MHW line.
- ~~Cape Mears S.P.~~ - Osprey nest site 50 yards north  
of parking lot facing sea.
- Cape Lookout S.P. - Eagle nest on timbered cape and  
Snowy Plovers on spit.
- ~~Nehalem Spit~~ - Snowy Plovers nesting habitat.
- ~~Oswest S.P.~~ - Elk forage area on south face of  
Neahkahnie Mt.. Brush and trees  
are encroaching on grassy area.  
It needs a good fire.

*Doug Taylor*

Doug Taylor  
ODFW Biologist

cw



CLASSIFICATION  
OF  
OREGON WILDLIFE

"Wildlife" means game fish, wild birds, amphibians, reptiles, and wild mammals except whales and porpoises (ORS 496.004).

Other Oregon laws and state regulations provide the following classifications of "wildlife".

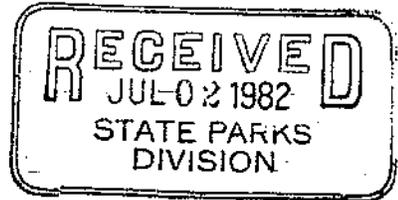
GAME ANIMALS

<u>Game Fish</u>	<u>Game Mammals</u>	<u>Game Birds</u>	<u>Furbearers</u>
Bass	Antelope	Band-tailed Pigeon	Beaver
Catfish	Bighorn Sheep	Brant	Bobcat
Crappie	Black Bear	Coots	Fisher
Grayling	Cougar	Cranes	Marten
Mullet	Deer	Ducks	Mink
Perch	Elk	Geese	Muskrat
Salmon	Moose	Grouse	Otter
Shad	Mountain Goat	Merganser	Raccoon
Sturgeon	Silver Gray Squirrel	Mourning Dove	
Sunfish		Partridge	
Trout		Pheasants	
Walleye		Ptarmigan	
Whitefish		Quail	
		Rails	
<u>Amphibians</u>		Snipe	
Bullfrogs		Swan	
		Wild Turkey	
		Woodcock	

PROTECTED WILDLIFE

<u>Birds</u>	<u>Mammals</u>	<u>Amphibians</u>	<u>Reptiles</u>
All birds except Game Birds and unprotected birds.	*Chickaree or Pine Squirrel	Black Salamander	Collared Lizard
*Blackbird	*Chipmunk	Larch Mountain Salamander	Leopard Lizard
*Common Crow	Columbian White-tailed Deer	Oregon Slender Salamander	Sharp-tailed Snake
*Cowbird	Cony or Pika	Siskiyou Mountain Salamander	Short-Horned Lizard
*Grackles	Fisher	Tailed Frog	
*Magpie	*Flying Squirrel	Western Spotted Frog	
<u>Fish</u>	*Golden-mantled Ground Squirrel		
Borax Lake Chub	Kit Fox		
Fosket Spring Dace	Ringtail Cat		
Oregon Tui Chub of Hutton Spring	Seal		
Warner Sucker	Sea Lion		
	Sea Otter		
	Wolverine		

\*Protected except when damaging agriculture.



Endangered Wildlife

Aleutian Canada Goose  
Anatum Peregrine Falcon  
California Brown Pelican  
Columbian White-Tailed Deer

Threatened Wildlife

Bald Eagle  
Kit Fox  
Northern Spotted Owl  
Sea Otter  
Western Snowy Plover  
Western Spotted Frog (western Oregon)  
Wolverine

UNPROTECTED WILDLIFE

Taking of the following species of wildlife is allowed at any time with the permission of landowners and in compliance with applicable laws and regulations.

Unprotected Birds

Starling  
House Sparrow

Other Wildlife

Mammals, amphibians, and reptiles that are not herein classified as "game animals" or "protected wildlife" may be taken at any time, provided that it is unlawful to hunt for any wildlife without possessing a hunting license.

"Hunt" means to take or attempt to take any wildlife by means involving the use of a weapon or with the assistance of any mammal or bird.

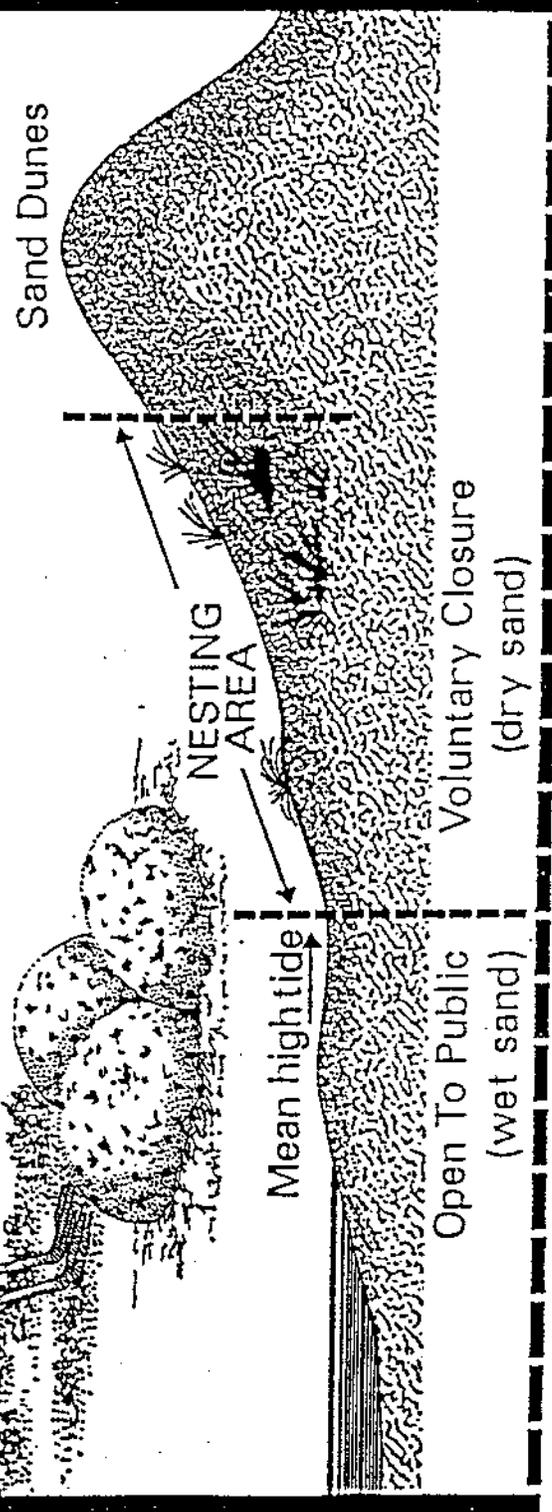
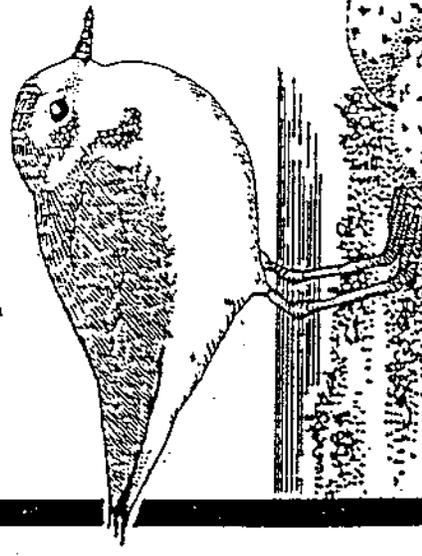
OREGON DEPARTMENT OF FISH AND WILDLIFE  
506 S.W. Mill Street  
P.O. Box 3503  
Portland, Oregon 97208

DRAFT

# SNOWY PLOVER NESTING AREA

## VOLUNTARY CLOSURE TO ALL ENTRY

MARCH 15 through  
SEPTEMBER 15



PROPOSED SIGN FOR BEACH CLOSURE, IF SNOWY PLOVERS ARE FOUND TO BE NESTING ON BEACH.



# Hikers and Equestrians



MARITIME EXPLORATION

The earliest known explorations of the Pacific coast were done by Spanish explorers in the early 1500's. It was difficult for these explorers to make their way north from their conquests in Mexico because of the adverse winds and currents, but the myths of wealth and an inland passage to North America drove them on. It is not known if any explorers got as far north as the Oregon coast prior to the inauguration of the annual sailing of the Manila Galleon in 1565. Each year from 1565 to 1815, a ship left the Philippines and sailed north following favorable currents until reaching the North Pacific. The ship then turned south, following the current along the coast of Oregon and California to its destination in Acapulco, Mexico.

It is known that at least 20 times in those 250 years, the galleon did not arrive in Acapulco. Although it is not known for certain what happened to these ships, there are reports linking at least one of the ships with past events on the Oregon coast. (See History, Nehalem Bay State Park).

Although a good deal of maritime activity went on in the 1600's and 1700's, much of it occurred outside of Oregon's coastal areas. Various countries, including the Spanish, French, Russian and British were anxious to establish trading outposts and acquire territory in the Pacific Northwest. Fur traders were among the first to come to the area and make contact with the native Americans.

John Meares, an English sailing captain, made one of the first detailed explorations of the Oregon coast in July of 1788. Meares sailed south along the coast of Washington and explored the northern portion of Tillamook County. In his journal, Meares described the country he saw from the ship and also noted that he saw no people on his voyage. He passed by, but was unable to enter, Tillamook Bay because of a sandy shoal which blocked the entrance. Meares named the bay Quicksand Bay and the headland to the south he called Cape Lookout. In the nineteenth century the name of that headland was changed to Cape Meares in honor of his explorations.

In that same summer, an American fur trader, Captain Robert Gray, also sailed along this part of the Oregon coast. This expedition had many contacts with native Americans, including a conflict at Tillamook Bay which caused Gray to fire his cannons at the shore and leave abruptly.

Because there were few sheltered anchorages and small quantities of furs, there was little impetus for further exploration of the Oregon coast from the seaward side.

## TRADERS, PIONEERS AND SETTLERS

In 1805-06, the Lewis and Clark Expedition began a major exploration of the Pacific Northwest by land. During the winter of 1805-06 which was spent near the mouth of the Columbia River, there were many contacts with Indians including the Tillamooks. After they returned to the east, their journals were published and reports of their travels were circulated. These reports inspired others to come west to trap, trade and settle.

In 1824, Dr. John McLoughlin, a former trapper and partner in one of the larger trading companies, was appointed chief factor for the Hudson's Bay Company at Fort Vancouver. This position gave him great control over affairs in the provisional government in Oregon. In 1825, McLoughlin began to send out teams of trappers to set up field stations and learn the country.

Some of McLoughlin's parties traveled along the coast, passing through Tillamook country. Progress was slow since traveling through that country was difficult and the directions given by the Indians were often incorrect. However, the knowledge they acquired was valuable in opening up the territory to further settlement.

In the late 1840's, pioneers and settlers began to come to the Oregon coast. In 1851 the first settler came to the Tillamook country. He was soon followed by many others drawn by the rugged beauty of the coast and the promise it held.

Unfortunately, the coming of settlers meant the Native Americans faced numerous conflicts, changes in their way of life, loss of their lands, and relocation to unfamiliar territories.

In the area of Tillamook County, relations between the settlers and the Indians were generally good. There were no armed conflicts or wars and people remained on fairly good terms with one another. Nevertheless, in a short period of time, the era of the native American ended, and the ways of modern life were quickly established.

## TRANSPORTATION AND TOURISM

Until the 1920's the beaches of the Oregon Coast served as the major north-south transportation route. There were trails cut across the prominent headlands, but these were narrow and hazardous. Early in the 1900's, a railroad connection was made from the Willamette Valley to Tillamook via the Nehalem watershed allowing goods and products to be transported back and forth.

Before the modern roads were constructed along the coast in the 1920's and 1930's, most north-south travel was done on the hard-packed sand of the beaches. This worked well until the traveler came to the steep headlands present at frequent intervals along the coast.

All of these headlands presented difficulties, but Neahkahnie Mountain was especially treacherous. It is an extremely steep and rocky headland, with most of its surface covered with loose stone from old rock slides. Footing was uncertain and the thought of the almost vertical drop of 500 feet to the ocean below was especially unsettling.

The path across Neahkahnie used by the Indians was wide enough for people to use, but was not suitable for animals. To cross over the mountain required strong nerves and two days of travel time.

Over the years, this trail was widened and improved until in the mid-1930's, the modern coast highway U.S. 101, was constructed. The completion of this highway opened the coast to the millions of tourists who have visited it since.

In modern times, another trail has been built on Neahkahnie, this one a foot trail built by CCC forces. It ascends to the summit of Neahkahnie at an elevation of 1710 feet above sea level. From the summit, visitors have excellent views to the north and south of the Oregon Coast.

Another impediment to the early traveler came south of Neahkahnie, at the Nehalem River. Here it was necessary for the traveler to arrange to be ferried across the river. Often it was possible to be ferried across by Indians who had a village nearby; the horses would swim behind the canoes.

Travelers avoided the steep headland area of Cape Meares and Maxwell Point by staying farther inland. Only in recent times has a road been built to Cape Meares and Oceanside.

### NATIVE AMERICANS

Evidence exists that the coast of Oregon has been inhabited for at least the past 3,000 years. It is likely that the area has been inhabited longer than that since other areas of Oregon show evidence of human occupation from as long as 10,000 years ago, but any evidence has been lost due to a general rise in the sea level along the coast.

The aboriginal culture found along the Oregon coast is considered to be an extension of the Northwest Coast Culture Area. This culture area reached its zenith in the highly specialized culture found to the north in British Columbia. The Oregon aboriginals engaged in more generalized subsistence practices, including fishing, hunting, gathering and trading.

The aboriginal peoples of the northwest coast were not organized into tribes in a political sense, but formed bands or small groups of families. These bands shared a common language and culture with other bands, but were not organized in any unit larger than the village in which they lived. The people who lived in Tillamook County were known as the Kil a mox, or Tillamook. The area inhabited by the Tillamooks extended from Tillamook Head south to the vicinity of Otter Rock, between Lincoln City and Newport. Within this region, the Tillamooks were further divided into four groups based on dialects: the Nehalem, Nestucca, Salmon River, and Siletz groups.

These groups and the villages along the coast tended to be isolated from each other because of the physical characteristics of the Oregon Coast. Mountains, headlands, rivers and estuaries all restricted travel north and south along the coast as well as to the interior valleys of the state. As a result, each village tended to be independent and self-sufficient.

There were two kinds of villages used by each band of Native Americans: a permanent winter site used by the whole group, and temporary summer sites used by smaller groups.

Village sites were located close to salt water as well as to fresh water, since both provided for a variety of needs. The salt water provided the shellfish utilized year-round, while the fresh water provided fish, especially the large runs of migratory fish in the fall, which were smoked and dried for use in the winter.

Village sites were chosen to provide as much protection from the elements as possible and to be close to other food supplies and trade routes.

In addition to fish and seafood, the Tillamooks hunted elk, deer, sealions, small mammals, waterfowl, and birds. In the summer and late fall, women and children gathered berries to be dried and used in winter. Roots of various edible plants were dug and gathered and the Tillamook traded for or purchased wappato, a root crop found on Sauvie Island and near Tualatin.

Generally, the villages did not have chiefs as we know them. The wealthiest in the villages tended to be leaders although their powers were quite limited. Often a person who was skilled in a particular aspect of village life such as hunting, fishing or trading provided the leadership for that activity.

Permanent villages usually consisted of a few houses and other miscellaneous structures built both above and partially below ground. The Tillamooks built rectangular houses of cedar boards with shed roofs. These houses varied in size and were used by two or three families. Often these houses were partially, or occasionally, totally subterranean. Two or more fireplaces were located in the center of each house. Wide shelves for sleeping were located around the perimeter of the building.

Other structures often found in the villages were a sweathouse and separate grass-mat structures used for storing provisions. People who could not afford to live in wood houses also used grass-mat structures as their dwellings.

Native American life followed the rhythm of the seasons and was governed by ritual and pattern. Elaborate ceremonies were followed in all the important aspects of village and personal life. The harsh conditions of life on the coast required that the Indians find and utilize every possible advantage. Since mortality rates often were as high as 50 percent for Native American children, elaborate rituals were followed to ensure the health of the child. Later each child acquired a spirit power or guardian who would help him or her to chose a direction in life and take a proper position among the other members of the band. Many places along the coast are known to be associated with the quest for a spirit power. Piles of rocks and dirt mounds known as spirit mounds are found in at least two sites in Tillamook County.

The last important rituals for the Native American were those associated with death. After purification rituals were performed, the body was placed in a canoe along with a paddle and personal effects. A smaller canoe was placed over the top of the burial canoe and secured. The canoes were then placed in a special area, often with a view to the west. One method of burial used by some groups was to wrap the body in elk skins and place it on a platform in a tree.

The Tillamooks became very proficient at making all the tools and implements required for their lives. Many implements were made of wood which was abundant and could be easily worked. Bowls, ladles, canoes, bows, pails and permanent dwellings were made of wood. Stone was used for axes, arrowheads,

mortar and pestles. Bone was used for implements such as wedges, chisels, combs and needles. Baskets, mats and items of clothing were made from various grasses and fibers and animal skins were tanned and used for robes and clothing.

The Tillamook were not a migratory people, but did travel within their immediate environment. Their principal methods of transport were canoes. Different kinds of travel required different types of canoes. Canoes for ocean travel were large and could hold up to 30 people. They were specially built to handle the large ocean waves, but were probably not used in heavy seas. The Tillamook traveled and traded up and down the coast in these canoes, rarely straying far from the shoreline. Within the bays and rivers, a smaller version of the ocean-going canoe was used which carried 6 to 12 people. A shallow two-to three-person canoe, designed for use on quiet waters, was also utilized by the Tillamook.

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## NATURAL AREA FEATURES OF THE COASTAL TILLAMOOK COUNTY STATE PARKS

The enclosed site reports, maps, and printouts describe and outline the ecological features of the coastal Tillamook County State Parks and Waysides currently being Master Planned. This information is the result of field work conducted by The Nature Conservancy on April 16-18, 1984, data on file in the Oregon Natural Heritage Data Base, and personal communications with several natural scientists across the State.

Those areas marked on the maps with prefixes of 1 and 2 are features in a natural or native condition. Areas with a prefix of 3 are not naturally occurring ecological features. This category includes areas with a relatively high percent cover of non-native vegetation or any area that has been substantially altered by human activities. A prefix of 1 indicates that the area is generally in good condition and is significant from a statewide perspective. A prefix of 2 indicates that the area is in a natural condition but is not particularly significant from a statewide perspective. The locations of rare and endangered or otherwise significant species of plants and animals are marked with a colored X. Distinct terrestrial, aquatic, and marine features have been outlined on aerial photos. In order to avoid confusion, geologic features have not been mapped. Their location and extent should be obvious based on the descriptions contained in the site reports and computer printouts. The printouts provide a good feature by feature overview of each Parks' individual elements. A descriptive key has been included for those fields on the printouts that are not self-explanatory.

Because of their diverse and largely undisturbed physical character, Oswald West and Cape Meares State Parks are two of the most cherished and scenic public natural resources remaining in Oregon. Each contain examples of old growth coastal forests which once covered the entire coastal strip and which now are restricted to a handful of sites. These forests and other features found here represent and could fill cell needs as listed in the Oregon Natural Heritage Plan. Protection of these cells through Master Planning and actual management procedures would add tremendously to the State's natural areas program. In general, the only type of management an area needs in order to fill a cell is to be left alone. Passive recreational pursuits such as hiking, sightseeing, and light trail maintenance are not a threat. Any consumptive type of use such as overnight camping, timber harvest, or vehicle access is not compatible with the protection of these ecosystems.

The Natural Heritage Program identifies and attempts to fill a limited number of ecosystem cells which represent the full spectrum of Oregon's natural heritage. When filled, these native ecosystems act as an outstanding visual and aesthetic public resource to be passed on to future generations. Another function of a protected cell is its use by scientists and educators as a baseline study area from which data is gathered and applied to land management practices.

Some of these cells are currently unrepresented by any existing protected areas and can likely only be filled on State Parks property. Though some of the cells found on these Parks are listed in the Plan as being already represented by other established natural areas, their protection here has merit and is important. Scientific results are far superior if the student has more than one quality area to work with and in some cases the cells on these Parks are found in better condition in the Park than on the area listed in the Plan under present representation. The perpetuation of any given natural feature depends upon some degree of replication since the viability of any one protected area could become tenuous.

Additional information regarding significant natural area features on these and other Parks in Oregon and on areas of other ownership in Oregon is on file (manual and computer) at the Oregon Natural Heritage Data Base housed and managed by The Nature Conservancy.

## OSWALD WEST STATE PARK

### GENERAL DESCRIPTION & OUTLINE OF SIGNIFICANT NATURAL FEATURES

Oswald West State Park, which is located between the towns of Arch Cape and Neahkahnie and includes about four and one-half miles of ocean frontage and a large amount of inland coastal forest lands, is unquestionably one of the most diverse and significant State Parks in Oregon from an ecological standpoint. Partly in Clatsop and mostly in Tillamook County, it is also one of the more popular recreational sites in the State Parks system. It is known to most Oregonians and many out-of-state visitors as a natural treasure. The major geographical features contained in the Park are the summit and three sides of Neahkahnie Mountain, Short Sands Beach, Cape Falcon, and their surrounding forest lands and stream drainages.

Nine significant natural ecosystems have been identified at this site. These types are listed on the map key. Among these features there are good examples of four terrestrial, two marine aquatic and one freshwater aquatic ecosystem cells as listed in the Oregon Natural Heritage Plan. The coastal headland geologic type from the Plan is also found within the Park at Cape Falcon. Populations of three rare or endangered plants: the Cascade Head catchfly, the bristly-stemmed checker mallow, and the coast fawn lily are known to occur in the Park as well.

### SPECIFIC DESCRIPTION OF NATURAL AREA FEATURES

The red fescue and pacific reedgrass - blue wildrye headland grassland communities are found in scattered patches on the slopes of Neahkahnie and at the end of Cape Falcon. They occupy areas where steep slopes, soil structure and movement, severe weather conditions, or relatively recent fires have prohibited shrub and tree growth. The former covers only about six acres of the Park and the latter about 70. Based on the species composition of these grasslands, it is apparent that the only grazing activity that has taken place is that of the native deer and elk populations. These areas are in outstanding ecological condition. Their scattered nature and relatively small size make them slightly less than optimal as study sites but they are still a good example of the coastal headland grassland cell in the Plan. This site is one of only four or five locations where this type is found in any semblance of a native condition.

The headland shrubland community, which covers about 120 acres, is also in good condition and is considered to be one of the largest and best occurrences of its kind in the state. It occurs as well on areas of steep slope and where there has been a history of fire. It is particularly well represented on the lower south and west slopes of Neahkahnie. The most dominant plants in these areas are salal, salmonberry, thimbleberry, and sword fern. Oswald West is one of several locations, \* mostly of Parks ownership, where this currently unfilled coastal headland shrub cell need could be filled.

The three old-growth forest types found in the Park are its largest and most significant natural features. Oswald West is one of only a very few sites remaining that has uncut examples of these plant communities that once covered the central and northern Oregon coastal strip. Until recently, it contained the single largest contiguous undisturbed example of these types in the state.

Nearest the ocean, where salt and wind influences are strongest, the sitka spruce/salal forest is found. It is restricted to this belt that rings the coastline. Picea sitchensis (sitka spruce) is the only abundant tree in the overstory and salal dominates the understory. This forest is fairly open in character and has wind-pruned trees in exposed areas, which is typical of old-growth stands of this type. The oldest trees found here are 230-250 years old. Oswald West and Cape Lookout are probably the only sites capable of filling this high \* priority, unfilled cell need from the Plan.

Further inland, where the salt spray and strong winds are less severe, Tsuga heterophylla (western hemlock) becomes a major component of the overstory and the forest changes to the sitka spruce - western hemlock/sword fern type. Scattered, older cedars are also found here. Sitka spruce does not sprout in a closed canopy, dark forest, but western hemlock does. Once a pure sitka spruce forest becomes well established, it stops reproducing. This is when western hemlock moves in, taking advantage of the spruce windbreak and the closed canopy. The spruce trees in this forest are roughly 70-240 years old and the hemlocks 1-200 years old. Given enough time and an absence of natural disasters such as fire or severe wind storms, hemlock will become the dominant tree of this forest. There has not, however, been an absence of severe wind storms in this forest. Much of it is littered with large downed hemlocks and a few downed or broken spruce. This down and dead wood is very important to the natural evolution and ecology of this forest type. The nutrients that fed the living trees before they blew down are still contained in the downed wood and, if left in

place, they will support the next generation by acting as seed beds and nurse logs. Many vertebrate animal species such as salamanders and squirrels are also dependent on this dead wood for their food source or as a home. Having an abundance of it here increases the diversity of wildlife within the Park.

Fire has also been an important natural disturbance factor in these forest communities. To the south and east of Cape Falcon and again on the west slope of Neahkahnie are areas where the forests are younger and where charcoal can be found near the surface in the soil horizon. The strip of forest off of Cape Falcon is dominated mostly by sitka spruce and is probably the result of a fire about 120 years ago. Western hemlock is beginning to move in here. The very interesting sitka spruce - western hemlock - Douglas fir/salal forest on the west slopes of Neahkahnie also owes its present composition in large part to fire. The over-story of this relatively open forest is made up of large old-growth Douglas firs with visible fire scars and younger spruce and hemlocks that have invaded since burning of the area has ceased. The last major burn on Neahkahnie was an October 1945 slash fire that got out of control and scorched much of the mountain. In less recent historical times, this area was probably burned purposely by Indians to maintain berry fields and big game habitat. The understory contains mostly salal, salmonberry, huckleberry, and pacific reedgrass. This type, together with the sitka spruce - western hemlock/sword fern type and its burn variant are best represented in the Plan by the spruce - hemlock/sword fern ecosystem cell.

Along the ridgetop and including the summit and false summits of Mount Neakahnie are small patches of the Martindale's lomatum rock garden plant community. It occupies areas of bare rock and very thin-soiled south facing slopes. Plants found associated with this type in addition to the lomatum include: red fescue, coast strawberry, wild yarrow, nodding onion, coast fawn lily, and blue-eyed Mary. The spring bloom in this forb dominated type is very colorful. Though this ecosystem is found here in excellent condition, it is too small to fill a cell need.

The two subtidal marine ecosystems found in the shoreline portions of the Park are good examples of wave-exposed outer coast habitats. They are found in the Plan as high priority, \* unfilled cell needs. The unvegetated type occurs where wave energy is highest and aquatic plants cannot take hold. The vegetated type occurs in the slightly calmer areas. Plants found here include surfgrass, floating kelp, and submerged kelp. Large numbers of subtidal marine animals are found in association with both ecosystems. These types appear to

intergrade with each other along the entire shoreline of the Park, with the exception of Smugglers Cove. Because a boat was not used, these ecosystems were viewed only from a distance during our April 1984 survey. Most of our information on these habitats has come from marine biologists in Oregon who are familiar with the site.

One high quality freshwater aquatic feature has also been identified at this site. It is a coastal stream system whose entire drainage is contained within the Park. This stream runs through forests dominated predominantly by sitka spruce and except for a small portion which was disturbed by recent timber harvest activities, its whole length is in a native condition. The mouth of this creek is in the form of a waterfall at the north end of Short Sands beach which is located on or very near a contact between basalt and sedimentary rock formations. It is probable that much of the streambed follows this contact. This feature is a good example of the first to third order stream system \* originating in the sitka spruce zone cell from the Plan.

The Cape Falcon and Neahkahnie Mountain mainland and offshore rock complexes provide important breeding and feeding localities for many seabirds. Those species known to nest here and their numbers as estimated by the 1979 U.S. Fish and Wildlife Service breeding bird survey are: Brandt's cormorant (276), pelagic cormorant (130), common murre (125), pigeon guillemot (133), western gull (54), and black oystercatcher (3). The black oystercatcher breeds in limited numbers all along the Oregon coast. Its occurrence here is indicative of undisturbed intertidal habitat.

Three plants of concern occur within the Park. Silene douglasii var. oraria is a candidate for federal listing under the Endangered Species Act and is considered by the Oregon Natural Heritage Data Base to be endangered throughout its range. Besides Oswald West State Park, it is known from only two other locations, Cascade Head and Cape Lookout. There were about a dozen clumps of it seen on the Cape Falcon headland during our April 1984 survey of the Park. The plant may also live on the lower slopes of Neahkahnie. A collection of it was made there in 1922. Our survey may have relocated it, but a later visit when the plant is in bloom will be necessary before positive identification can be made. Sidalcea hirtipes and Erythronium revolutum are considered rare throughout their ranges but currently stable. Both are found associated with the headland grassland and shrubland plant communities and the latter is found in openings of the spruce - hemlock/sword fern forests and along the edges of the rock garden community as well. Each are represented within the Park by large, healthy populations.

The coastal headland geologic feature covers about 75 acres. This is the Cape Falcon portion of the Park. Like Cape Meares, it is made of basalt that correlates with the Columbia River basalt formation that covers much of the plateau land of southwestern Washington and northeastern Oregon and which makes up the rock walls of the Columbia River Gorge. Its age is about 12 million years old. It is dense, hard rock that has been eroded through wave action into promontories and cliffs that in places rise vertically to heights of 300 feet above the ocean. The basalt is overlain by sedimentary rock of the Astoria formation on portions of the headland.

#### MANAGEMENT COMMENTS

As described in the previous section, Oswald West State Park has many outstanding natural features. While recreational use can sometimes be very heavy, the size of the Park makes it possible to both protect these features and accommodate the need for public use. In order to do this, it would be best to restrict developed facilities to those areas already disturbed (altered from natural condition) and to keep them at as 'primitive' a level as possible. The Park's current public use developments are not a serious threat to its existing natural features.

The headland grassland and shrubland communities are in superb condition and are somewhat protected from direct human disturbance because they occur in areas that are not conducive to heavy use. The current level of grazing by native deer and elk on these areas does not degrade their composition. Any colonization of the Park by feral or domestic grazing ungulates, particularly on Neahkahnie, could easily damage these areas irreparably.

The historical ecology of these unforested areas most likely included periodic burning. With a prolonged absence of fire, the grasslands will become shrublands and the shrublands will become forest lands. The use of controlled burns as a management tool on these ecosystems is just beginning to be studied by The Nature Conservancy at its Cascade Head preserve.

Oswald West's most important natural features are also its most impressive. These are its old-growth coniferous forests. The existing primitive trail system running to Cape Falcon and down the west side of Neahkahnie are well placed and provide the hiker with an excellent look at the three major types found in the Park and the various stages of their ecological development. Their maintenance and use at current levels is compatible with protection of the features through which they pass.

As is the case with most of Oregon's forested coastal Parks, Oswald West is susceptible to sometimes, severe windthrow damage by major storms. The Park is naturally exposed and the surrounding forests that used to provide some measure of a windbreak have all been logged. A walk down the west slope Neahkahnie trail is testimony to what these storms can do. While the simple clearing of this debris from existing trails is not a threat, its larger scale commercial removal is not consistent with protective management of these important ecosystems. The recent road building, salvage, and small clear-cut operations in the Park and the subsequent planting of Douglas fir seedlings have greatly reduced the condition, size, viability, and educational value of the old-growth spruce-hemlock system in Oregon. Strong consideration should be given to the important role that existing and future down and dead timber plays in the maintenance of the state's few remaining native coastal forests. Consideration should also be given to the great recreational and scientific potential that these blowdown areas possess.

The rock garden plant community found on the top of Neahkahnie is somewhat fragile because of its small size and very thin, erodible soils. A marked increase in foot traffic could threaten it. Current usage is not causing significant damage. Vehicle access to the top of the mountain should continue to be prohibited and trails should be kept in their existing primitive state.

To protect the two bedrock bottom marine ecosystems in the Park it is necessary to control the taking of marine organisms. The jurisdiction over such collection in the state lies with the Oregon Department of Fish and Wildlife. They have designated some areas in the state as "marine gardens" where no collecting is allowed, and a few other areas where collecting is allowed by permit and for scientific purposes only. Currently, no part of Oswald West State Park is classified under these conditions. Most of the subtidal areas where these features occur in the Park are easily accessible only by boat. By not providing easy access to these areas by boat or by foot, current management of the area can be considered protective of its marine habitats.

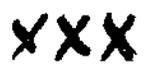
Since the entire length of the coastal stream system found in the Park traverses through coniferous forest, management needs for protection of this feature are similar to those of the forest types. Any activity of a major soil-disturbing nature within this watershed would damage its aquatic character.

The seabirds that breed in this area do so both on the mainland and on offshore rocks. Parks has jurisdiction over the mainland sites. Most of the offshore rocks near the Park are within the Oregon Islands National Wildlife Refuge and are owned by the U.S. Fish and Wildlife Service. As with the marine features, these areas are well protected by their physical inaccessibility.

In general, the best way to manage for the continued existence of the Park's rare and endangered plants is to maintain the ecosystems in which they thrive. This is particularly true for Sidalcea hirtipes and Erythronium revolutum, both of which are found in good numbers within the grassland and shrubland communities. The Silene appears to occur in very low numbers because its habitat is limited, but this population can be considered stable under current management of the edge of Cape Falcon.

- The geologic headland feature here has and probably will maintain its form through many millenia. The only human use that could threaten it would be quarrying of its basalt.

KEY TO OSWALD WEST STATE PARK MAP

<u>Map Symbol</u>	<u>Ecosystem or Species</u>	<u>Representative Cell in Plan</u>
1a	Red fescue coastal headland grassland	Terrestrial Oregon Coast Range Cell #20
1b	Pacific redgrass-blue wildrye headland grassland	
1c	North Coast headland shrubland	Terrestrial Oregon Coast Range Cell #21
1d	Old Growth Sitka spruce/salal coastal forest	Terrestrial Oregon Coast Range Cell #1
1e	Old Growth Sitka-western hemlock/sword fern coastal forest	Terrestrial Oregon Coast Range Cell #2
1ee	Sitka spruce-western hemlock/sword fern coastal forest (burn variant)	
1f	Old Growth Sitka spruce-western hemlock-Douglas fir/salal coastal forest	
1g	Martindale's lomatium rock garden	Not large enough
1h	Complex of vegetated and un-vegetated bedrock bottoms in the subtidal zone (two types)	Marine Aquatic Cells #4 and #5
1j	Coastal stream system in sitka spruce zone	Freshwater Aquatic Oregon Coast Range Cell #1
2a	Unvegetated sand beach in the intertidal zone	Too heavily collected
3a	Areas altered from natural condition	None
	Mainland rock walls and sea cliffs	None
	<u>Silene douglasii</u> var. <u>oraria</u> (Cascade Head catchfly)	None
	<u>Sidalcea hirtipes</u> (bristly-stemmed checker-mallow)	None

Oswald West continued

<u>Map Symbol</u>	<u>Ecosystem or Species</u>	<u>Representative Cell in Plan</u>
XXX	<u>Erythronium revolutum</u> (coast fawn lily)	None
XXX	<u>Haematopus bachmani</u> (black oystercatcher)	None

## CAPE MEARES STATE PARK

### GENERAL DESCRIPTION & OUTLINE OF SIGNIFICANT NATURAL FEATURES

Cape Meares State Park is located about seven miles northwest of the city of Tillamook. The coastline here consists of basalt headlands and sea cliffs formed through wave erosion and, where the rock is weakened by fractures, small coves. The bulk of Parks' property is made up of the surrounding coastal forests which are dominated by Sitka spruce and western hemlock. The intertidal areas of the Park are virtually inaccessible except by boat. Part of the Park is leased from the U. S. Fish and Wildlife Service.

Four significant natural ecosystems have been identified at this site. They are: Sitka spruce/salal coastal forest (1a on photos), Sitka spruce-western hemlock/sword fern coastal forest (1b), vegetated bedrock bottoms in the subtidal zone (1c), and unvegetated bedrock bottoms in the subtidal zone (1c). That part of the Park not covered by the aerial photo is of the (1b) type. The latter three are of the size and quality necessary to be excellent examples of ecosystem cells as defined in the Oregon Natural Heritage Plan. One other cell from the Plan, the coastal headland geologic type, is represented here as well. Cape Meares is currently being considered by the National Park Service for National Natural Landmark designation under this geologic theme.

Four birds of special interest also inhabit the Park. They are all found within the mainland rock and sea cliffs complex portion of the map. They are: peregrine falcon, rhinoceros auklet, tufted puffin, and black oystercatcher.

### SPECIFIC DESCRIPTION OF NATURAL AREA FEATURES

The two forested ecosystems found here are very typical of the native coastline forests that once covered the central and northern Oregon coast and which now remain uncut in only a few areas such as Oswald West, Cape Lookout and Cape Meares State Parks. Picea sitchensis (Sitka spruce) is tolerant of salt spray and strong winds and consequently it is the only abundant tree in the overstory of the Sitka spruce/salal type which rings the coastal strip of this Park. The condition of this community from an ecological standpoint is excellent. Some of the trees are up to 240 years old. Only its relatively small size (approximately 60 acres) makes this occurrence less than optimal for filling the high priority unfilled cell need it represents.

Further inland, where salt spray and prevailing winds are not so severe, the forest changes to the sitka spruce-western hemlock/sword fern type. The ecology of this forest is like that of the Oswald West occurrence of this type. Because Cape Meares is more exposed, there has been a higher percentage of timber blowdown. The age of the spruce trees in this old-growth forest range from about 70-230 years old and the hemlocks from 1-200 years old. In some places the forest has been opened up enough to allow for natural regeneration by Sitka spruce, which does not sprout well in a closed canopy situation. This makes it an excellent site for study of forest succession. The down and dead woody debris will provide the seed beds and nutrients for the next generation of trees. The ecological condition of this forest is very good and it is a fine example of the spruce-hemlock/sword fern cell in the Natural Heritage Plan.

The two marine ecosystems found in the shoreline portions of the Park are good examples of wave-exposed outer coast habitats. They are found in the Plan as high priority, unfilled cell needs. The unvegetated type occurs where wave energy is highest and aquatic plants cannot take hold. The vegetated type occurs in the slightly calmer areas. Plants found here include surfgrass, floating kelp and submerged kelp. Large numbers of subtidal marine animals are found in association with both ecosystems. These types appear to intergrade with each other all along the shoreline of the Cape Meares headland. Because a boat was not used, these ecosystems were viewed only from a distance during our April 1984 survey. Most of our information on these habitats has come from marine biologists in Oregon who are familiar with the site.

Cape Meares and its offshore stacks and islets are well known for their concentrations of sea bird breeding grounds. Most of the offshore areas are part of the Oregon Islands National Wildlife Refuge managed by the U. S. Fish and Wildlife Service. Birds which are known to breed on Parks property include common murre (655), tufted puffin (218), western gull (212), pelagic cormorant (124), pigeon guillemont (50) and black oystercatcher (4). The numbers of birds given are estimates from the 1979 U.S. Fish and Wildlife Service bird counts taken here.

The puffin breeding colony is one of Oregon's larger ones and Cape Meares is one of only two mainland sites where the bird nests - the other being Cape Lookout. The rhinoceros auklet is a very rare breeder in Oregon. Since 1974 it has been observed here several times in breeding plumage during the breeding season and although no nests have been found, nesting is suspected. The black oystercatcher breeds in limited numbers all along the

Oregon Coast. Its occurrence here is indicative of high quality, undisturbed intertidal habitat. The peregrine falcon is listed as an endangered species under the Endangered Species Act. It nested at Cape Meares historically, before the use of pesticides severely reduced its numbers. It is regularly observed here during winter months and occasionally in the spring. While it is not currently nesting here, habitat availability is ideal and the possibility of a pair colonizing this site is considered good.

The coastal headland geologic feature covers about 150 acres within section 13 of the Park. It is made of basalt that correlates with the Columbia River basalt formation that covers much of the plateau land of southeastern Washington and north-eastern Oregon and which makes up the rock walls of the Columbia River Gorge. It is dense, hard rock that has been eroded through wave action into promontories and cliffs that in places rise vertically to heights of 300 feet above the ocean. The basalt is overlain by sedimentary rock of the Astoria formation on portions of the headland.

#### MANAGEMENT COMMENTS

Much of this Park consists of significant natural features. The portions that have been developed with a road, paved trails, picnic and parking facilities, and a hiker-biker camp are well located and do little damage to these features. In order to protect the Park's natural areas it is important that these developed facilities not be expanded beyond the areas classified herein as "altered from natural condition".

The spruce-hemlock/sword fern forest at Cape Meares is in a very dynamic state. The entire cape is surrounded by relatively recent and massive clear-cuts. There appears to have been a small amount of trespass logging in the northeast portion of the Park as well. This activity has eliminated the natural windbreak and increased the susceptibility of the Park's forest to windthrow. This is evidenced by the many downed trees on both Park and U.S. Fish and Wildlife property. It is likely that further windthrow will occur as future major storms come through the area. The value of this dead material to the vegetation and wildlife of the Park is well documented and its existence is critical to the maintenance of this natural system. Besides this ecological value, it also has great visual qualities. The primitive trails that lead through this forest type (particularly the Park's northernmost trail) provide the Park visitor with an awe-inspiring appreciation for the power of nature. Seeing old-growth trees that have been

snapped off or uprooted and thrown to the ground leaves one with a lasting impression. It's an educational and recreational experience worth preserving.

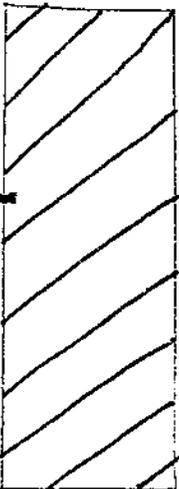
It is the position of the U. S. Fish and Wildlife Service that the areas they own should be established as a Research Natural Area. This area is under consideration by the Pacific Northwest RNA Committee. While their ownership here would make an adequate RNA, the inclusion of some Parks' property to such a proposal would greatly increase its viability.

In order to adequately protect the marine aquatic ecosystems along the Park's shoreline it is necessary to control or, optimally, to prohibit the taking of marine organisms. The collection of marine organisms in Oregon is under the jurisdiction of the Oregon Department of Fish and Wildlife. They have designated some areas in the state as "marine gardens" where no collecting is allowed, and a few other areas where collecting is allowed by permit and for scientific purposes only. Currently, Cape Meares is not designated under either of these conditions. In practice however, it is fully protected. Because access to these subtidal areas is by boat only and difficult under those circumstances, it is assumed that only light collecting takes place here. By not providing an access point to the intertidal areas, management of this Park can be considered as protective of its marine ecosystems.

This same inaccessibility also acts as protective management for the many birds that nest on the steep slopes and rocky shores of Cape Meares. Their breeding season runs roughly from April to August each year. Again, it appears that the only real disturbance that could affect these birds would have to come from a boat. There should perhaps be a policy against any harassment during these times, but otherwise current management is compatible with the protection of these animals.

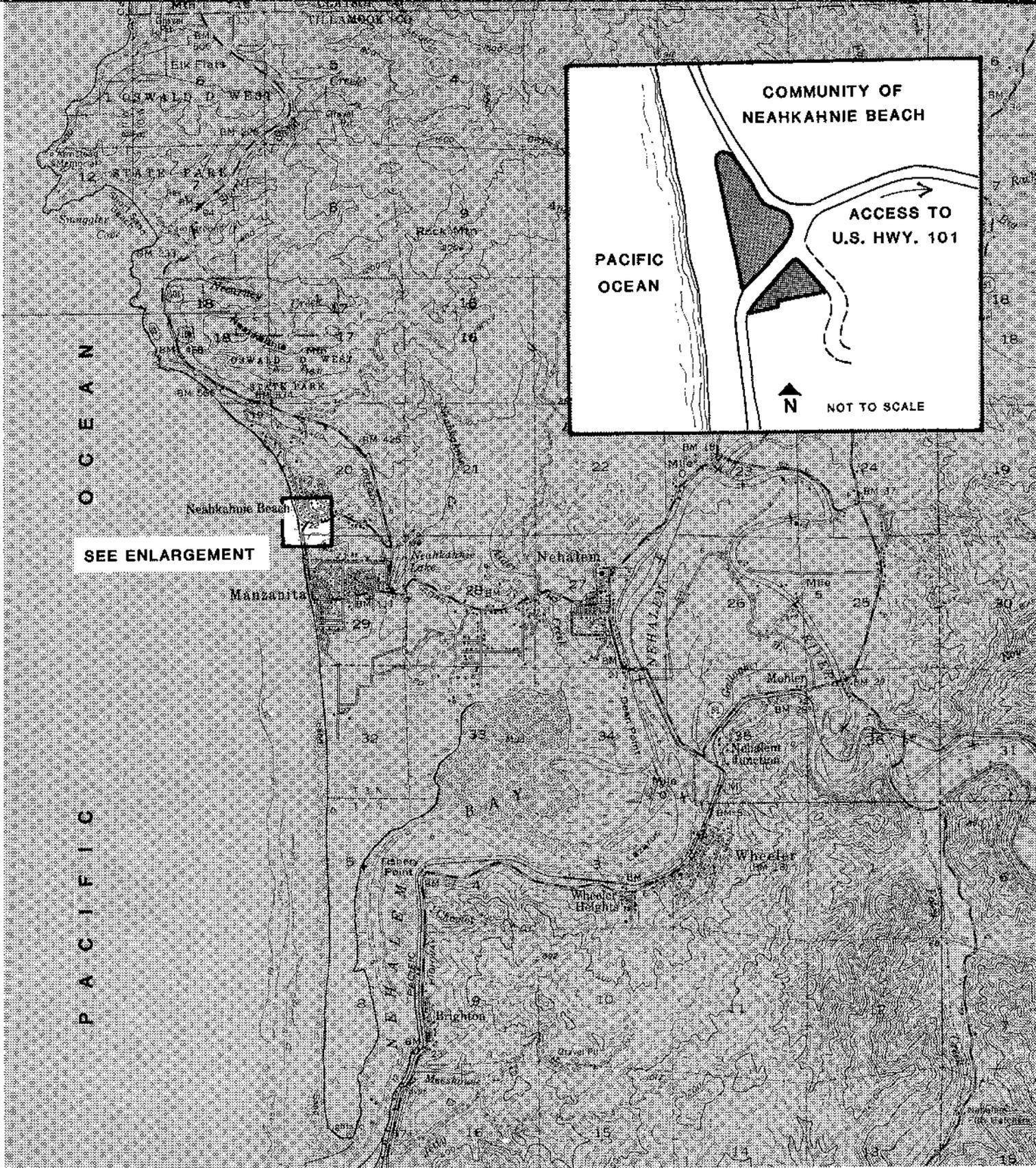
The geologic headland feature here has and probably will maintain its form through many millenia. The only possible human use that could threaten it would be quarrying activity.

KEY TO CAPE MEARES STATE PARK MAP

<u>Map Symbol</u>	<u>Ecosystem or Species</u>	<u>Representative Cell in Plan</u>
1a	Sitka spruce/salal coastal forest	Not large enough
1b	Sitka spruce - western hemlock/ sword fern coastal forest	Terrestrial Oregon Coast Range Cell #2
1c	Complex of Vegetated and Unvege- tated Bedrock Bottoms in the Subtidal Zone (two types)	Marine Aquatic Cells #4 and #5
2a	North Coast Headland Shrubland	Not large enough
3a	Areas altered from natural condition	None
	Mainland Rock and Sea Cliffs Complex. Includes areas used by significant Bird species.	None
	<u>Falco peregrinus anatum</u> (Peregrine falcon)	None
	<u>Cerorhinca monocerata</u> (rhinoceros auklet)	None
	<u>Lunda cirrhata</u> (tufted puffin)	None
	<u>Haematopus bachmani</u> (black oystercatcher)	None

## TILLAMOOK COUNTY WAYSIDES

The Neahkahnie-Manzanita, Manhattan Beach, Rockaway Beach, Twin Rocks, Oceanside, and Neskowin Beach Waysides do not contain any significant natural features. These properties are all either too small or too disturbed or both to be considered as important from an ecological standpoint. The dune areas in these Waysides are all dominated by European beachgrass (Ammophila arenaria) and by and large they are little more than parking areas and beach access points.



# NEAHKAHNNIE-MANZANITA STATE WAYSIDE

T3N R10W SEC 20  
TILLAMOOK COUNTY



SCALE IN MILES



OREGON STATE PARKS 8/86

EXISTING CONDITIONSNEAHKAHNIE-MANZANITA

Location: In community of Manzanita, off U.S. 101,  
Tillamook County.

Acreage: 1.25 Acres.

Description: This wayside consists of a very small area of  
stabilized sand dunes and ocean beach.

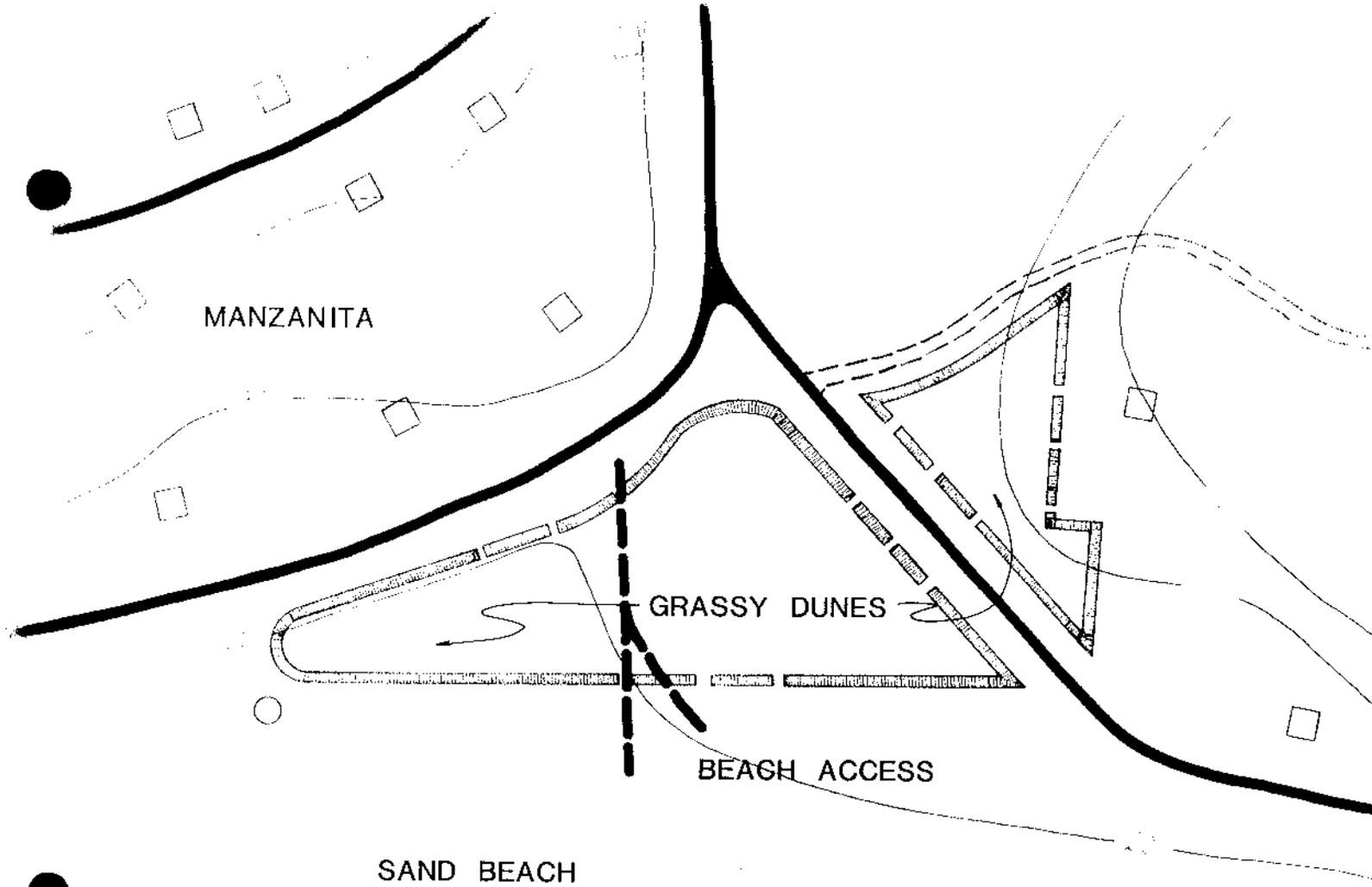
The property was transferred to State Parks from  
The Nature Conservancy with deed restrictions  
which prevent any development on the property  
and preclude its disposal.

Its only use is for pedestrian beach access.

Day-Use Facilities: None.

Average Annual  
Day-Use Attendance  
1980-1985: Not recorded.

Recreation Activities: Beach activities.



PACIFIC OCEAN

**EXISTING CONDITIONS  
& FEATURES**

**NEAHKAHNIIE - MANZANITA  
STATE WAYSIDE**

LAND USE PLAN

NEAHKAHNE-MANZANITA

1.25 Acres

PROTECTION None

MANAGEMENT - 1.25 Acres 100%

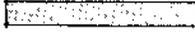
This small wayside is all in Management since it has been altered by the introduction of European beach grass.

DEVELOPMENT None

Deed restrictions on this property prohibit development or disposal of this property.

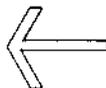


# LAND USE PLAN

Management 

PACIFIC OCEAN

## NEAHKAHNIE - MANZANITA STATE WAYSIDE



0 100 200 300

1984

OREGON STATE PARKS

T3N R10W SEC 20

Tillamook County

RECREATION OPPORTUNITIES

Although this area is capable of some minor development, deed restrictions prevent any construction.

IMPACTS OF PROPOSED PARK DEVELOPMENT

Because the deed restrictions at Neahkahnie-Manzanita Wayside do not allow any recreational development, there is an impact on the City of Manzanita.

Normally, restroom facilities and parking are provided at a beach wayside. At Neahkahnie-Manzanita Wayside, deed restrictions attached to the property prevent any development from occurring there. This results in a large public beach area with no restroom facilities and consequent pressure on local businesses.

At the present time, the State Parks and Recreation Division is working with the City of Manzanita to find a suitable site and adequate funds to provide a restroom building at the beach.

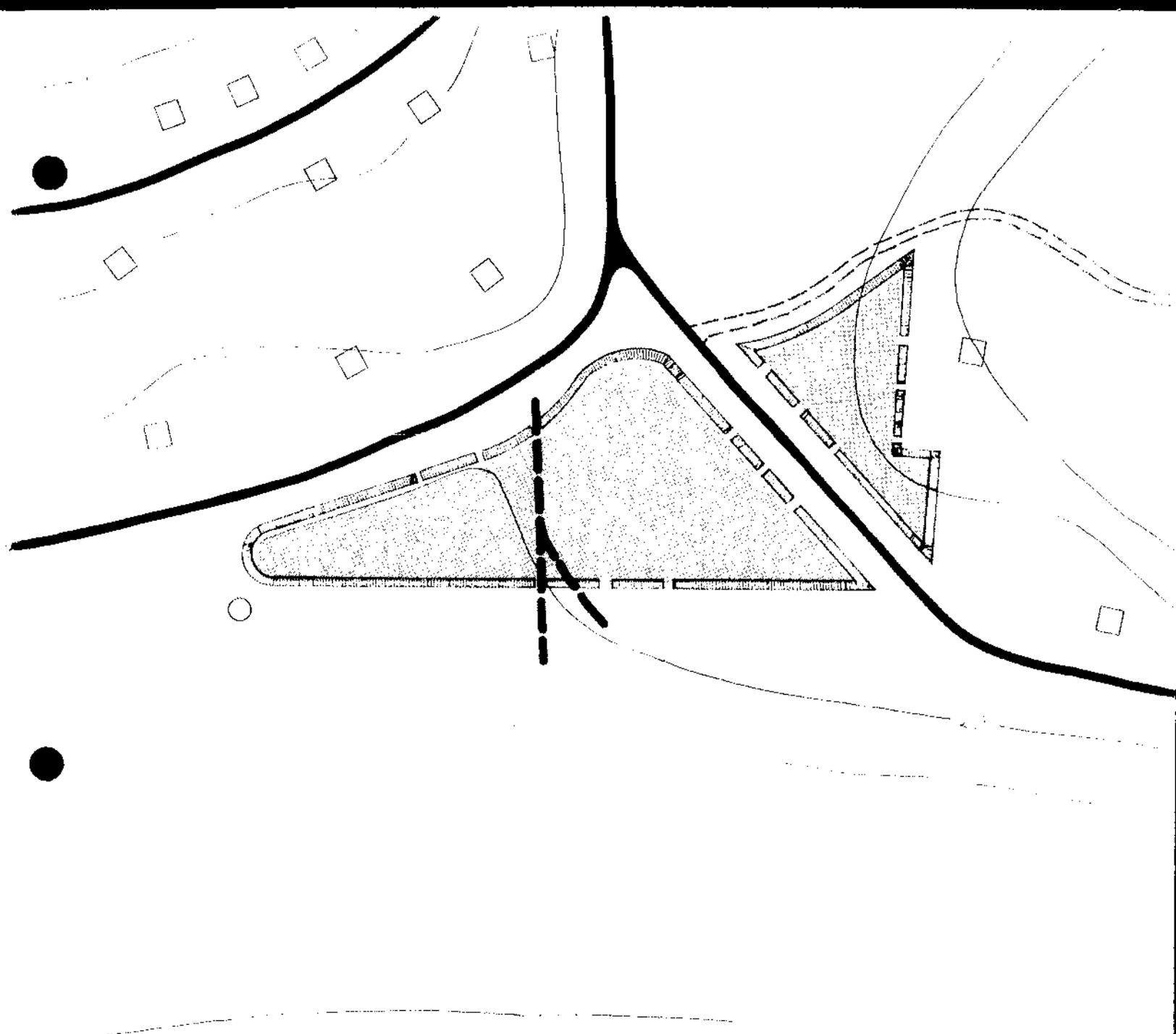
BEACHES AND DUNES

This wayside consists only of beach and dunes.

GEOLOGIC HAZARDS

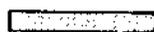
Erosion of the beaches and dunes is a continuing geologic process.

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.



# SOILS

Soil Restriction Ratings for  
Recreation Development

Severe 

PACIFIC OCEAN

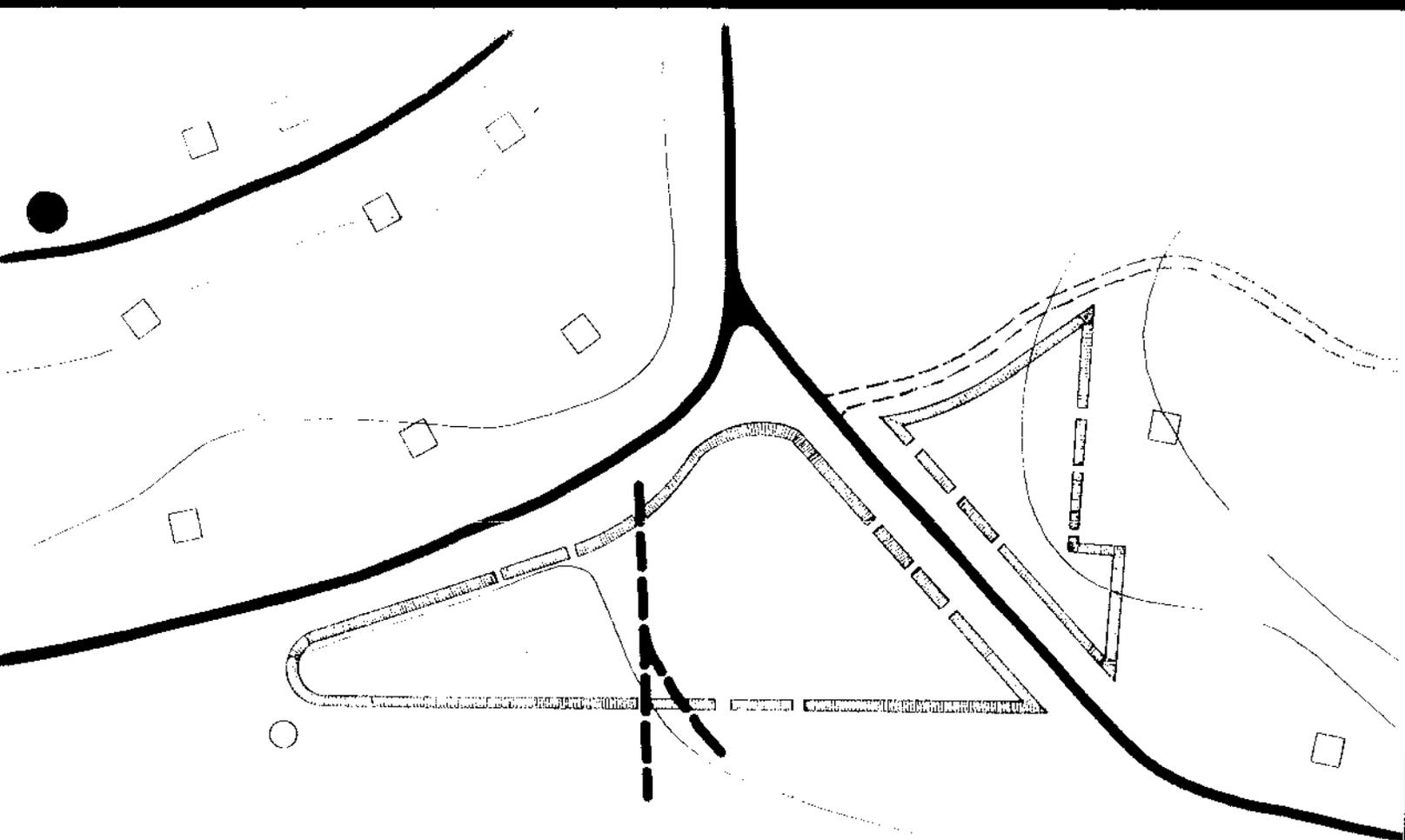
## NEAHKAHNIE - MANZANITA STATE WAYSIDE



WATER FEATURES

NEAHKAHNIE-MANZANITA

The only water features is the Pacific Ocean and since there is no development or use of the wayside beyond pedestrian access, there are no problems.



UPPER BEACH

LOWER BEACH

PACIFIC OCEAN

## WATER FEATURES

Intertidal Sand Beaches

Upper - Irregularly Wet 

Lower - Regularly Wet 

# NEAHKAHNIE - MANZANITA STATE WAYSIDE



1984

0 100 200 400  
0 100 200 400

OREGON STATE PARKS

T3N R10W SEC 20

Tillamook County

VEGETATION

NEAHKAHNE-MANZANITA

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NATIVE PLANT COMMUNITIES

None.

ALTERED VEGETATION

Vegetation here consists of shrubs and European beachgrass.

RARE AND ENDANGERED SPECIES

None known.



This wayside is part of a long stretch of sandy beach in the community of Manzanita.

HISTORIC AND ARCHEOLOGIC FEATURES    NEAHKAHNIE-MANZANITA

HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

None.

PARK BACKGROUND

The 1.25 acres which comprise this park were given to The Nature Conservancy who in turn gave it to us. Deed restrictions prevent any development from occurring here.

ZONING AND COMPREHENSIVE PLANS

NEAHKAHNIE-MANZANITA

Zoning	R-1 Low Density Urban Residential with Shoreland Overlay.  Permitted uses include: 1. public open space and park and recreation areas.
Jurisdiction	Tillamook County
Other Considerations	Property donated to Nature Conservancy with stringent restrictions for development.

OWNERSHIP

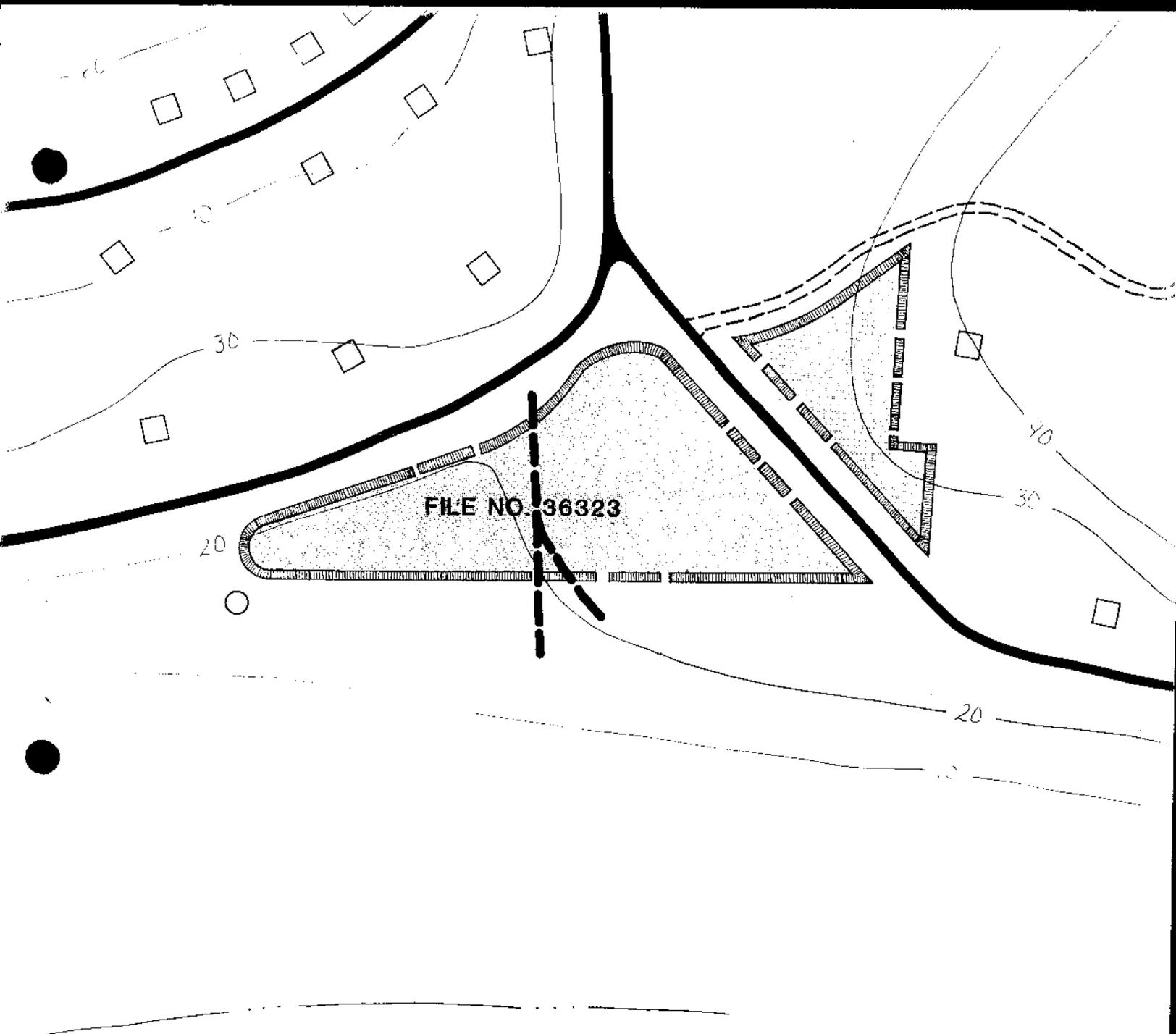
NEAHKAHNIE-MANZANITA

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The 1.25 acres of the Neahkahnie-Manzanita Wayside were given to the Nature Conservatory who in turn gave the property to State Parks. There are a number of conditions attached to the gift.

The property was donated as public pedestrian access to the beach. No disturbance to plants or trees will be allowed except to remove dead, diseased or unsightly plants or trees. Parks may construct a conduit to contain the flow of the small stream that crosses the property.

No building, bench or structure will be permitted nor will any vehicles be allowed. If the property is not used as specified, it will revert to the Grantor.

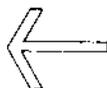


**PROPERTY OWNERSHIP,  
LEASES & EASEMENTS**

Restrictions   
See Text For Explanation

PACIFIC OCEAN

**NEAHKAHNIE - MANZANITA  
STATE WAYSIDE**



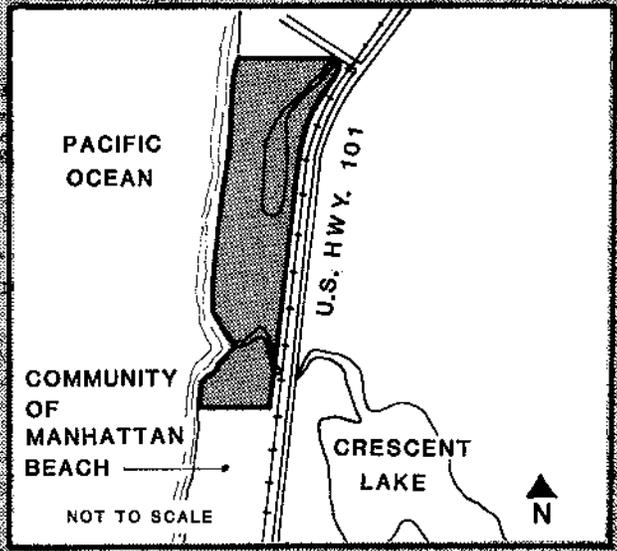
1984

OREGON STATE PARKS

T3N R10W SEC 20

Tillamook County

PACIFIC OCEAN



SEE ENLARGEMENT

# MANHATTAN BEACH STATE WAYSIDE

T2N R10W SEC 20,29  
TILLAMOOK COUNTY



EXISTING CONDITIONS

MANHATTAN BEACH

Location: Northern edge of City of Rockaway, on U.S. 101, Tillamook County.

Acreage: 41.00 Acres.

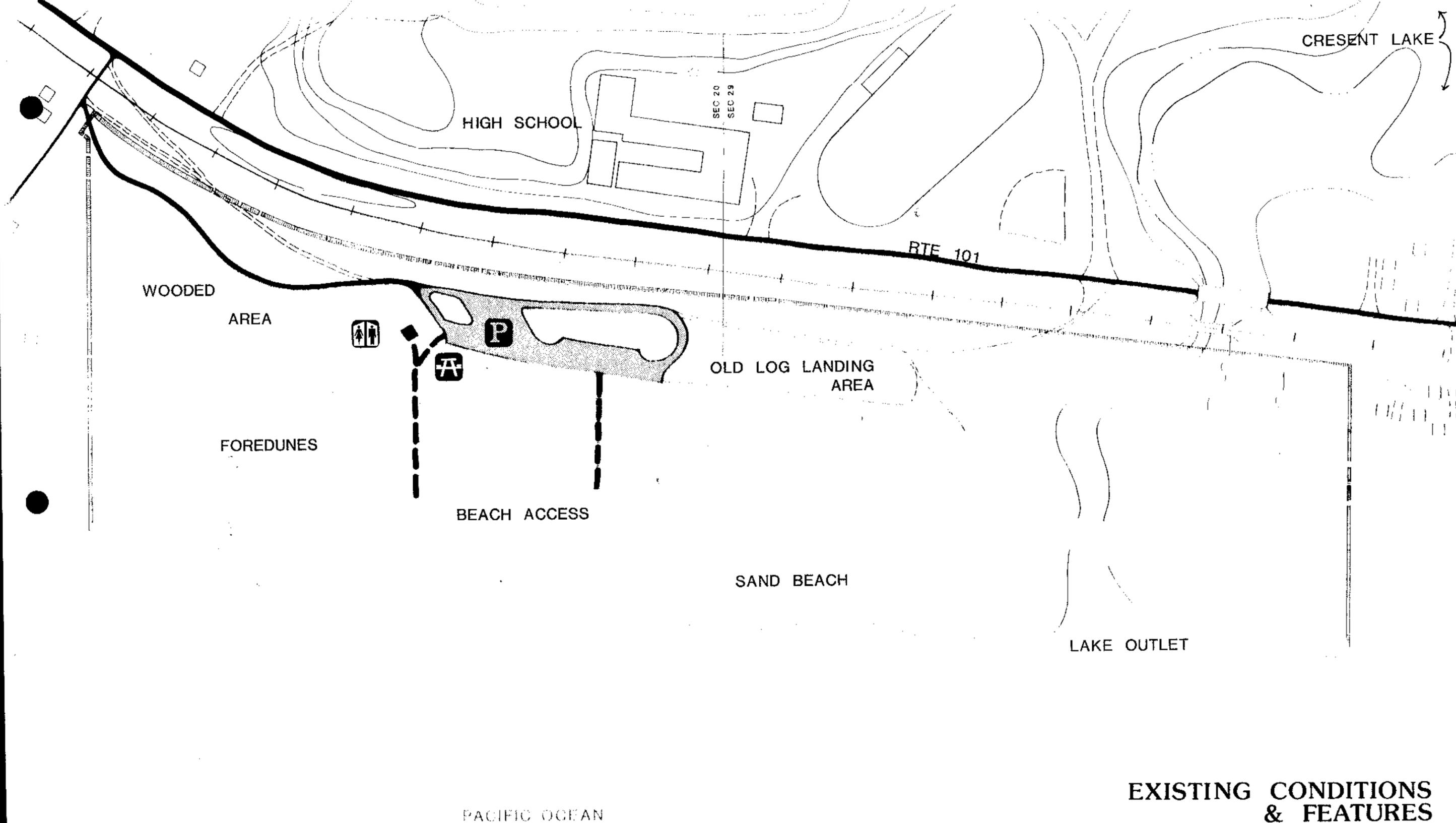
Description: Manhattan Beach State Wayside is a large state wayside located on the site of a former log scaling station.

The wayside has a large parking lot, restrooms, picnic tables and access to a broad stretch of beach.

Day-Use Facilities: Picnic facilities (2 units), restrooms, paved parking lot.

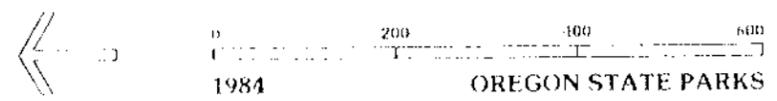
Average Annual Day-Use Attendance 1980-1985: 161,500.

Recreation Activities: Picnicking, beach activities.



**EXISTING CONDITIONS  
& FEATURES**

**MANHATTAN BEACH  
STATE WAYSIDE**



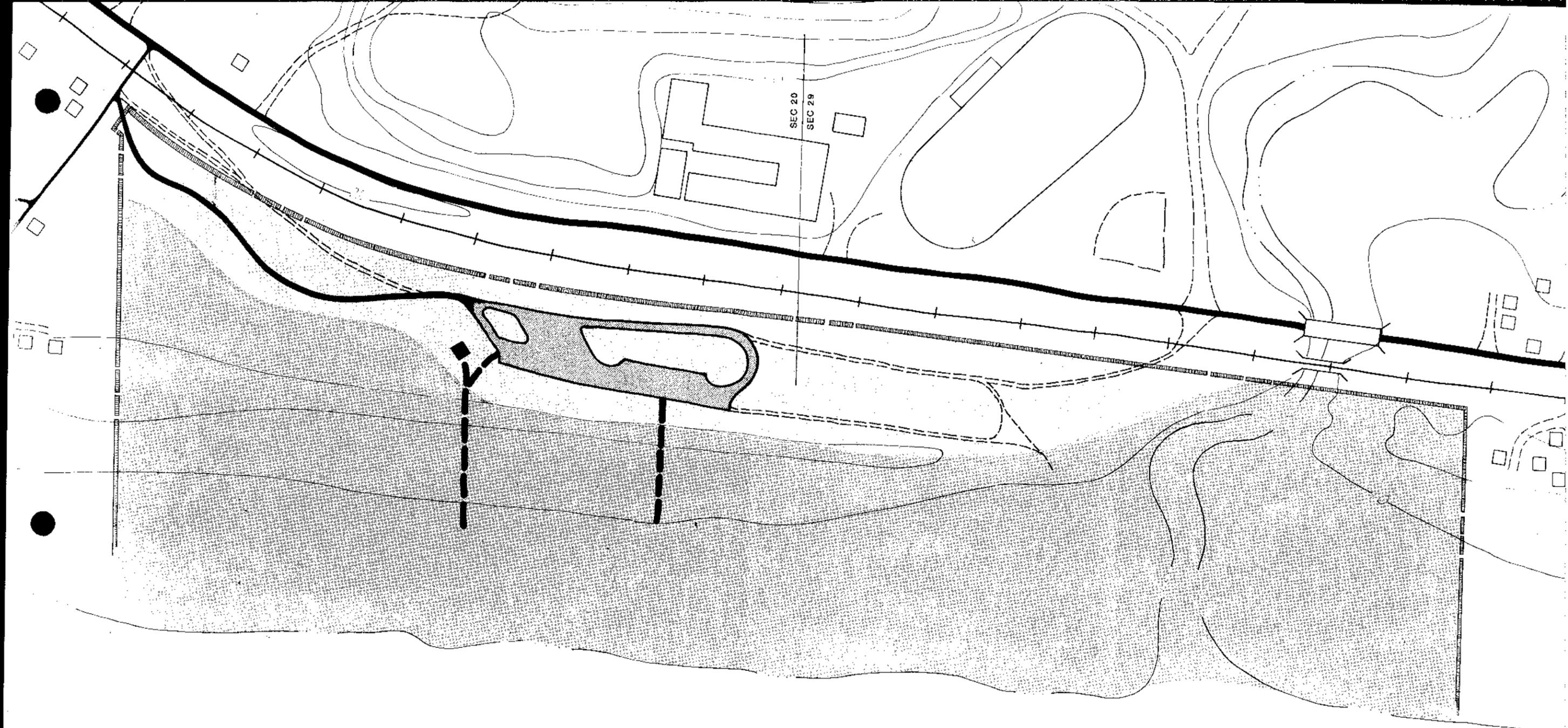
PROTECTION None

MANAGEMENT 30.8 Acres 75%

Most of this former log scaling station is in the Management land use class. It has been altered from the natural condition and much of the area is covered by European beach grass.

DEVELOPMENT 10.2 Acres 25%

The area adjacent to the existing development is suitable for additional development. It is flat and soils are suitable.

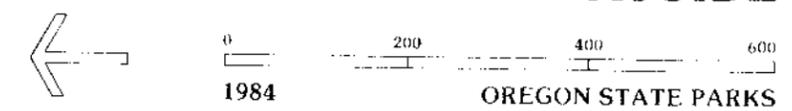


**LAND USE PLAN**

Management   
 Development 

PACIFIC OCEAN

**MANHATTAN BEACH  
 STATE WAYSIDE**



DEVELOPMENT PLAN OBJECTIVES

Provide additional day-use facilities when the need arises.

RECREATION OPPORTUNITIES

This large state wayside is capable of supporting additional recreational facilities when the need arises. At present it receives moderate use.

Since this area was formerly a log scaling station, there are large areas of open space and well-compacted ground to support additional picnicking, parking and restrooms.

IMPACTS OF PROPOSED PARK DEVELOPMENT

Due to the large size and stable condition of the wayside, no adverse impacts are expected if the picnic and parking areas are expanded.

HANDICAP ACCESSIBILITY

The facilities at Manhattan Beach are handicap accessible.

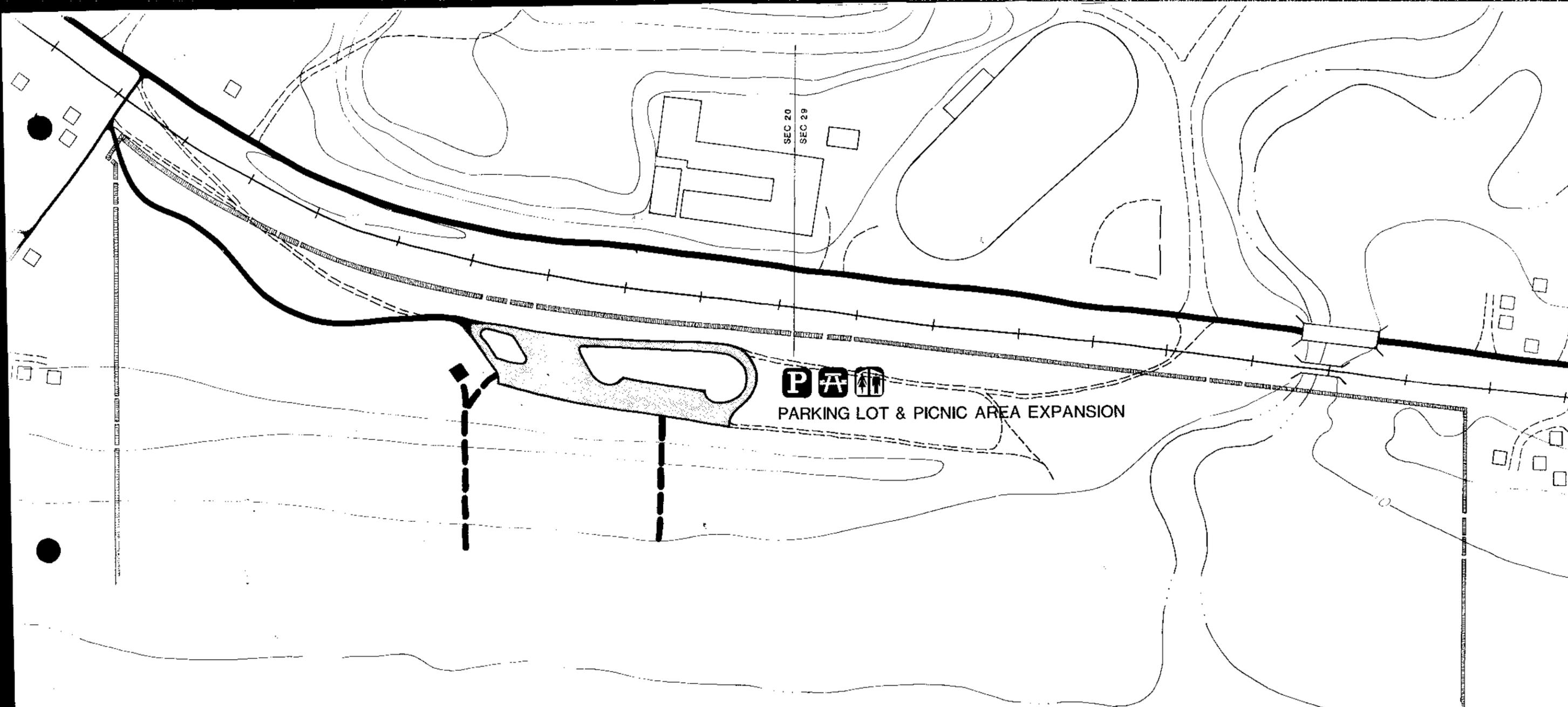
PROJECT SUMMARY

MANHATTAN BEACH

Capital Improvement Projects

Rehabilitation Projects

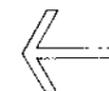
Day-Use Facility Expansion  
\$150,000



PACIFIC OCEAN

DEVELOPMENT PLAN

# MANHATTAN BEACH STATE WAYSIDE



1984 OREGON STATE PARKS

T2N R10W SEC 20,29 Tillamook County

Capitol Improvement Projects

DAY-USE FACILITY EXPANSION

Construction Cost (1987): \$150,000

Annual Maintenance Cost: \$10,000

Existing Conditions:

A large parking lot and restrooms exist at the wayside. There are two picnic table units.

Proposal:

When conditions warrant, expand the parking lot and picnic area to the south. Construct a type 4 toilet building.

MANHATTAN BEACH

BEACHES AND DUNES

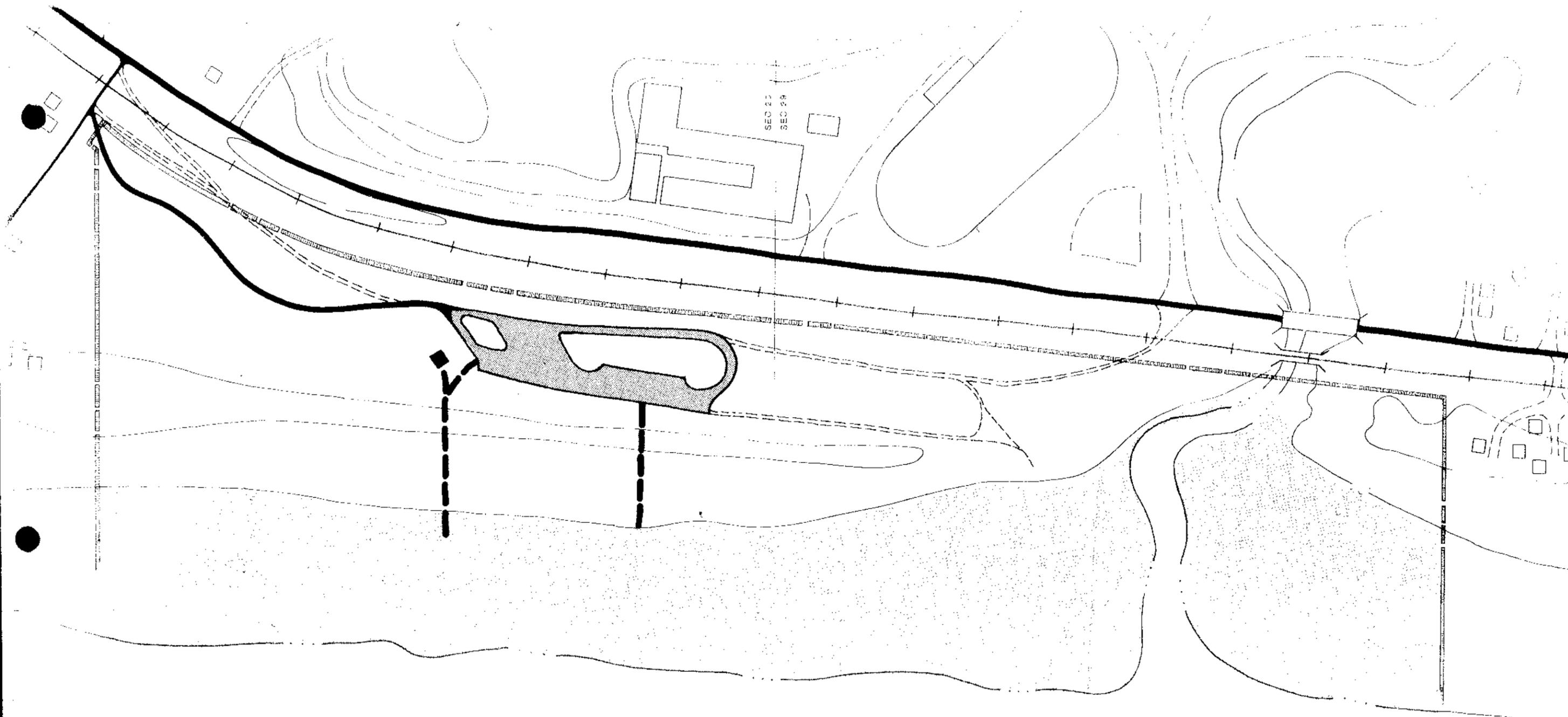
This wayside consists of open sand beach and stabilized dunes. Crescent Lake, located east of the wayside, drains out to the ocean through the southern end of the wayside.

GEOLOGIC HAZARDS

Erosion of the beaches and dunes is a continuing geologic process.

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.

Soils at Manhattan Beach have been altered because of the previous use of the area for a log scaling station. Some portions of the site are quite stable.



**SOILS**

Soil Restriction Ratings for  
Recreation Development

Moderate   
Severe 

PACIFIC OCEAN

**MANHATTAN BEACH  
STATE WAYSIDE**

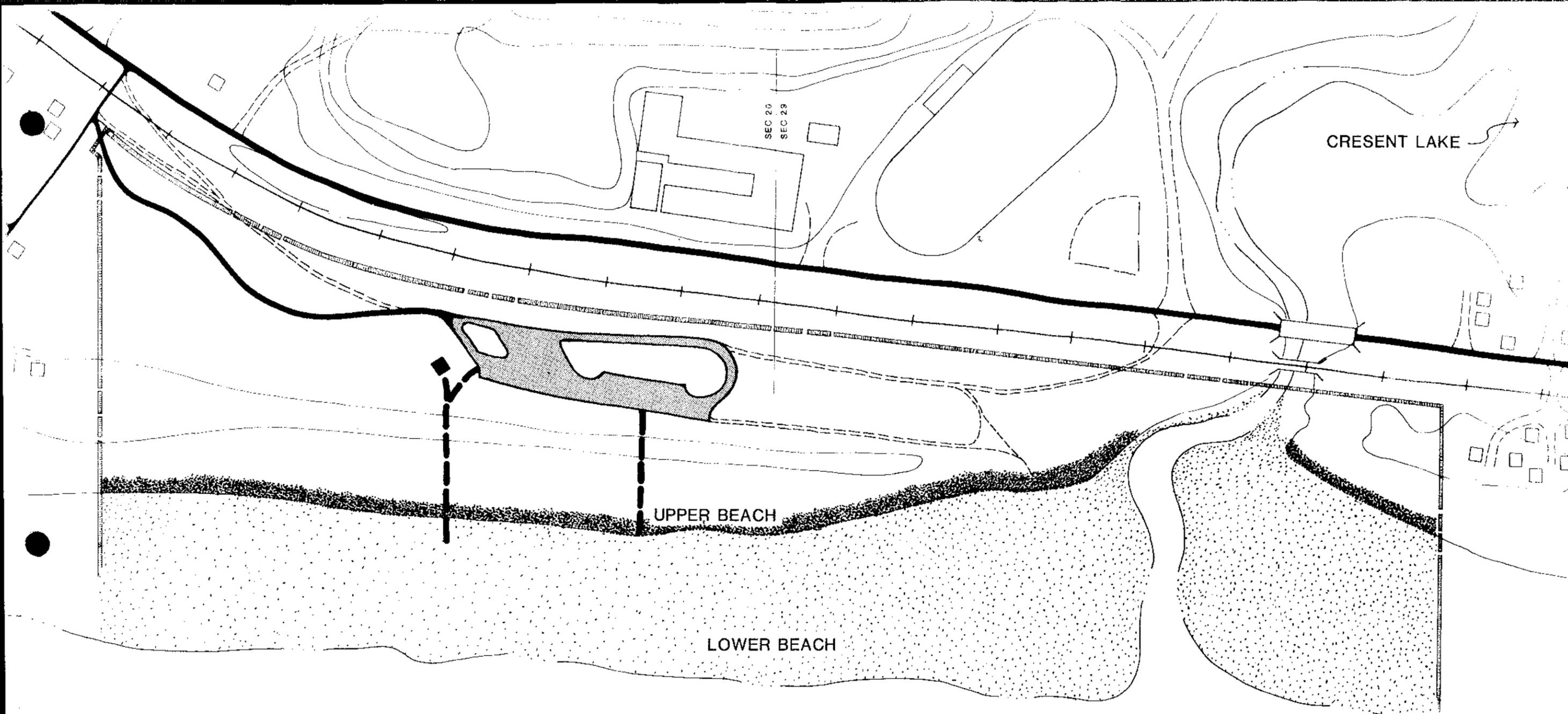


CRESENT LAKE OUTLET

The outlet from Cresent Lake on the east side of Route 101 flows west through Manhattan Wayside, out to the ocean. This outlet is classed as a subtidal, open water, estuarine system.

SAND BEACHES

Upper and lower sand beaches subject to tidal activity are present at Manhattan Beach.



CRESENT LAKE

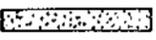
SEC 20  
SEC 29

UPPER BEACH

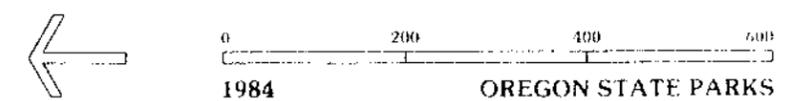
LOWER BEACH

PACIFIC OCEAN

**WATER FEATURES**

- Crescent Lake Outlet -  
Estuarine, Open Water
- Intertidal Sand Beaches
- Upper - Irregularly Wet 
- Lower - Regularly Wet 

**MANHATTAN BEACH  
STATE WAYSIDE**



NATIVE PLANT COMMUNITIES

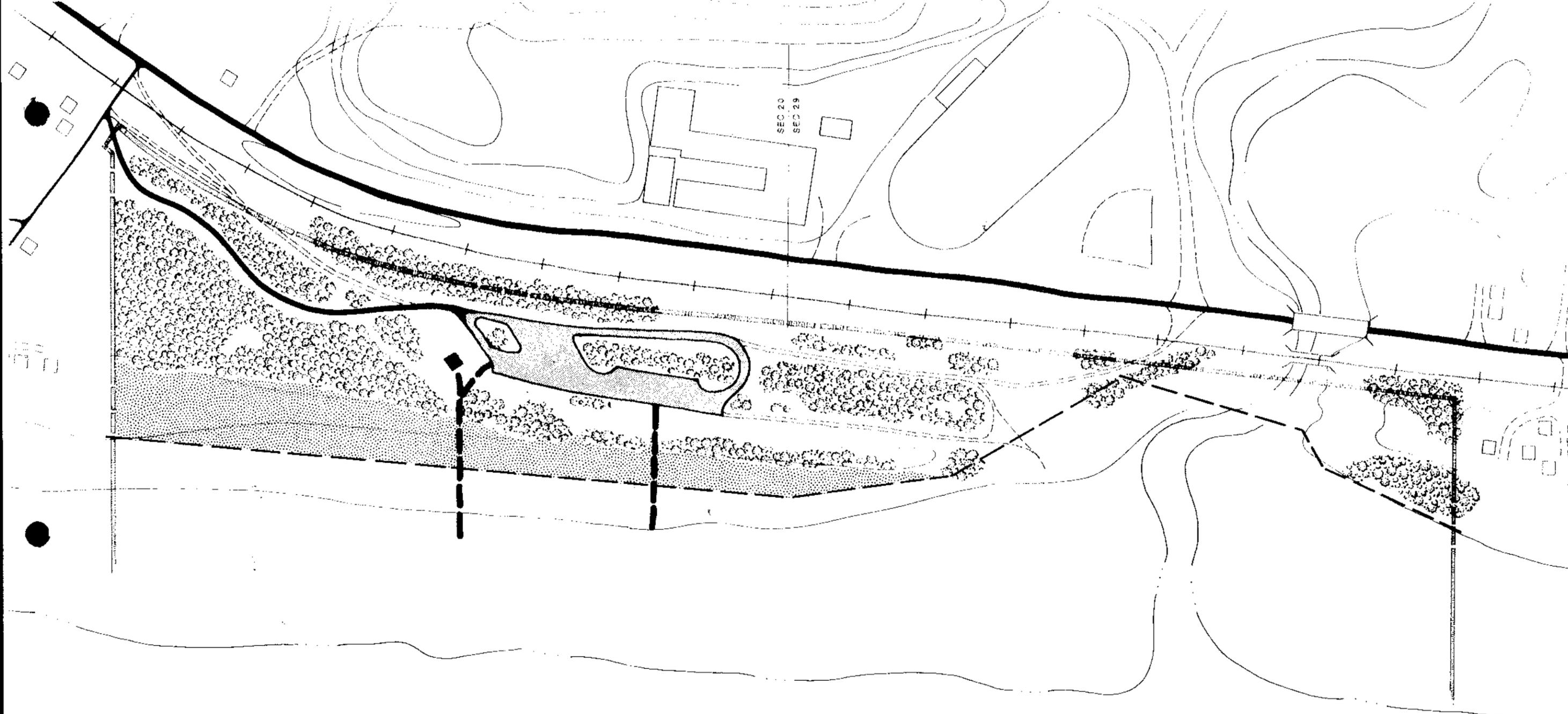
None.

ALTERED VEGETATION

Vegetation at this wayside consists primarily of European beachgrass in the foredunes with stands of shore pine and shrubs farther inland.

RARE AND ENDANGERED SPECIES

None known.



**VEGETATION**

- Shore Pine 
- Beach Grass 
- Beach Zone Line 

PACIFIC OCEAN

**MANHATTAN BEACH  
STATE WAYSIDE**

This large wayside consists of shore pine-stabilized dunes and a long stretch of sand beach.

County Comprehensive Plan Designation: Scenic overlay.

HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

None.

PARK BACKGROUND

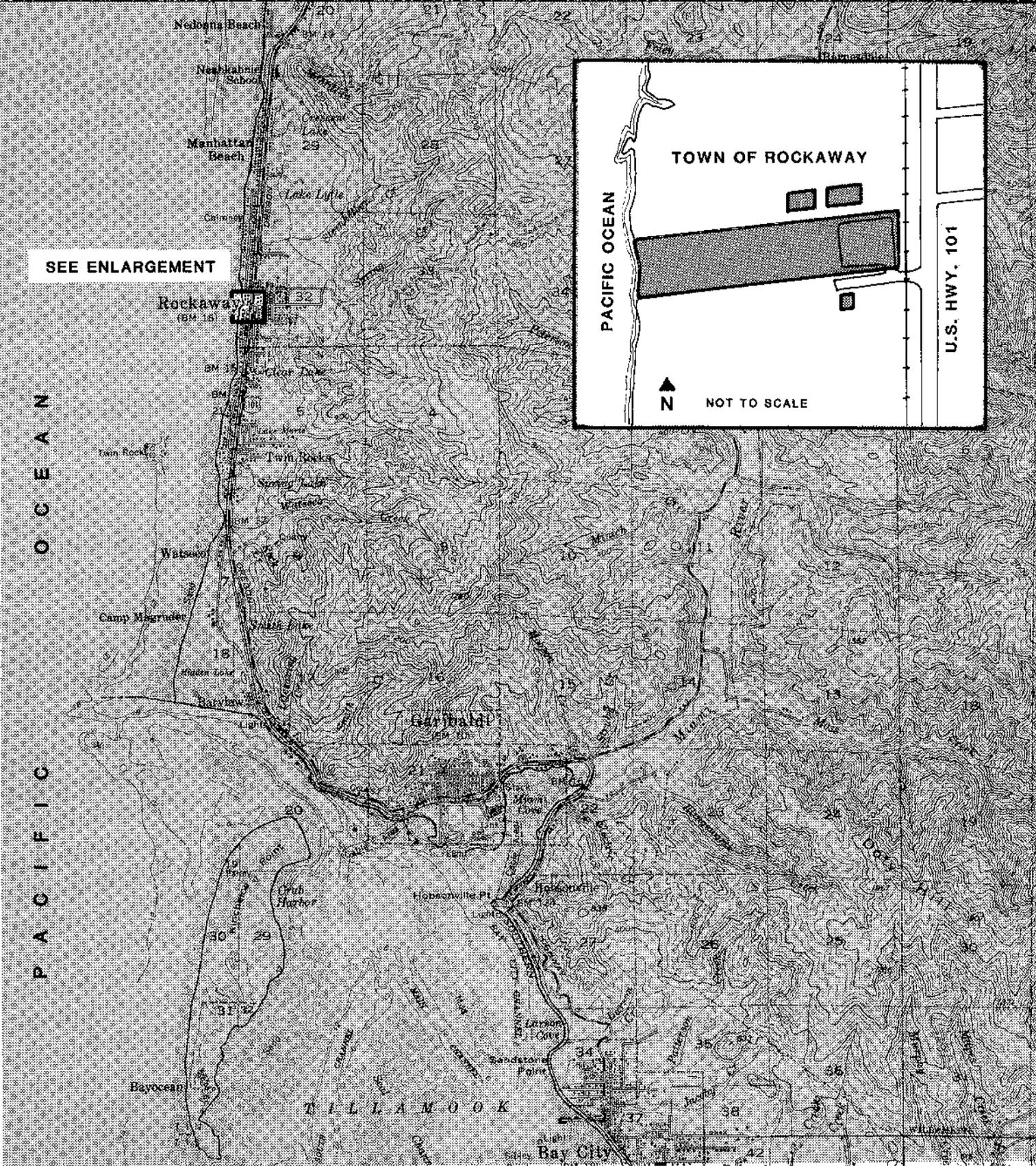
The 41 acres in this park were acquired from Publishers Paper Company in 1970. The land was used by Publishers Paper as a log staging area. A spur line from Southern Pacific Railroad ran through the area.

Zoning	OS - Open Space with Shoreland Overlay (See discussion of OS under <u>Rockaway Beach</u> for permitted uses).
Jurisdiction	All permits are handled by Tillamook County, but since the park is within the Urban Growth Boundary of the City of Rockaway, the City signs off on all permits with approval or denial.
Other Considerations	Under the joint management arrangement, Tillamook County shall have responsibility for land use decisions in this area including zoning, street improvements, standards and subdivisions. City and County shall cooperate in regulating development through UGB policies. The County will enforce the City of Rockaway's land use zone and ordinance in this State Wayside.

Manhattan Beach consists of 41 acres acquired from Publishers Paper. There is an easement on the property granted by Publishers Paper to Union High School.

Agreement

C&A 6506 Agreement with the City of Rockaway. In exchange for free water and services, the State agrees to keep the outfall of Crescent Lake open by removing sand and debris from the mouth whenever the level of the lake reaches 8' in elevation.



# ROCKAWAY BEACH STATE WAYSIDE

T2N R10W SEC 32

TILLAMOOK COUNTY



OREGON STATE PARKS 8/86

EXISTING CONDITIONSROCKAWAY BEACH

Location: In community of Rockaway, on U.S. 101, Tillamook County.

Acreage: 3.02 Acres (4 parcels).

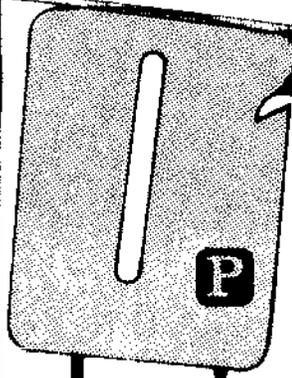
Description: Rockaway Beach State Wayside consists of four small parcels of land with parking, restrooms, and beach access.

Day-Use Facilities: Parking lot, restrooms.

Average Annual  
Day-Use Attendance  
1980-1985: 326,310.

Recreation Activities: Beach activities.

RTE 101



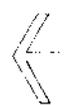
LAKE SEAVIEW  
OUTLET

SAND BEACH

EXISTING CONDITIONS  
& FEATURES

ROCKAWAY BEACH  
STATE WAYSIDE

PACIFIC OCEAN



0 100 200 300  
FEET

1984

OREGON STATE PARKS

T2N R10W SEC 32 Tillamook County

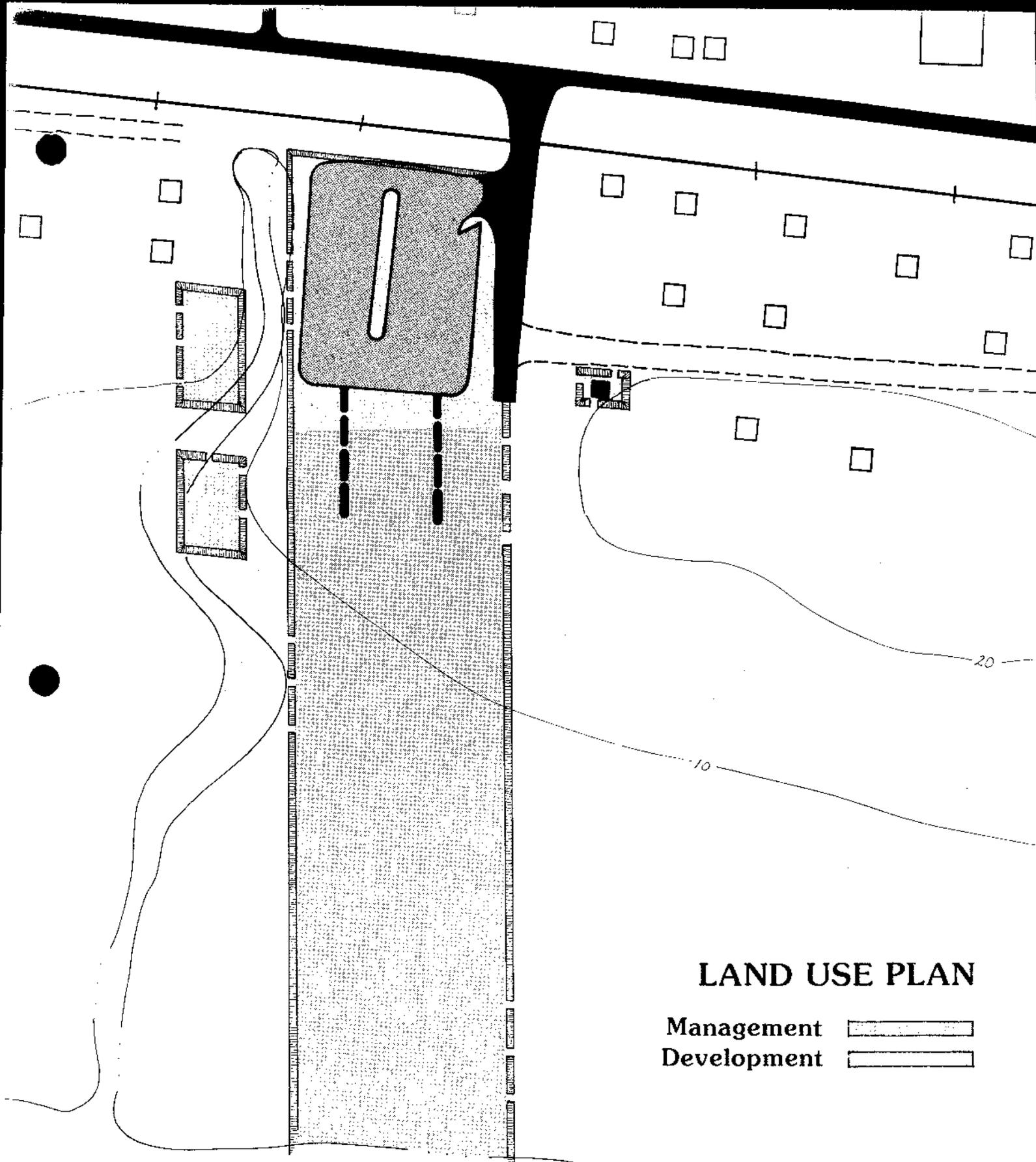
PROTECTION None

MANAGEMENT 2.12 Acres 70%

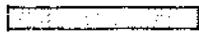
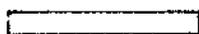
All of the wayside that is not already developed is in the Management class. The Management areas consist of stabilized sand dunes or open beach.

DEVELOPMENT 0.9 Acres 30%

All existing facilities are in the Development land use class. There is no room for additional development at this wayside.

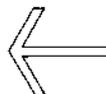


# LAND USE PLAN

Management   
 Development 

PACIFIC OCEAN

## ROCKAWAY BEACH STATE WAYSIDE



0 100 200 300

1984

OREGON STATE PARKS

T2N R10W SEC 32

Tillamook County

DEVELOPMENT PLAN OBJECTIVES

Maintain and improve the park facilities.

Replace the restroom building with a new type-4 when it is economically feasible to do so.

RECREATION OPPORTUNITIES

This wayside is very limited in terms of its physical capability to accommodate any more recreation use. The only flat areas are already occupied by a parking lot and restrooms. The rest of the property is open sand dunes and beach.

HANDICAP ACCESSIBILITY

The facilities at Rockaway Beach are handicap accessible.

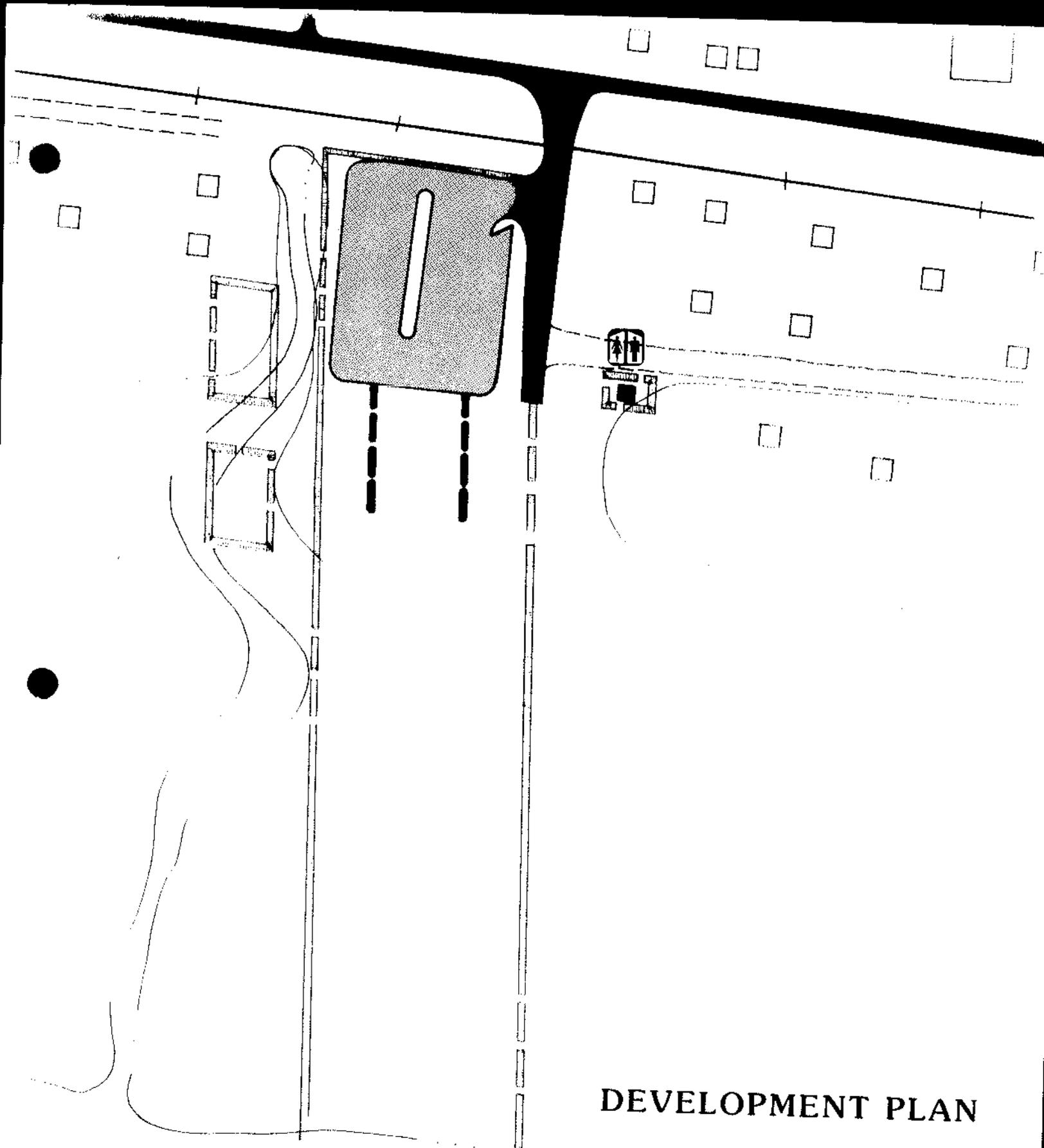
PROJECT SUMMARY

ROCKAWAY BEACH

Capital Improvement Projects

Rehabilitation Projects

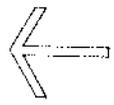
Restroom Building Replacement  
\$60,000



DEVELOPMENT PLAN

ROCKAWAY BEACH  
STATE WAYSIDE

● PACIFIC OCEAN



1984 OREGON STATE PARKS

T2N R10W SEC 32 Tillamook County



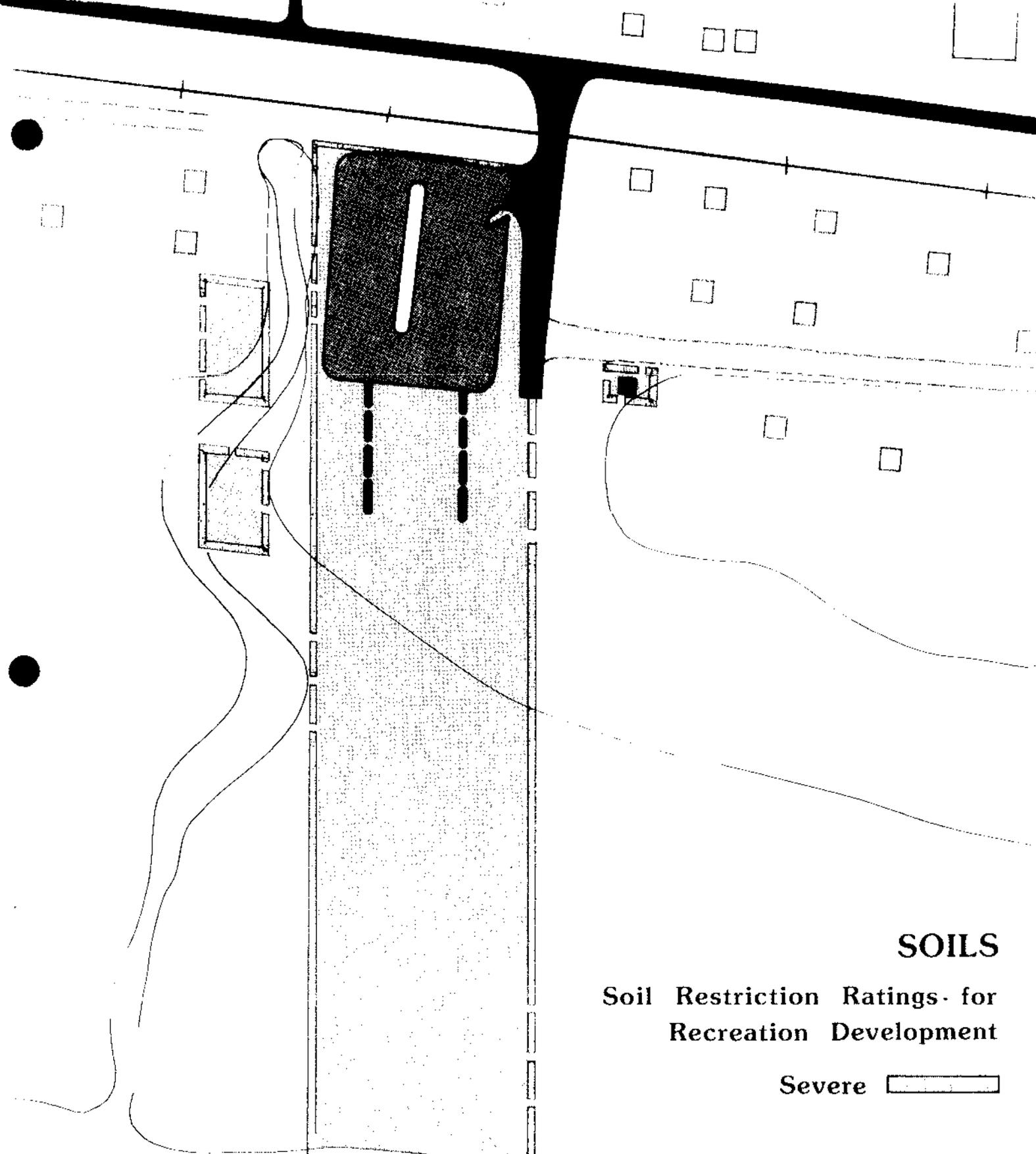
BEACHES

There is a creek adjacent to the northern boundary of the wayside. The remainder of the site is open sand.

GEOLOGIC HAZARDS

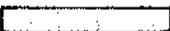
Erosion of the beaches and dunes is a continuing geologic process.

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.



**SOILS**

Soil Restriction Ratings for Recreation Development

Severe 

PACIFIC OCEAN

**ROCKAWAY BEACH  
STATE WAYSIDE**

0 100 200 300  
feet

1984

OREGON STATE PARKS

T2N R10W SEC 32 Tillamook County

WATER FEATURES

ROCKAWAY BEACH

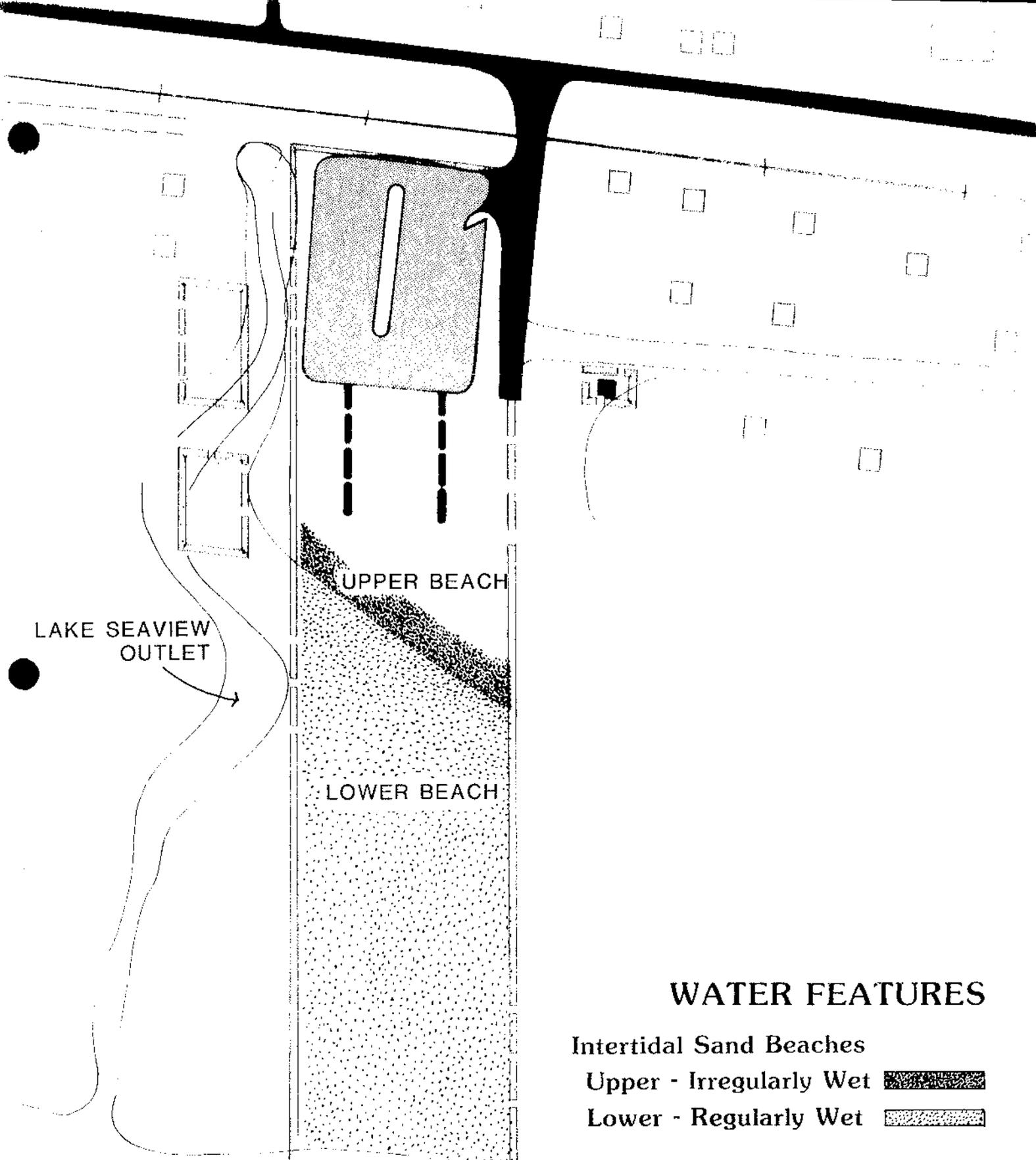
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MARSH OUTLET

A small outlet from a marshy area on the east side of Route 101 flows just outside the northern boundary of Rockaway Wayside.

SAND BEACHES

Rockaway also has a good deal of upper and lower sand beach areas subject to tidal activity.



LAKE SEAVIEW  
OUTLET

UPPER BEACH

LOWER BEACH

### WATER FEATURES

Intertidal Sand Beaches

Upper - Irregularly Wet

Lower - Regularly Wet

## ROCKAWAY BEACH STATE WAYSIDE

PACIFIC OCEAN

1984

OREGON STATE PARKS

OSD 8409 1/4 12 1/8" x 11" 1/8" 1/8" 1/8" 1/8"

NATIVE PLANT COMMUNITIES

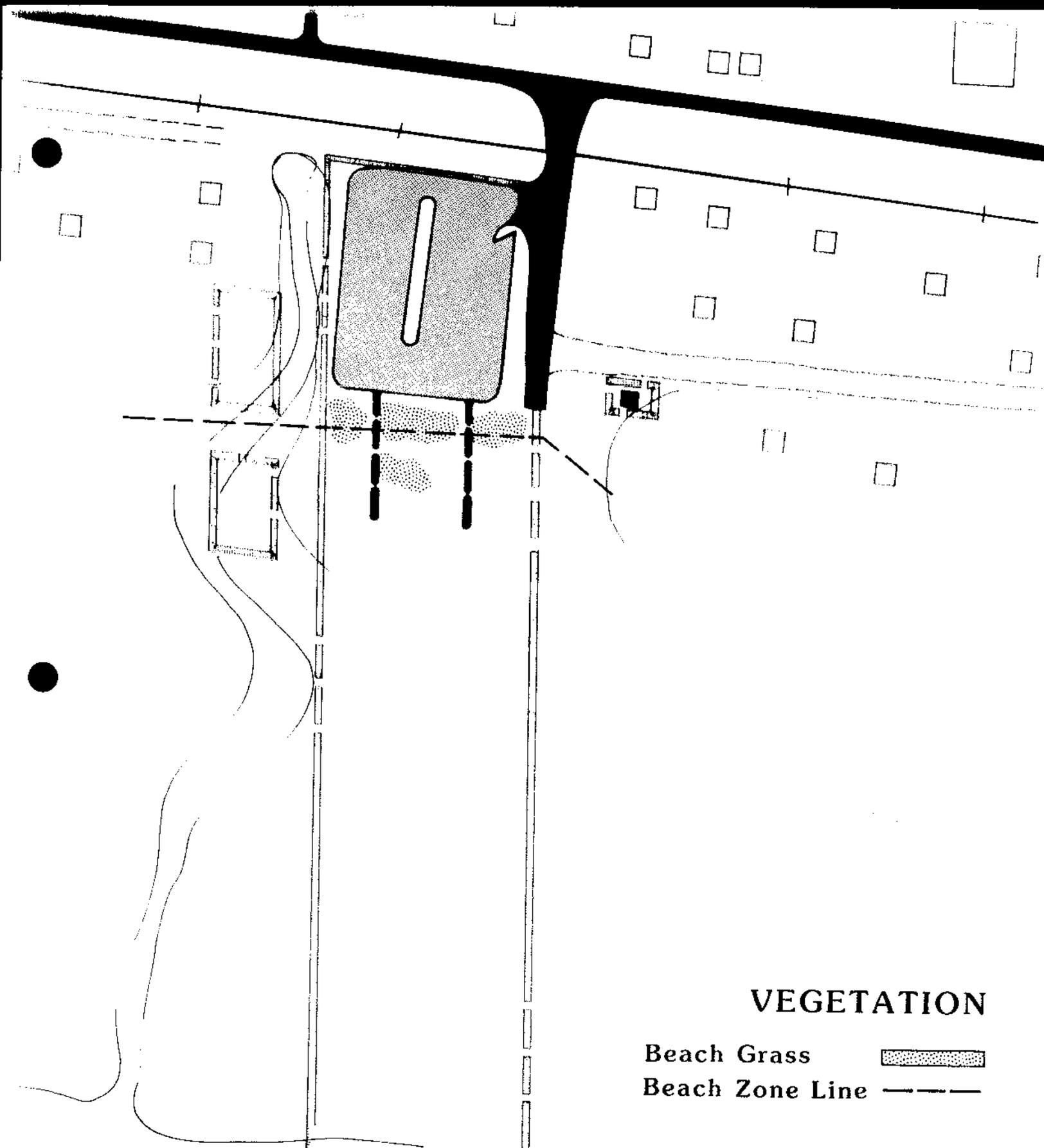
None.

ALTERED VEGETATION

Vegetation here consists of European beachgrass.

RARE AND ENDANGERED SPECIES

None known.



**VEGETATION**

Beach Grass   
 Beach Zone Line 

PACIFIC OCEAN

**ROCKAWAY BEACH  
 STATE WAYSIDE**



1984 OREGON STATE PARKS

T2N R10W SEC 32 Tillamook County

This wayside, located in the community of Rockaway, consists of little more than a parking lot and a short stretch of sand beach.

HISTORIC AND ARCHEOLOGIC FEATURES

ROCKAWAY BEACH

HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

None.

PARK BACKGROUND

The majority of this wayside was purchased from Leo and Rose Cassidy in 1967. Other acquisitions have brought the park acreage to 3.02.

Zoning

OS - Open Space. Tax lots 9000, 9100  
C-1 Commercial - Tax lots 8700, 8800, 9290

The following uses are permitted outright in an OS zone:

1. Utility lines necessary for public services.
2. Public or private outdoor recreation areas and parks. (These are to consist of low intensity, primarily non-structural uses. Structures are to be limited to minimal uses necessary for the activity).

The following is permitted outright in a C-1 zone:

1. Parks and publicly owned recreation areas.

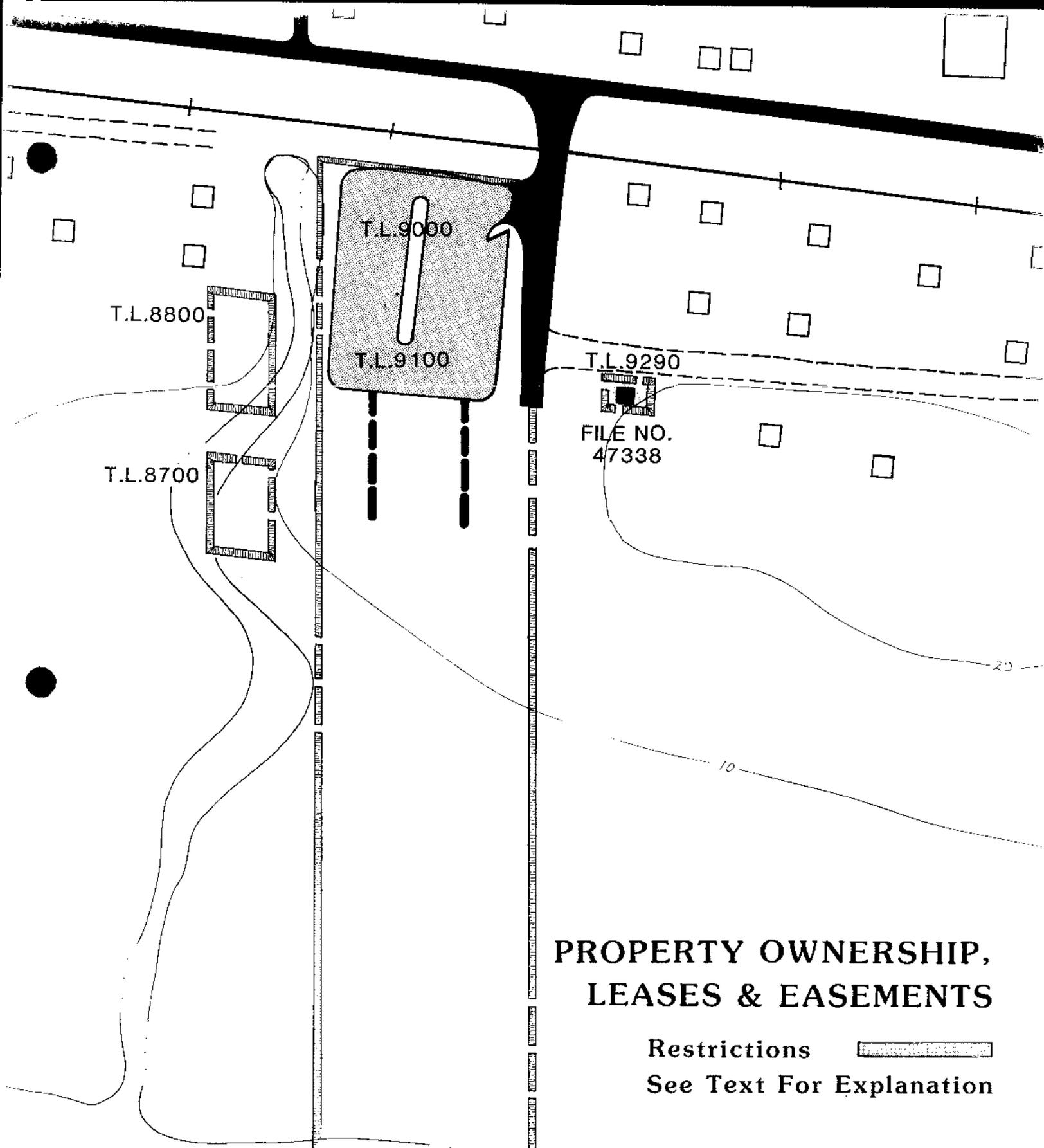
Jurisdiction

City of Rockaway

Other Considerations

None

The 3.02 acres of Rockaway Beach are owned free and clear. In exchange for the State's assumption of the title, maintenance and operation of the restroom building and property, the City of Rockaway has agreed to provide sewer and water service at no cost to the State as long as the State maintains the restroom building.

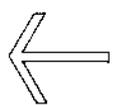


PACIFIC OCEAN

**PROPERTY OWNERSHIP,  
LEASES & EASEMENTS**

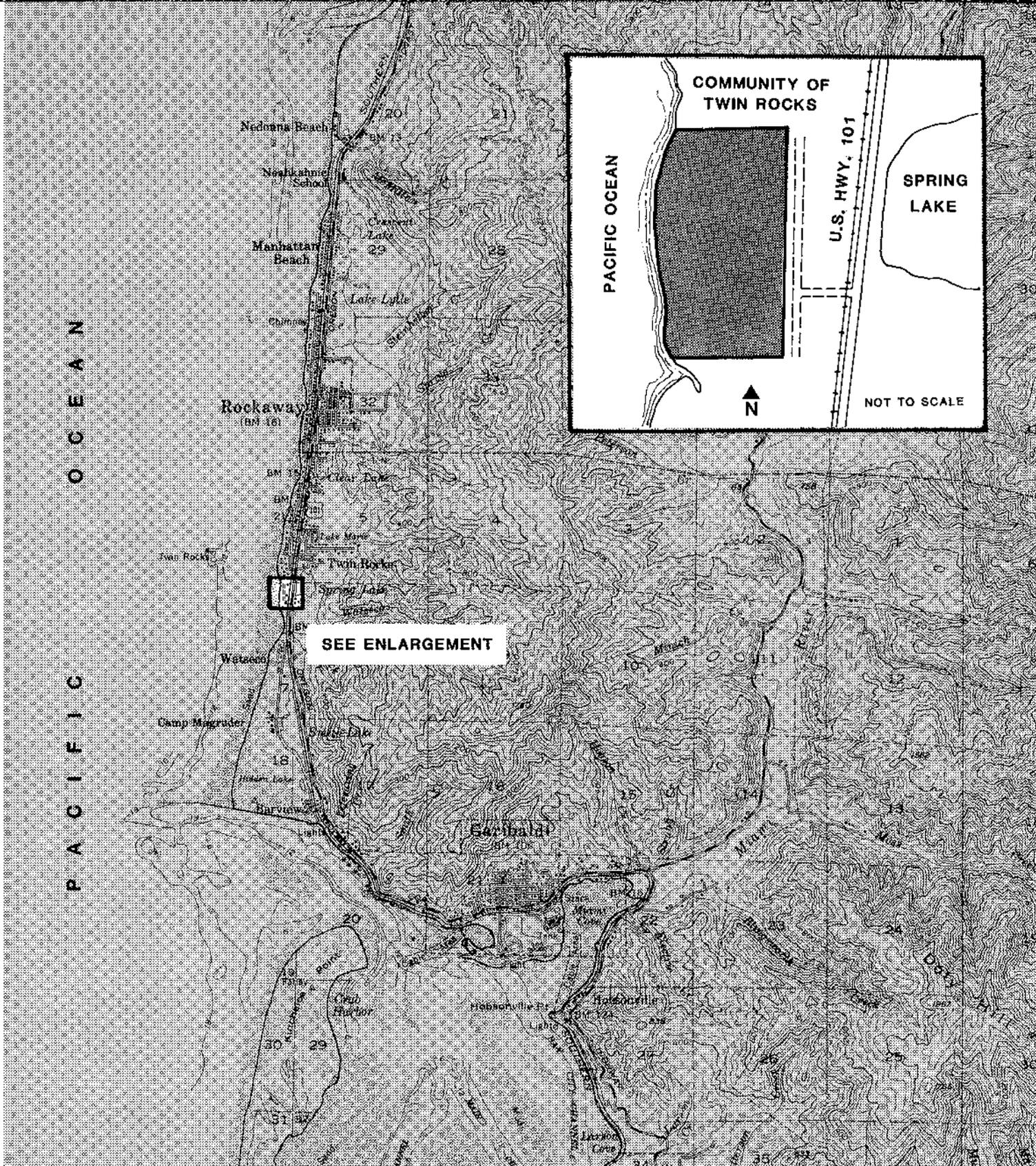
Restrictions   
See Text For Explanation

**ROCKAWAY BEACH  
STATE WAYSIDE**



1984 OREGON STATE PARKS

T2N R10W SEC 32 Tillamook County



SEE ENLARGEMENT

# TWIN ROCKS STATE WAYSIDE

T11 N R10W SEC 7  
TILLAMOOK COUNTY



EXISTING CONDITIONS

TWIN ROCKS

Location: South of community of Rockaway, off U.S. 101, Tillamook County.

Acreage: 22.00 Acres.

Description: This wayside is a large sandy stretch of beach with no developments. Most of the wayside is seaward of the beach zone line, consequently no development is planned for this area.

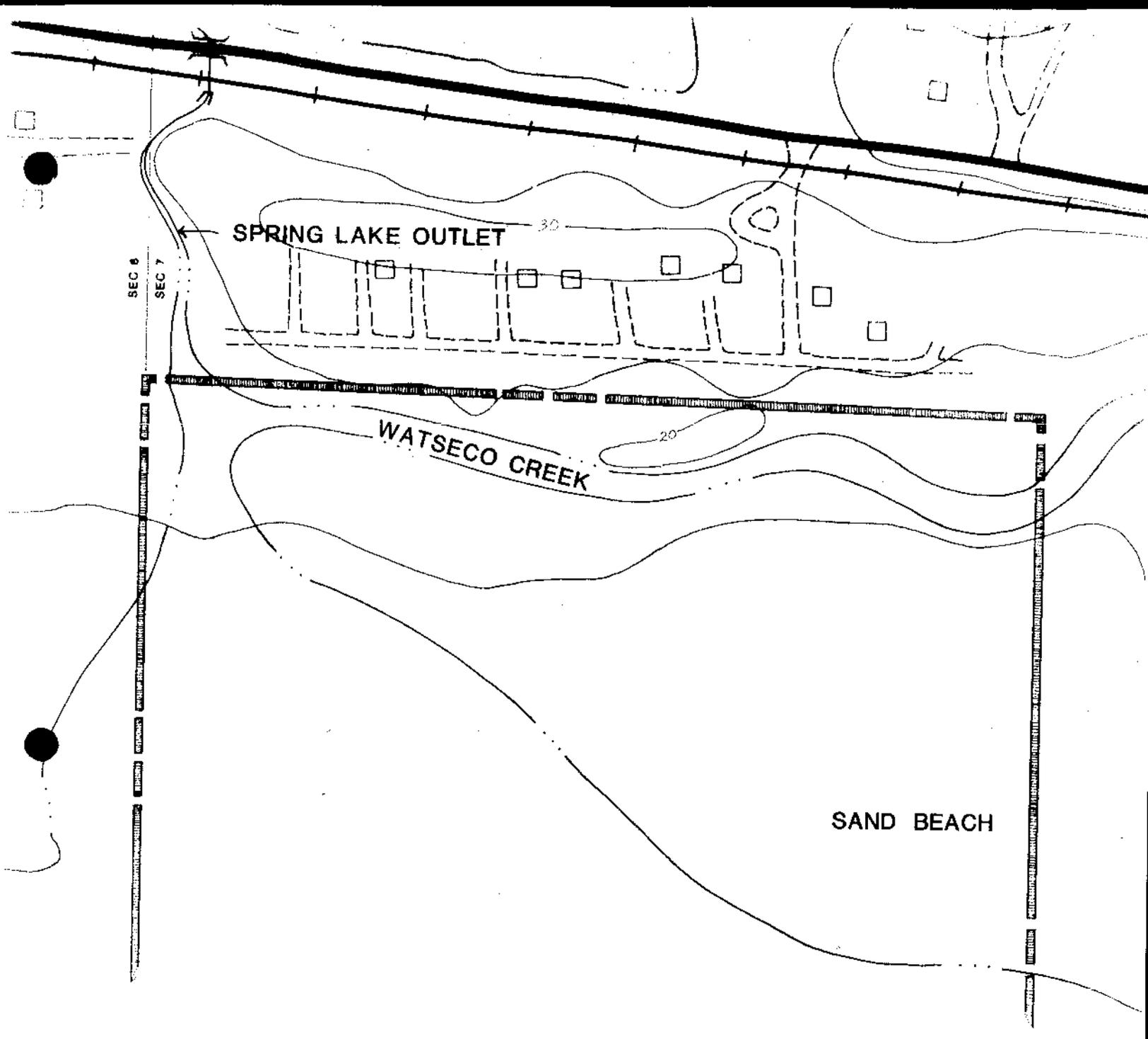
Two creeks flow through the property causing the sand to shift and change constantly.

Primary use of the area comes from local residents and a youth camp located across Highway 101.

Day-Use Facilities None.

Average Annual Day-Use Attendance 1980-1985: Not recorded.

Recreation Activities: Beach activities.



PACIFIC OCEAN

**EXISTING CONDITIONS  
& FEATURES**

**TWIN ROCKS  
STATE WAYSIDE**



1984

OREGON STATE PARKS

T1N R10W SEC 7 Tillamook County

LAND USE PLAN

TWIN ROCKS

22.00 Acres

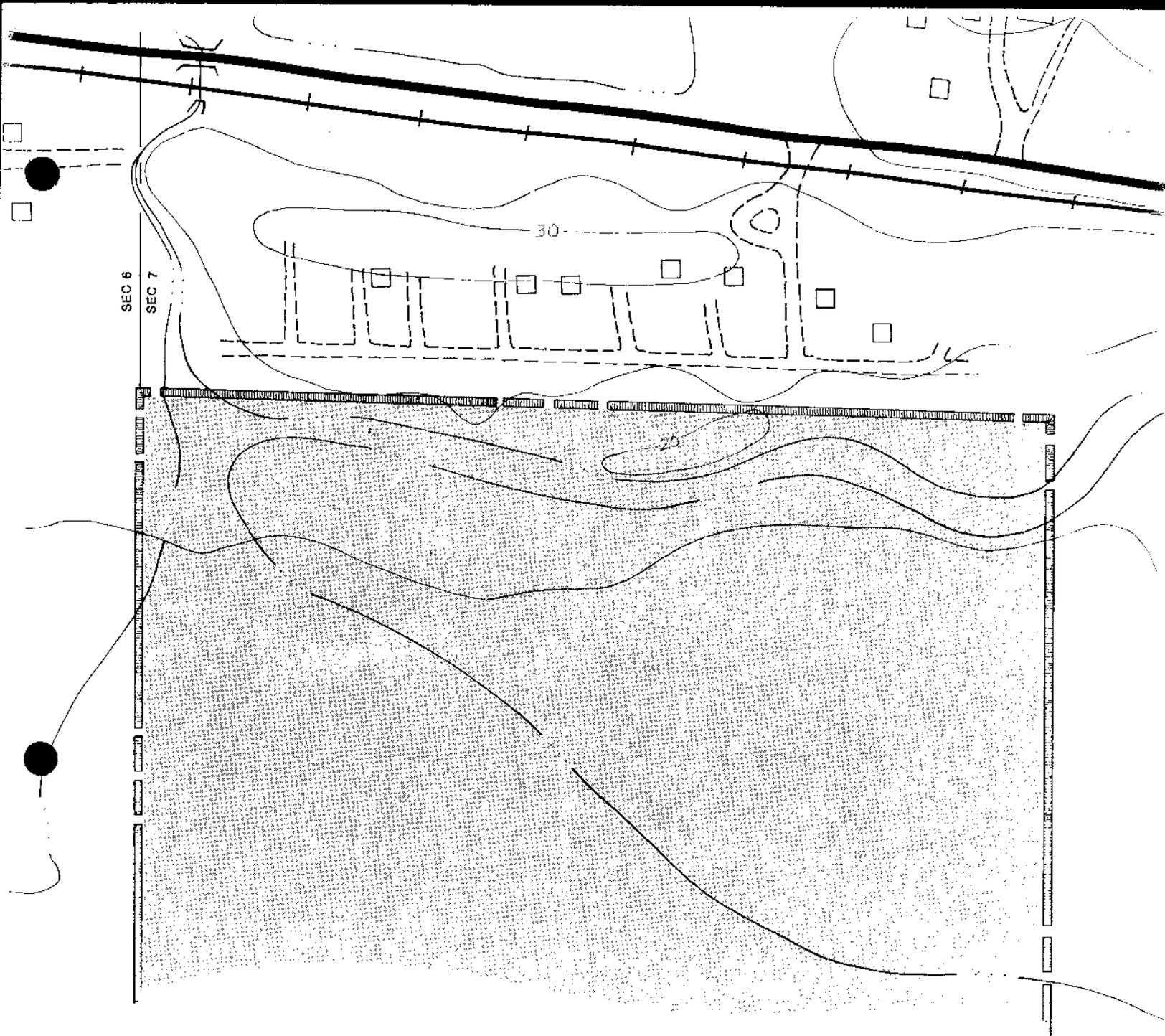
PROTECTION None

MANAGEMENT 22.0 Acres 100%

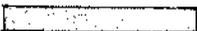
This wayside consists of dune areas stabilized by European beach grass and areas of open sand. The influence of the ocean and two creeks which flow through this small property cause the continual shifting of the open sand.

DEVELOPMENT None

There is no area large enough or stable enough for development.



# LAND USE PLAN

Management 

PACIFIC OCEAN

## TWIN ROCKS STATE WAYSIDE



0 200 400 600

1984

OREGON STATE PARKS

T1N R10W SEC 7

Tillamook County

DEVELOPMENT PLAN OBJECTIVES

Maintain the wayside in its present natural condition.

RECREATION OPPORTUNITIES

This wayside consists primarily of sand dunes and beach. There are two creeks which flow through it and constantly shift their courses. There is very little land available on which to provide for any recreation activities beyond those which occur now. The wayside serves primarily as a beach access for local residents and for the Friends camp located nearby.

Creek Channel Stabilization

At some time in the future, the County has indicated a desire to stabilize the channel of Watseco Creek to an earlier configuration. Parks should be actively involved in any such proposals to protect the aesthetic values of the creek and wayside and to ensure that the final product is well-designed and environmentally sound.

BEACHES AND DUNES

Twin Rocks Wayside has a small amount of stable sand at the east edge of the site. Two small creeks flow into the area from the north and south, join in the center of the property and flow west to the ocean. Most of the wayside consists of open sand in an active foredune area.

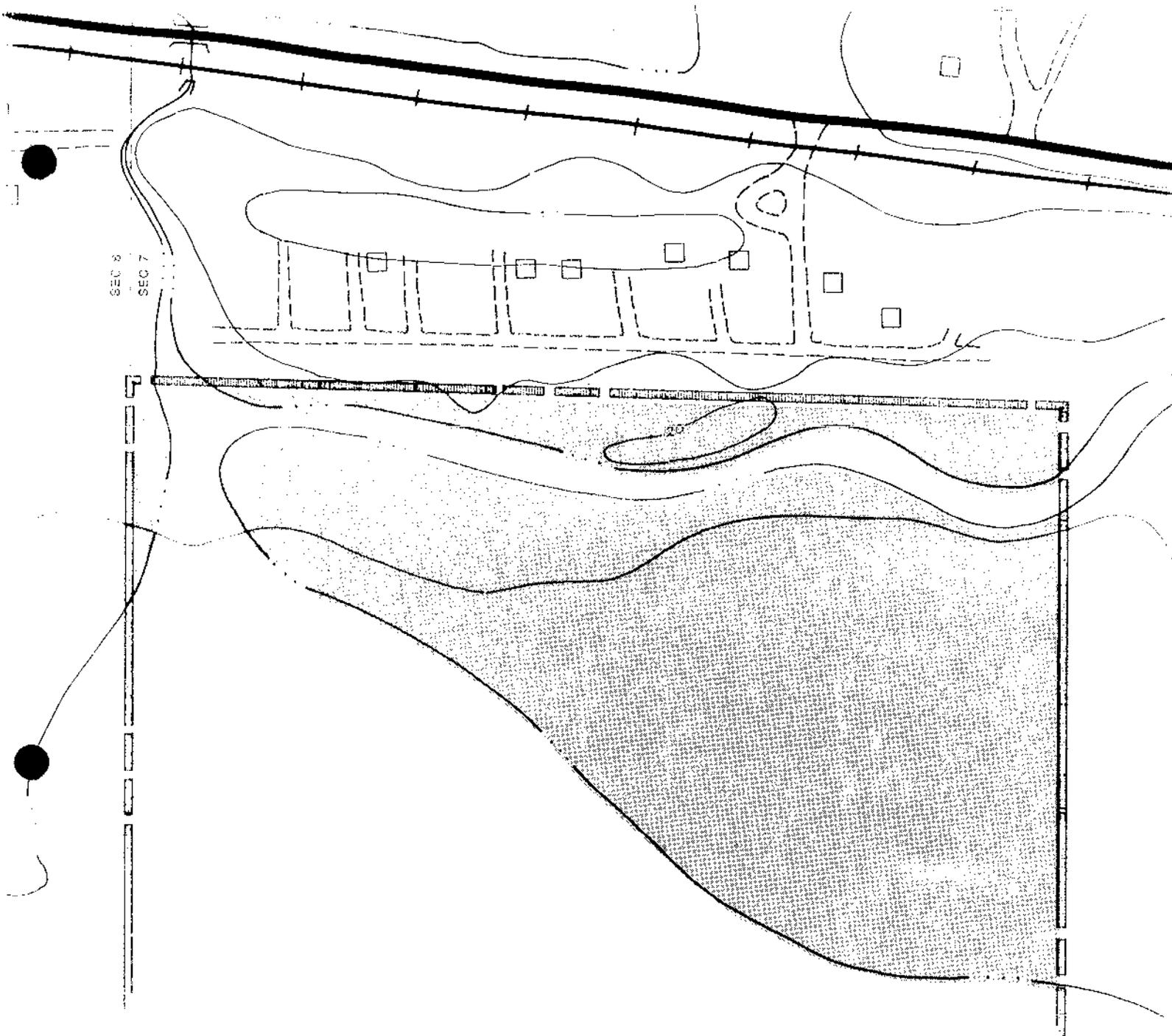
TWIN ROCKS

The Twin Rocks for which this wayside is named are two basalt remnants located some distance offshore from the wayside.

GEOLOGIC HAZARDS

Erosion of the beaches and dunes is a continuing geologic process.

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.



# SOILS

Soil Restriction Ratings for  
Recreation Development

Severe

PACIFIC OCEAN

## TWIN ROCKS STATE WAYSIDE



1984

OREGON STATE PARKS

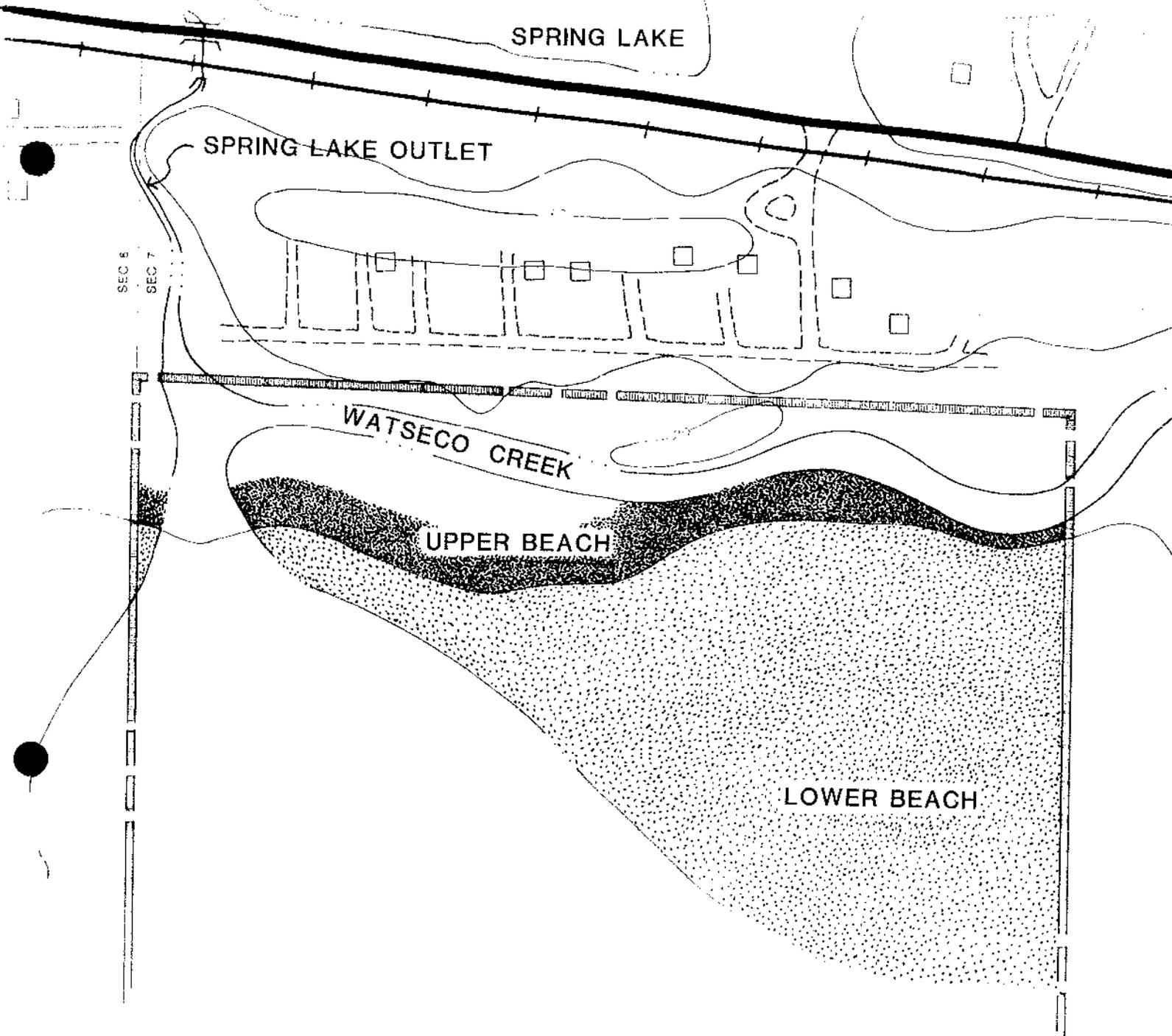
T1N R10W SEC 7 Tillamook County

SPRING LAKE OUTLET

On the north side of the Twin Rocks Wayside, the Spring Lake outlet flows toward the ocean. The Spring Lake outlet is classed as a subtidal, open water, estuarine system.

WATSECO CREEK

The Spring Lake outlet is joined by another small stream which flows along the eastern boundary of the park which is permanent, open water, lower perennial riverine.



SPRING LAKE

SPRING LAKE OUTLET

SEC 6  
SEC 7

WATSECO CREEK

UPPER BEACH

LOWER BEACH

PACIFIC OCEAN

**WATER FEATURES**

Spring Lake Outlet - Estuarine,  
Open Water

Creek - Permanent, Open Water

Intertidal Sand Beaches

Upper - Irregularly Wet 

Lower - Regularly Wet 

**TWIN ROCKS  
STATE WAYSIDE**



1984

OREGON STATE PARKS

T1N R10W SEC 7

Tillamook County

NATIVE PLANT COMMUNITIES

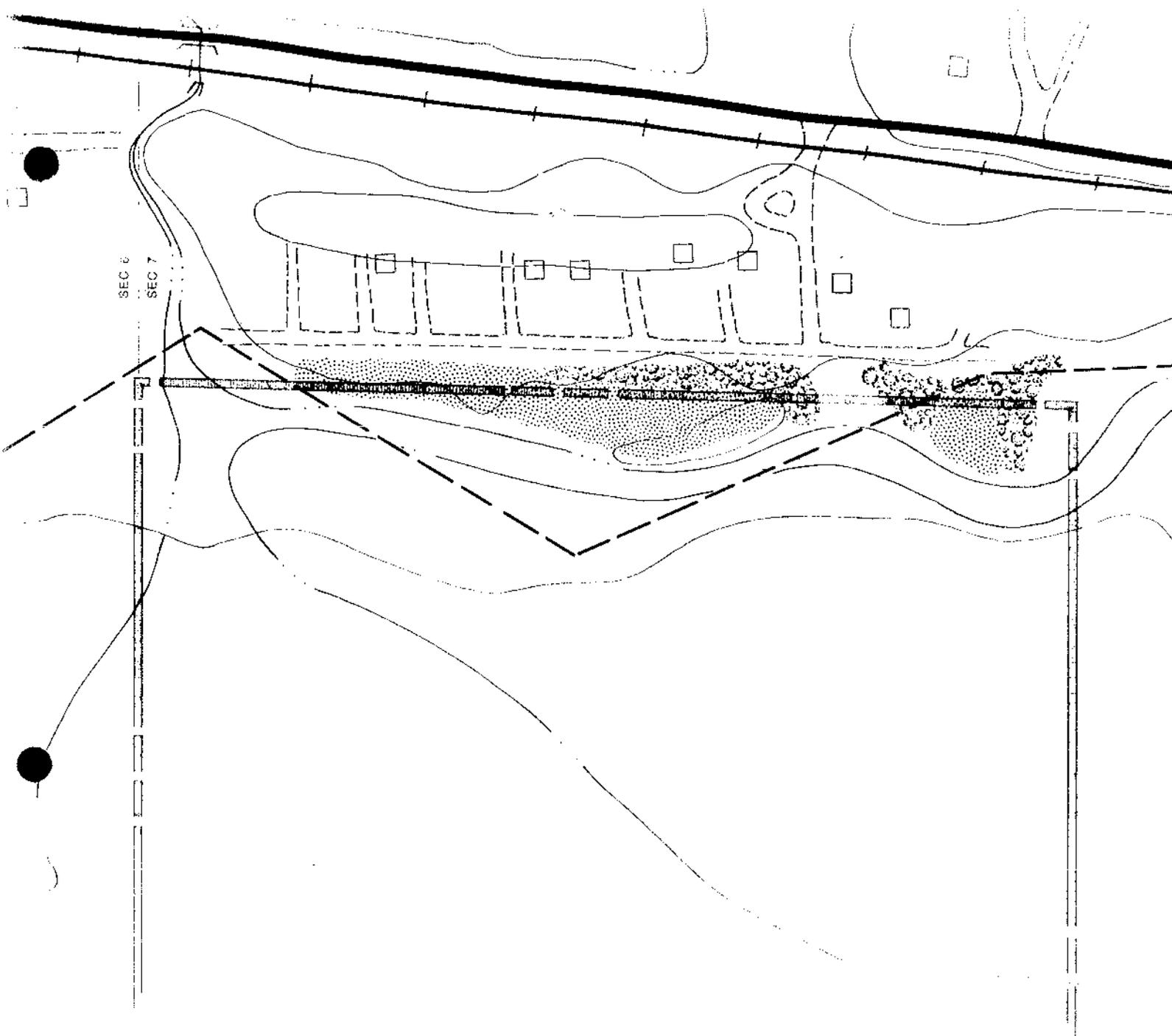
None.

ALTERED VEGETATION

Vegetation at this wayside consists of European beachgrass on the foredunes and shrubs mixed with shore pine farther inland.

RARE AND ENDANGERED SPECIES

None known.

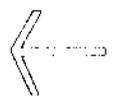


### VEGETATION

- Shore Pine
- Beach Grass
- Beach Zone Line

PACIFIC OCEAN

## TWIN ROCKS STATE WAYSIDE



1984 OREGON STATE PARKS

T1N R10W SEC 7 Tillamook County

This wayside consists almost entirely of sand beach which is constantly changing due to the interaction of the ocean and the two creeks which flow through it.

County Comprehensive Plan Designation: Scenic overlay.

HISTORIC AND ARCHEOLOGIC FEATURES

TWIN ROCKS

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HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

None.

PARK BACKGROUND

The 22.0 acres in this wayside were purchased from Malcom McDonald and assorted heirs in 1971.

Zoning	RM - Recreation Management with Shoreland Overlay
Jurisdiction	Tillamook County
Other Considerations	The majority of the park is located west of the Ocean Shore Boundary. Any structures placed west of the zone line would require a permit from the State Parks and Recreation Division as well as any other county permits.

OWNERSHIP

TWIN ROCKS

---

Twin Rocks consists of 22.0 acres, owned free and clear. Twenty acres of this park lie west of the beach zone line.

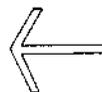


P A C I F I C O C E A N

# PROPERTY OWNERSHIP, LEASES & EASEMENTS

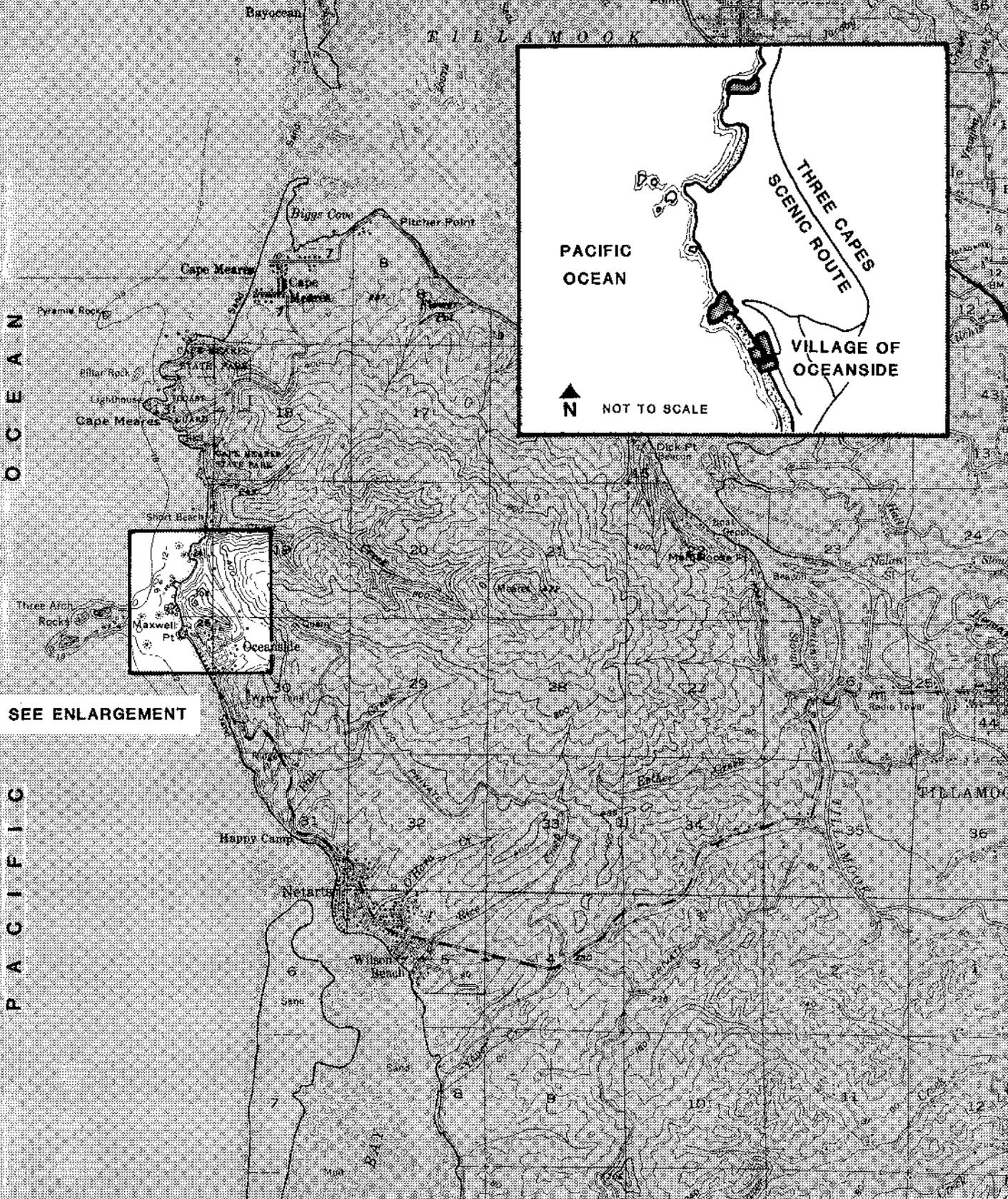
No Restrictions

## TWIN ROCKS STATE WAYSIDE



1984

OREGON STATE PARKS



SEE ENLARGEMENT

# OCEANSIDE BEACH STATE WAYSIDE

T1S R11W SEC 24, 25  
TILLAMOOK COUNTY



EXISTING CONDITIONS

OCEANSIDE BEACH

Location: In community of Oceanside, Tillamook County.

Acreage: 7.32 Acres (5 parcels).

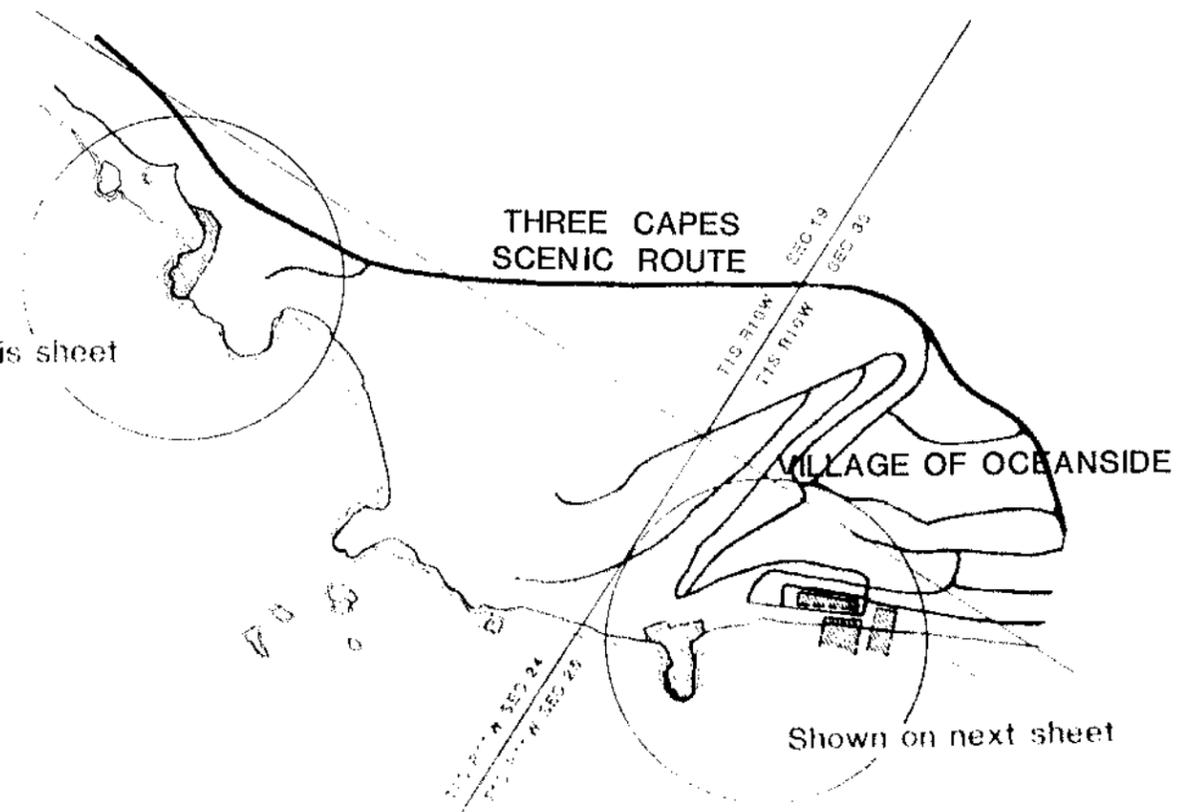
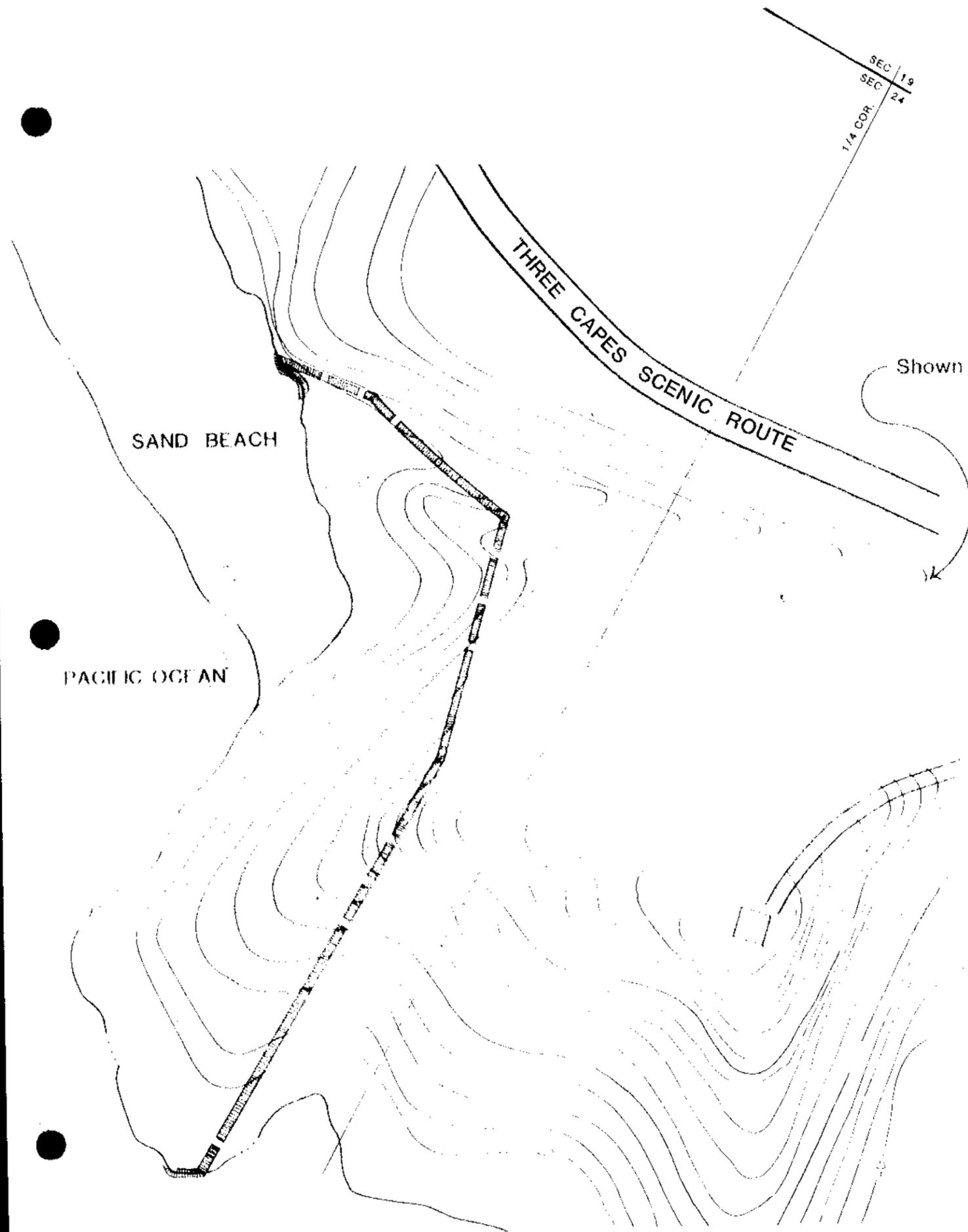
Description: Five parcels of land make up Oceanside Beach State Wayside. The primary attraction of this wayside is the access to the beach in this area.

Day-Use Facilities: Parking and restrooms.

Prior to park acquisition of this property, a tunnel was constructed through Maxwell Point to provide access to the north side of the point during high tides. The tunnel is presently completely blocked by landslide debris and no plans exist to reopen it at this time.

Average Annual Day-Use Attendance 1980-1985: 268,700.

Recreation Activities: Beach activities.



**EXISTING CONDITIONS  
& FEATURES**

Park Property

sheet 1 of 2  
**OCEANSIDE BEACH  
STATE WAYSIDE**

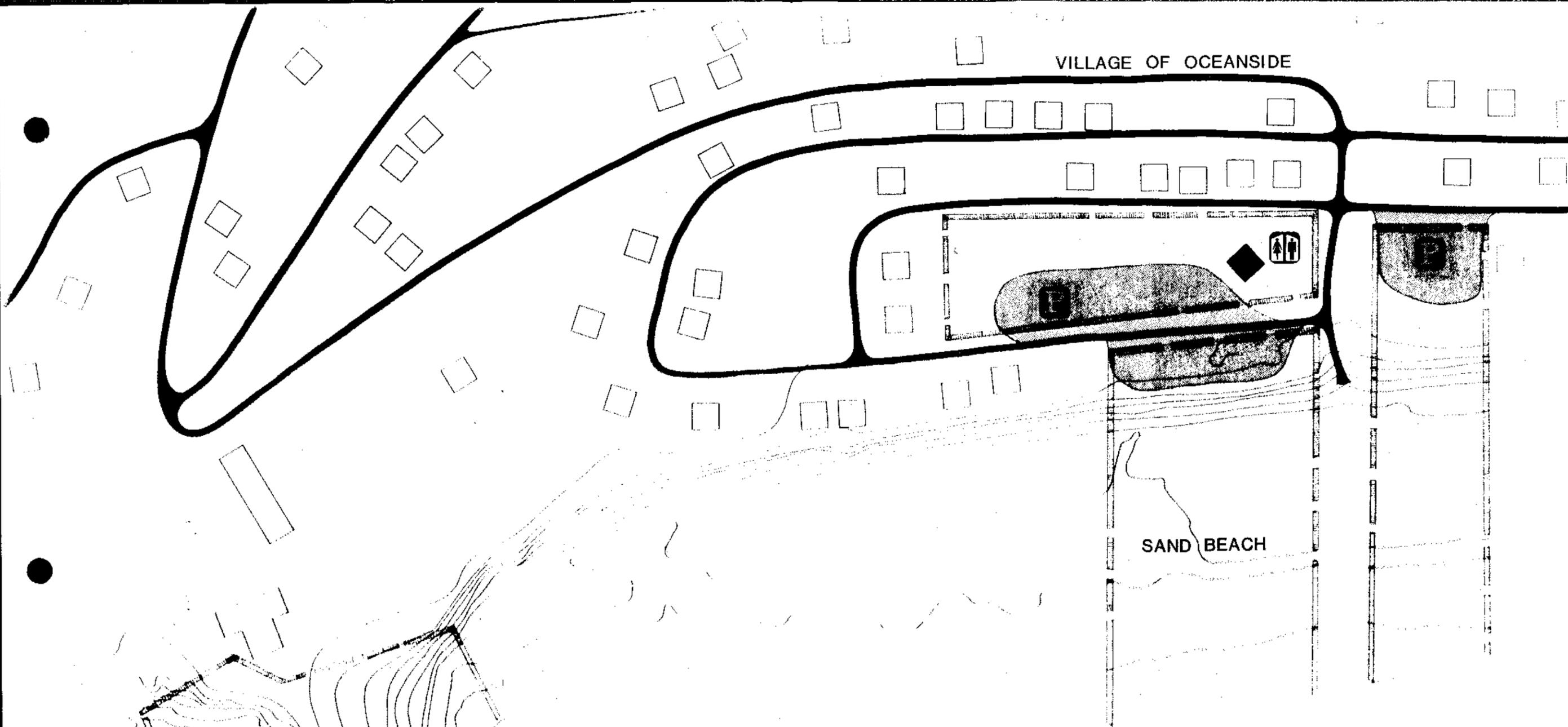


1984

OREGON STATE PARKS

T1S R11W SEC 24,25 Tillamook County

VILLAGE OF OCEANSIDE



SAND BEACH

### EXISTING CONDITIONS & FEATURES

Park Property

TUNNEL  
(Blocked by Landslide)

MAXWELL POINT

PACIFIC OCEAN

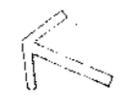
HEADLAND



VIEW  
to Three Arch Rock  
National Wildlife Refuge

sheet 2 of 2

## OCEANSIDE BEACH STATE WAYSIDE



1984

OREGON STATE PARKS

PROTECTION None

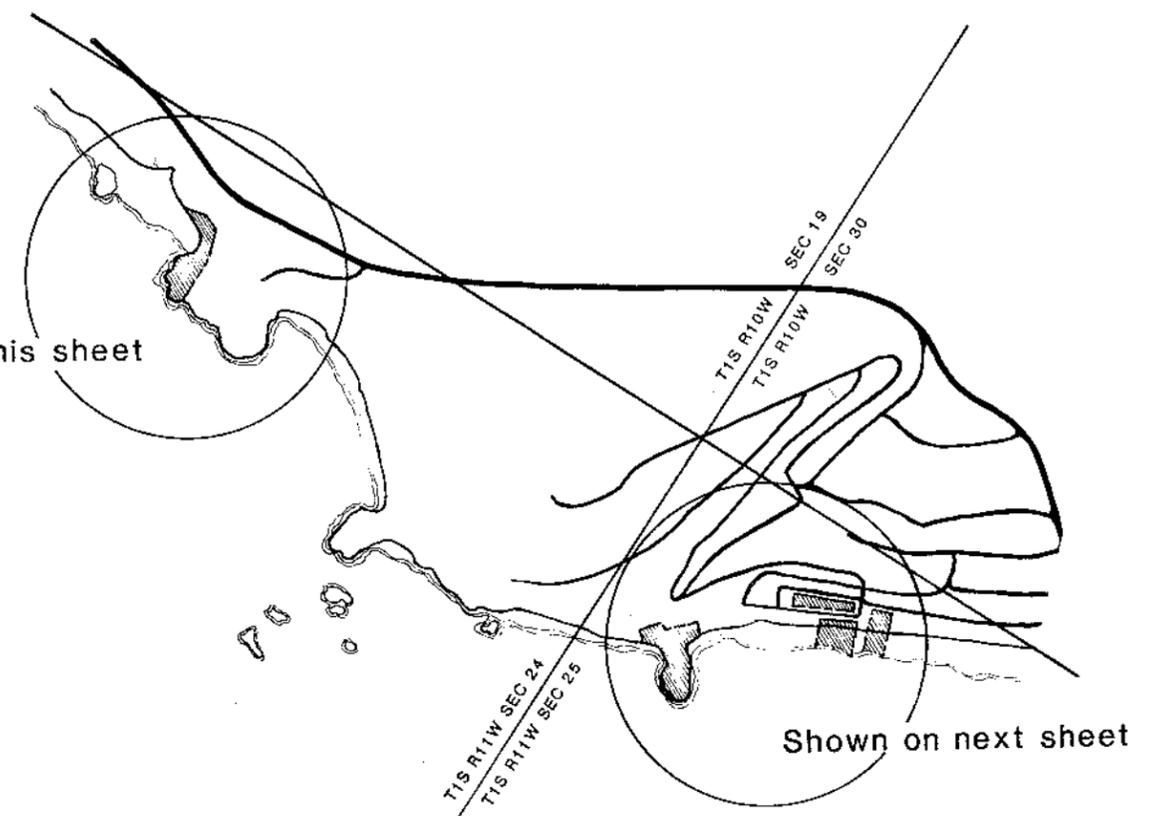
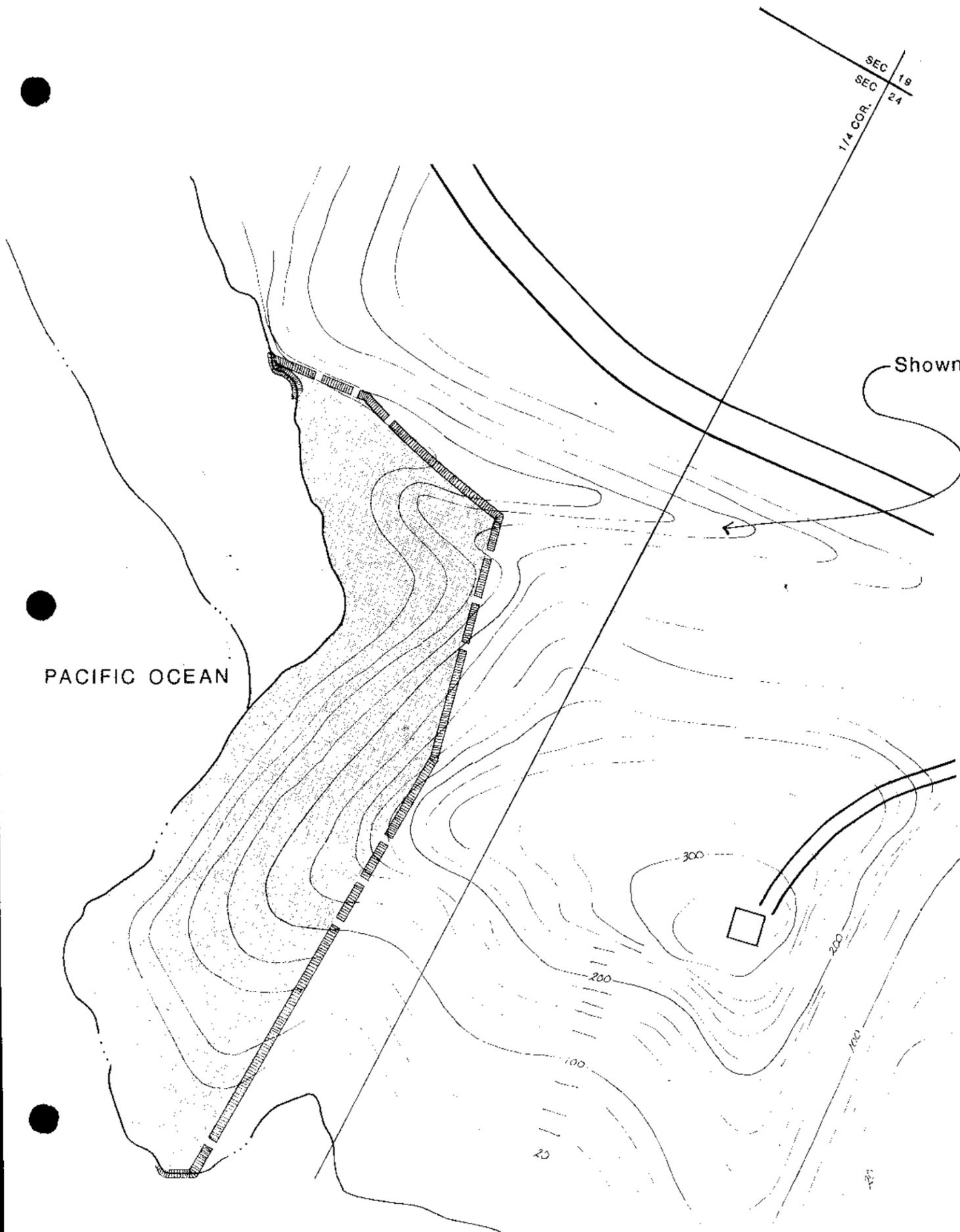
MANAGEMENT 5.72 Acres 78%

The portion of Oceanside Beach State Wayside known as Maxwell Point is in the Management class because it requires surveillance and maintenance to reduce the dangers from rockfall from the cliffs above.

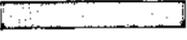
The other areas of the wayside in management are open beach and stabilized dunes. An isolated wooded parcel of land is also in the management class.

DEVELOPMENT 1.6 Acres 22%

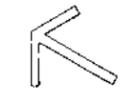
The existing developed areas are in the Development class. There is no room for any additional development.



**LAND USE PLAN**

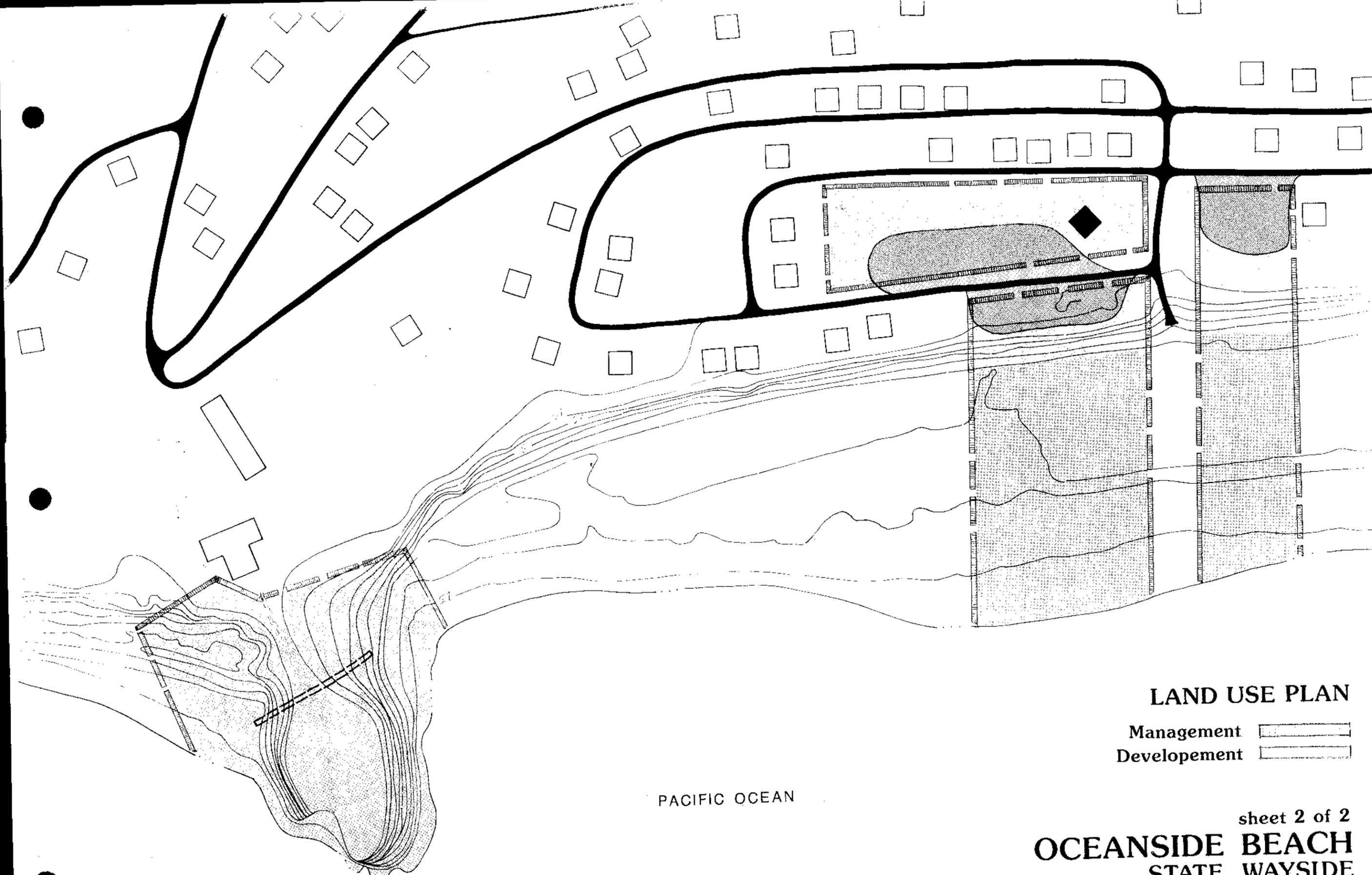
Management 

sheet 1 of 2  
**OCEANSIDE BEACH  
 STATE WAYSIDE**



1984 OREGON STATE PARKS

T1S R11W SEC 24,25 Tillamook County

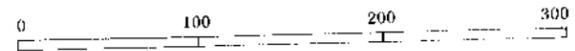
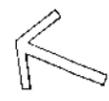


**LAND USE PLAN**

Management   
 Development 

PACIFIC OCEAN

sheet 2 of 2  
**OCEANSIDE BEACH**  
**STATE WAYSIDE**



1984

OREGON STATE PARKS

DEVELOPMENT PLAN OBJECTIVES

Maintain the present level of use at the wayside.

Continue to maintain and improve the recreation facilities.

RECREATION OPPORTUNITIES

The wayside consists of five parcels of land. One is steep and inaccessible, another consists of a steep and erodable parcel known as Maxwell Point and three parcels have parking and restroom facilities on them.

At one time, there was a tunnel through the Maxwell Point parcel which allowed pedestrians to get to the north side of the point. Unfortunately, the tunnel was constructed in an area where rockfall is a constant danger and the tunnel has been completely blocked by a landslide. Due to the continuing rockfall problem, there are no plans to reopen the tunnel at this time.

There is no room for additional recreational use in this wayside.

HANDICAP ACCESSIBILITY

The facilities at Oceanside Beach are handicap accessible.

Maxwell Point Tunnel

Prior to the acquisition of property at Oceanside Beach State Wayside, a tunnel was excavated through Maxwell Point, providing easy access from one side of the Point to the other.

The tunnel was constructed at the boundary line between the hard basalt of the headland and the softer rock of the mainland. This soft rock has always been subject to erosion and rockfall. A covered extension to the tunnel was constructed by Parks in 1982 to allow the use of the tunnel to continue, although there were constant rockfall problems.

Unfortunately, this solution was not adequate to protect the mouth of the tunnel and a subsequent rockfall has completely covered the mouth of the tunnel on the south side.

Although there is a clause in the deed for this property which states that State Parks will maintain the tunnel and keep it open, the person who deeded the property to Parks has stated that we need not attempt to reopen the tunnel. There are no plans to attempt to reopen it at this time.

BEACHES AND DUNES

A large portion of the site is open sand with some upper areas of stable sand.

MAXWELL POINT

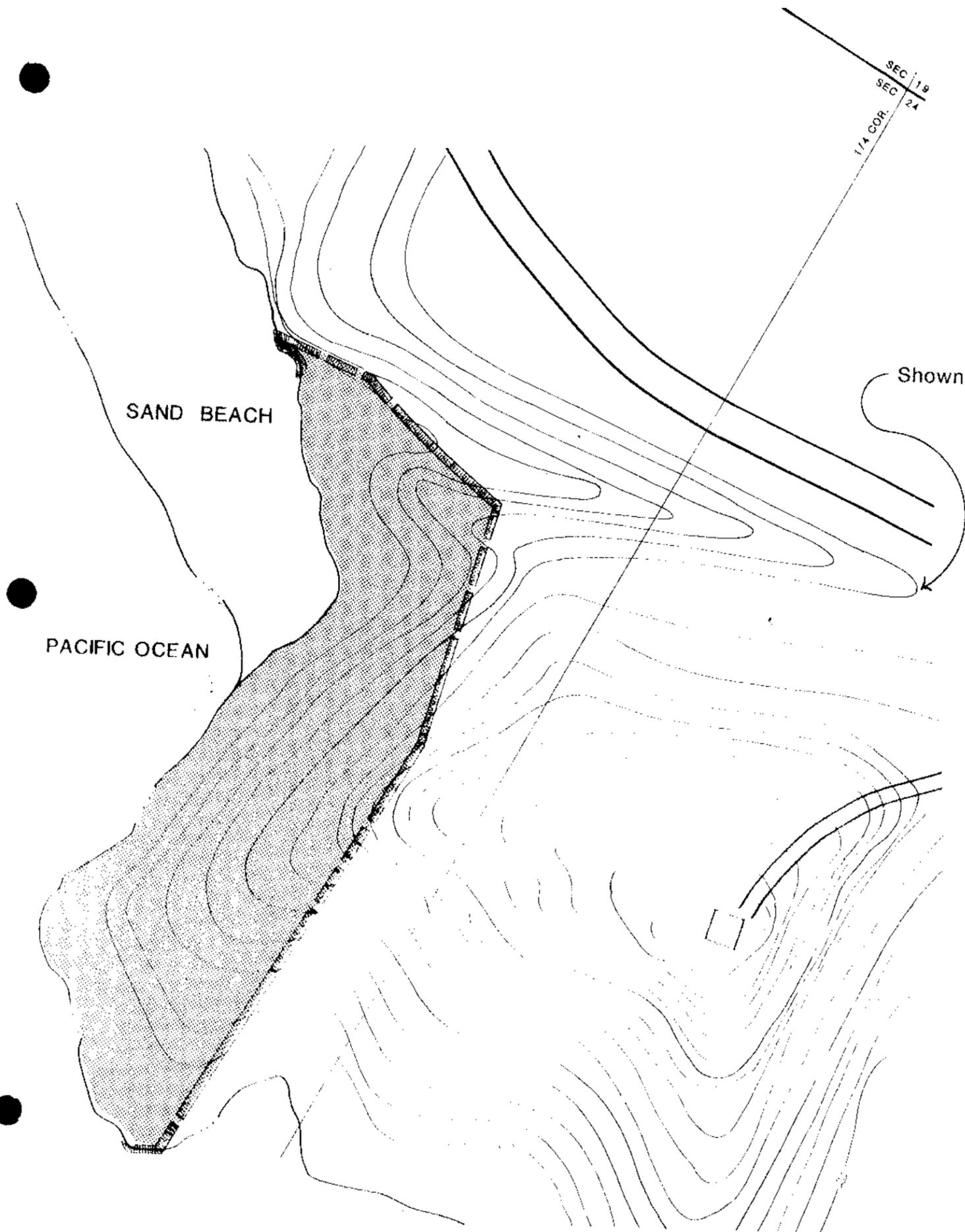
This large rock promontory consists of two kinds of rock, a hard resistant basalt at the ocean end and a softer, less stable, sedimentary rock at the land end. The sedimentary rock frequently crumbles and breaks off, causing hazardous rock slides.

SEA STACKS

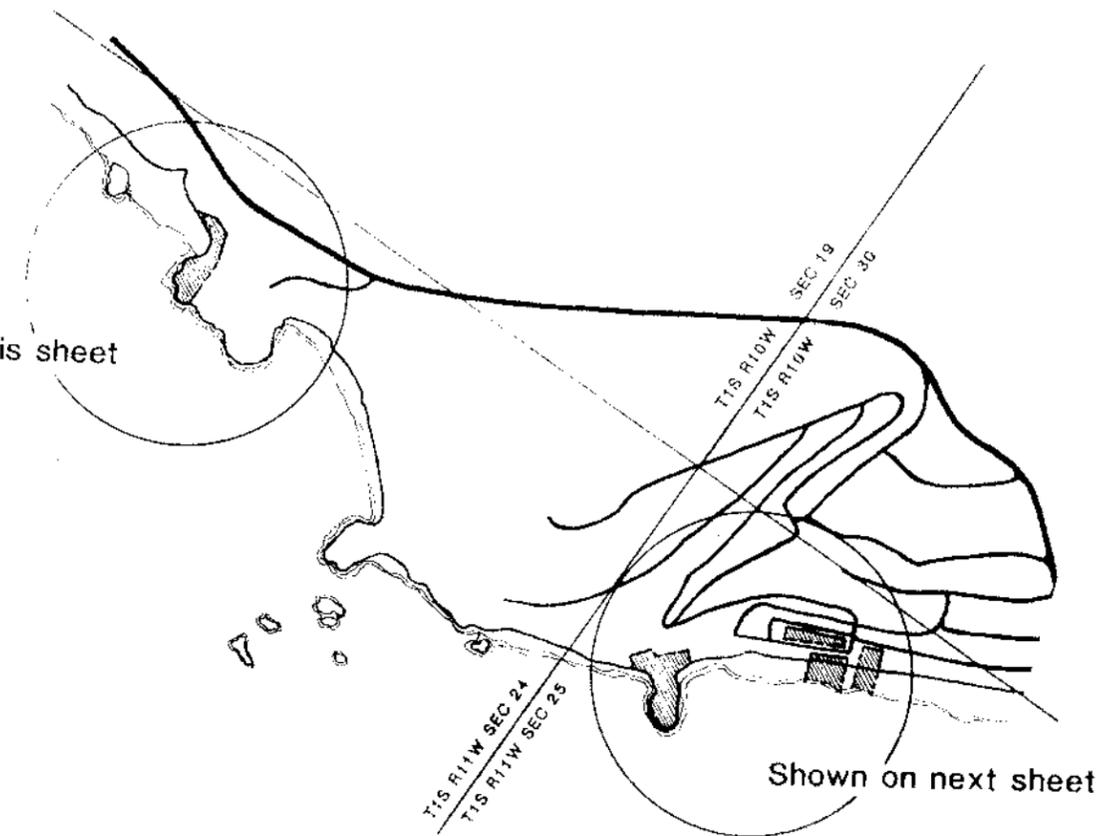
Extending offshore from Maxwell Point are rock knobs, stacks and arches - all remnants of a former promontory. Largest of these are Three Arch Rocks which are part of the Oregon Island National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service.

GEOLOGIC HAZARDS

Erosion of the beaches and dunes is a continuing geologic process.



Shown on this sheet



# LAND FORMS & GEOLOGY

Slopes Over 10% 

Geology - Basalt

sheet 1 of 2

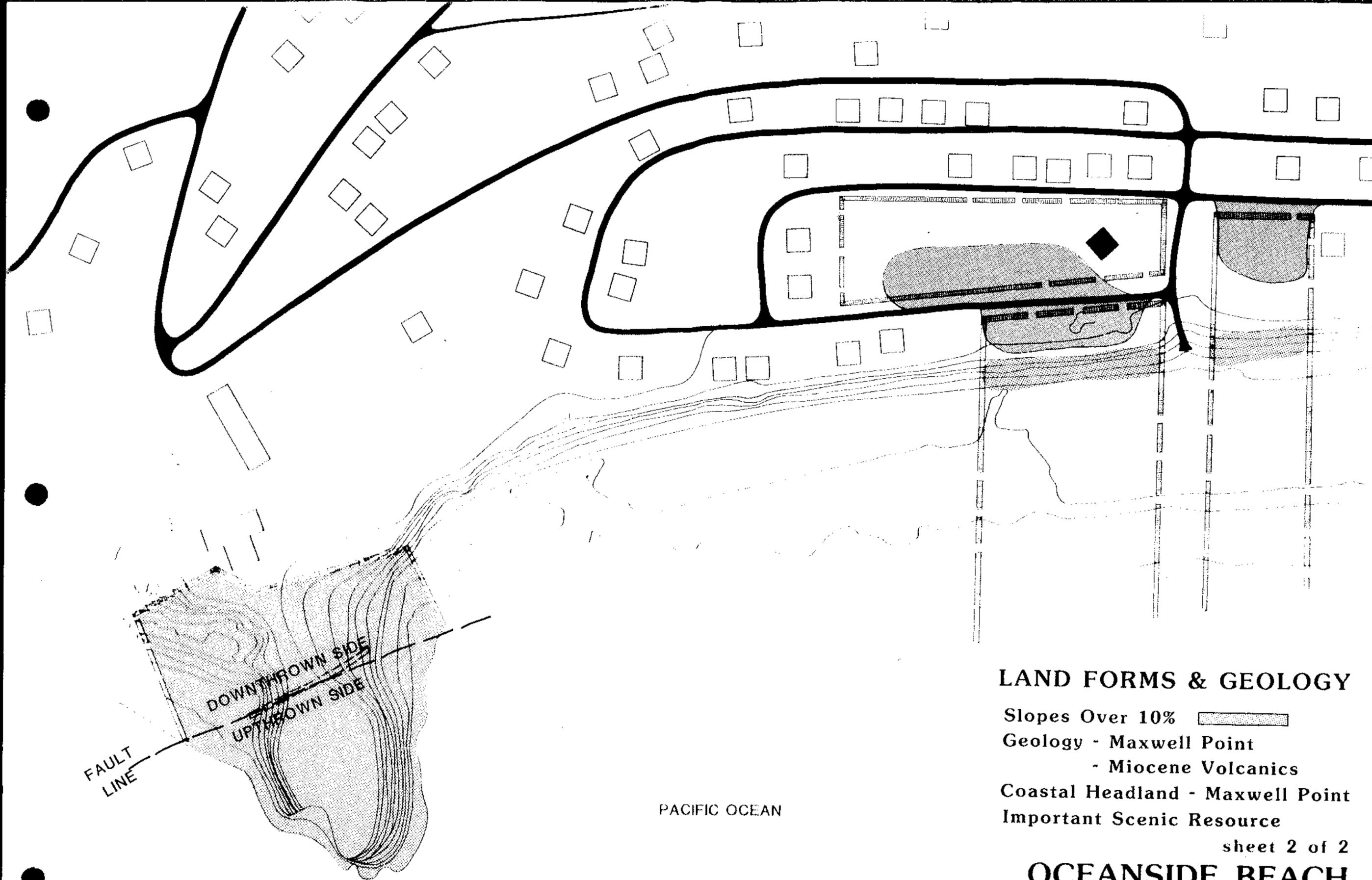
## OCEANSIDE BEACH STATE WAYSIDE



1984

OREGON STATE PARKS

T1S R11W SEC 24,25 Tillamook County



**LAND FORMS & GEOLOGY**

Slopes Over 10%

Geology - Maxwell Point  
 - Miocene Volcanics

Coastal Headland - Maxwell Point  
 Important Scenic Resource

sheet 2 of 2

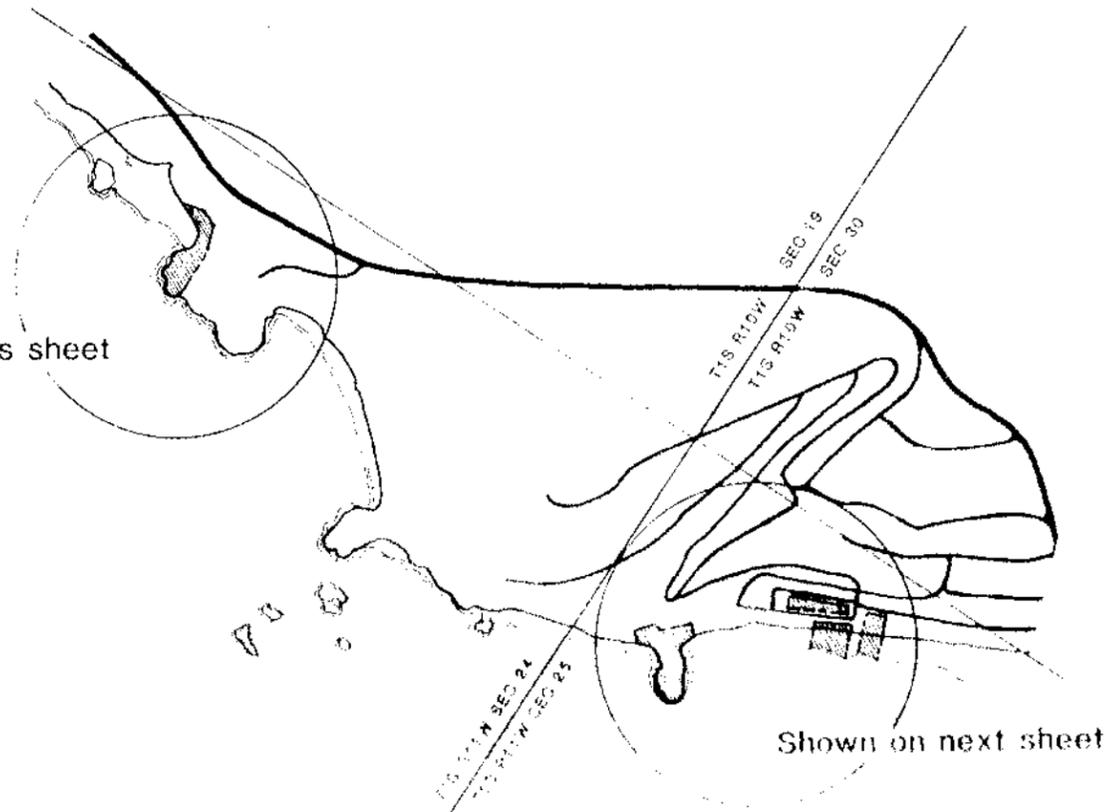
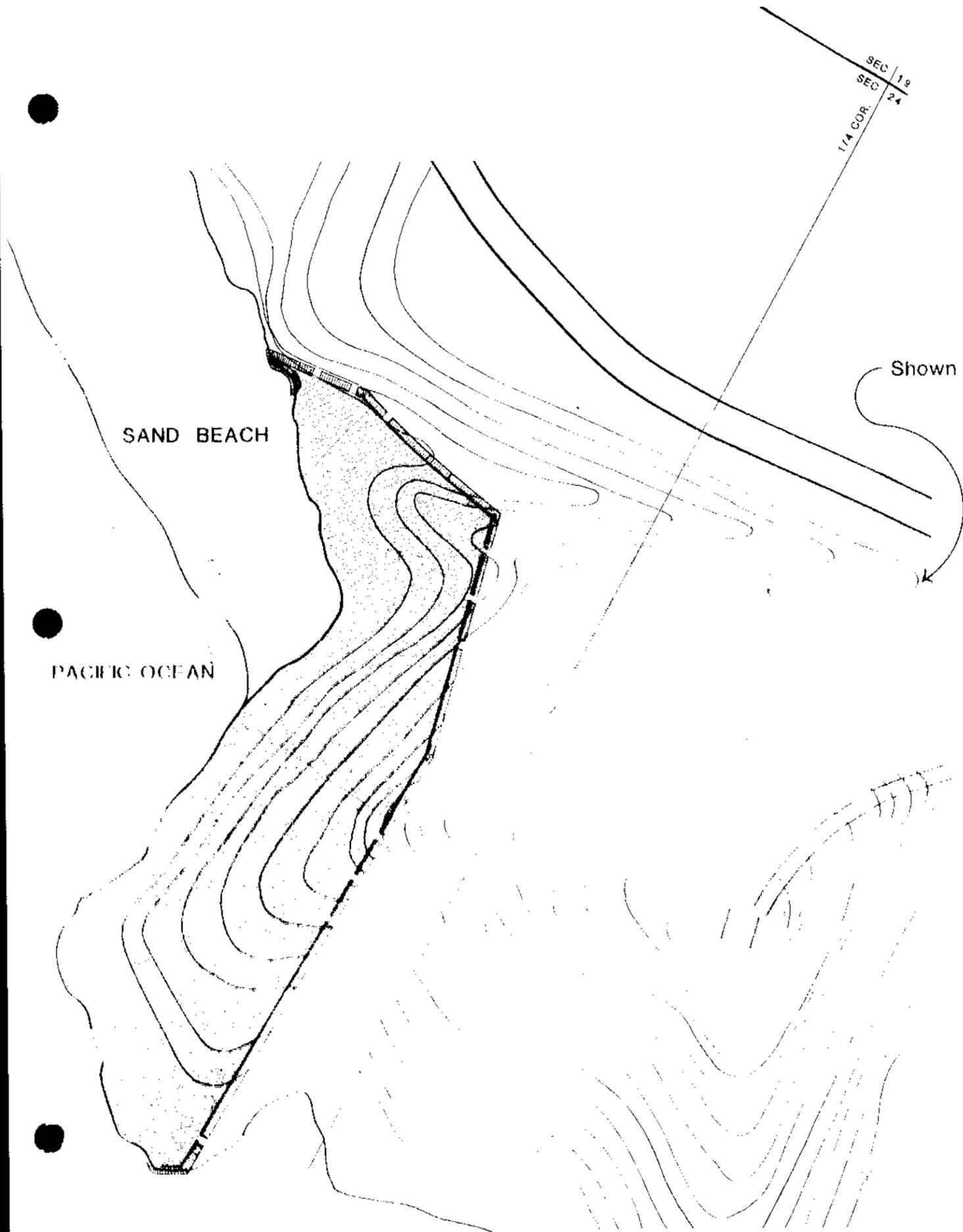
**OCEANSIDE BEACH  
 STATE WAYSIDE**



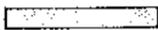
1984

OREGON STATE PARKS

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.



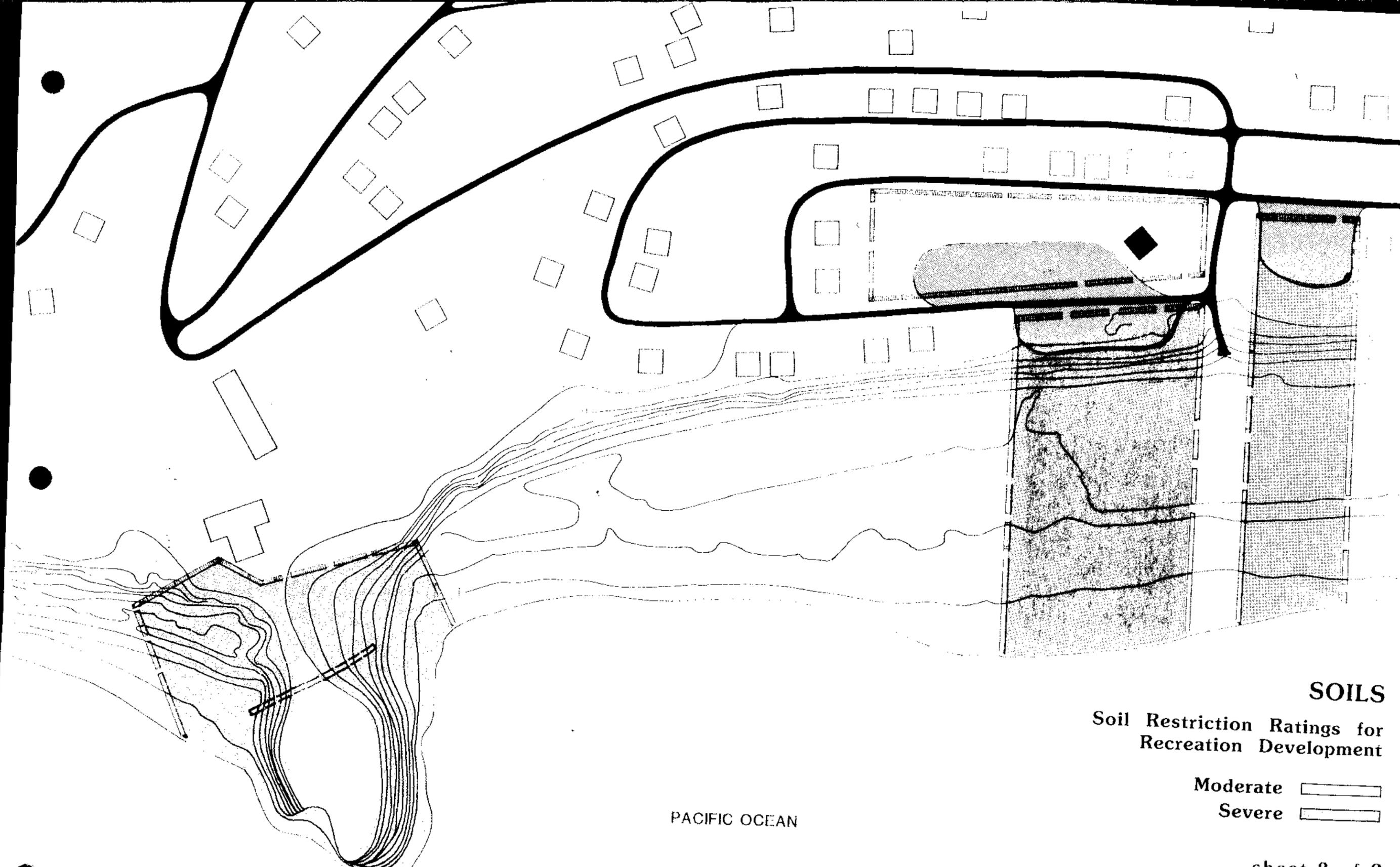
**SOILS**  
 Soil Restriction Ratings for  
 Recreation Development

Severe 

sheet 1 of 2

**OCEANSIDE BEACH**  
**STATE WAYSIDE**





**SOILS**

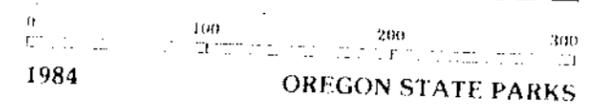
Soil Restriction Ratings for  
Recreation Development

- Moderate
- Severe

PACIFIC OCEAN

sheet 2 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**

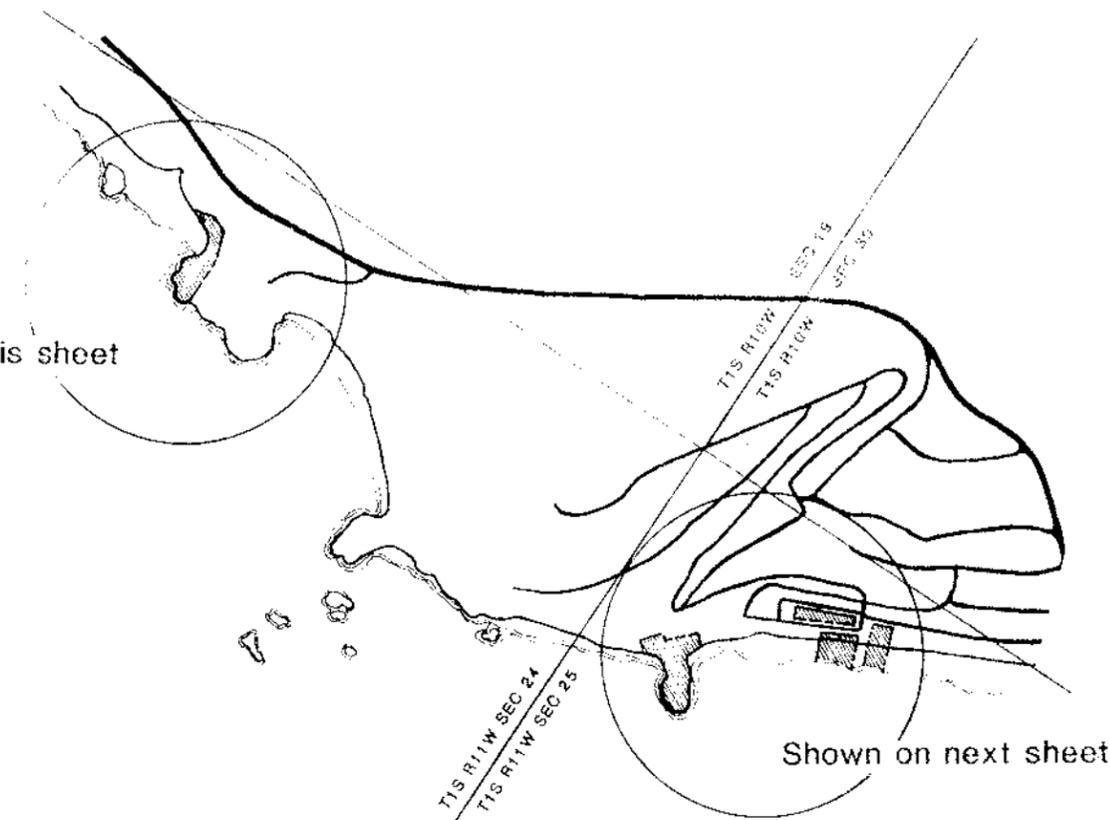
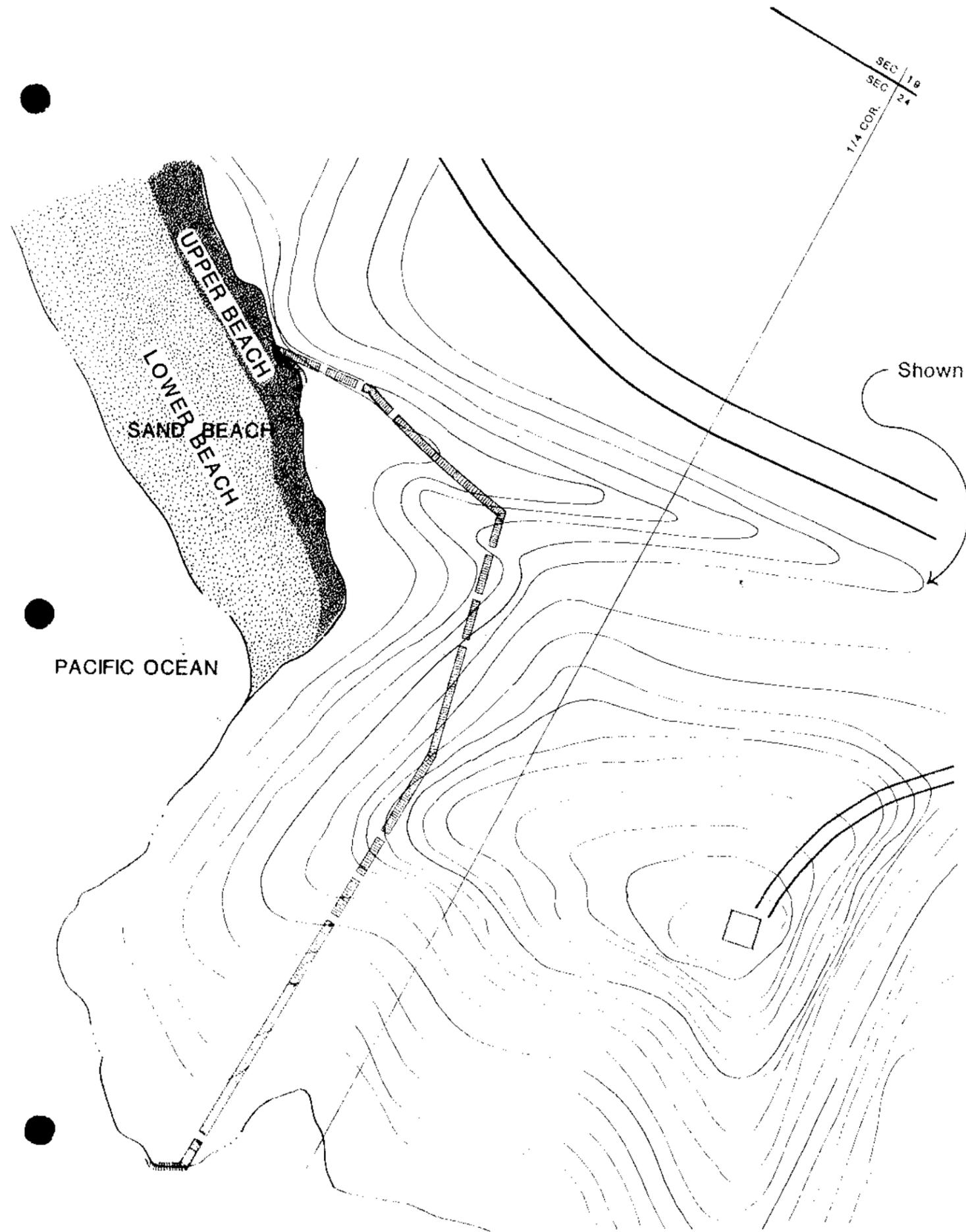


1984

OREGON STATE PARKS

BEACHES

In addition to the upper and lower sand beach areas subject to varying degrees of tidal activity, there is an area of rocky shore intertidal marine at Oceanside. This is a bedrock area subject to regular tidal inundation.



PACIFIC OCEAN

UPPER BEACH  
LOWER BEACH  
SAND BEACH

Shown on this sheet

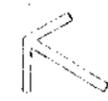
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**WATER FEATURES**

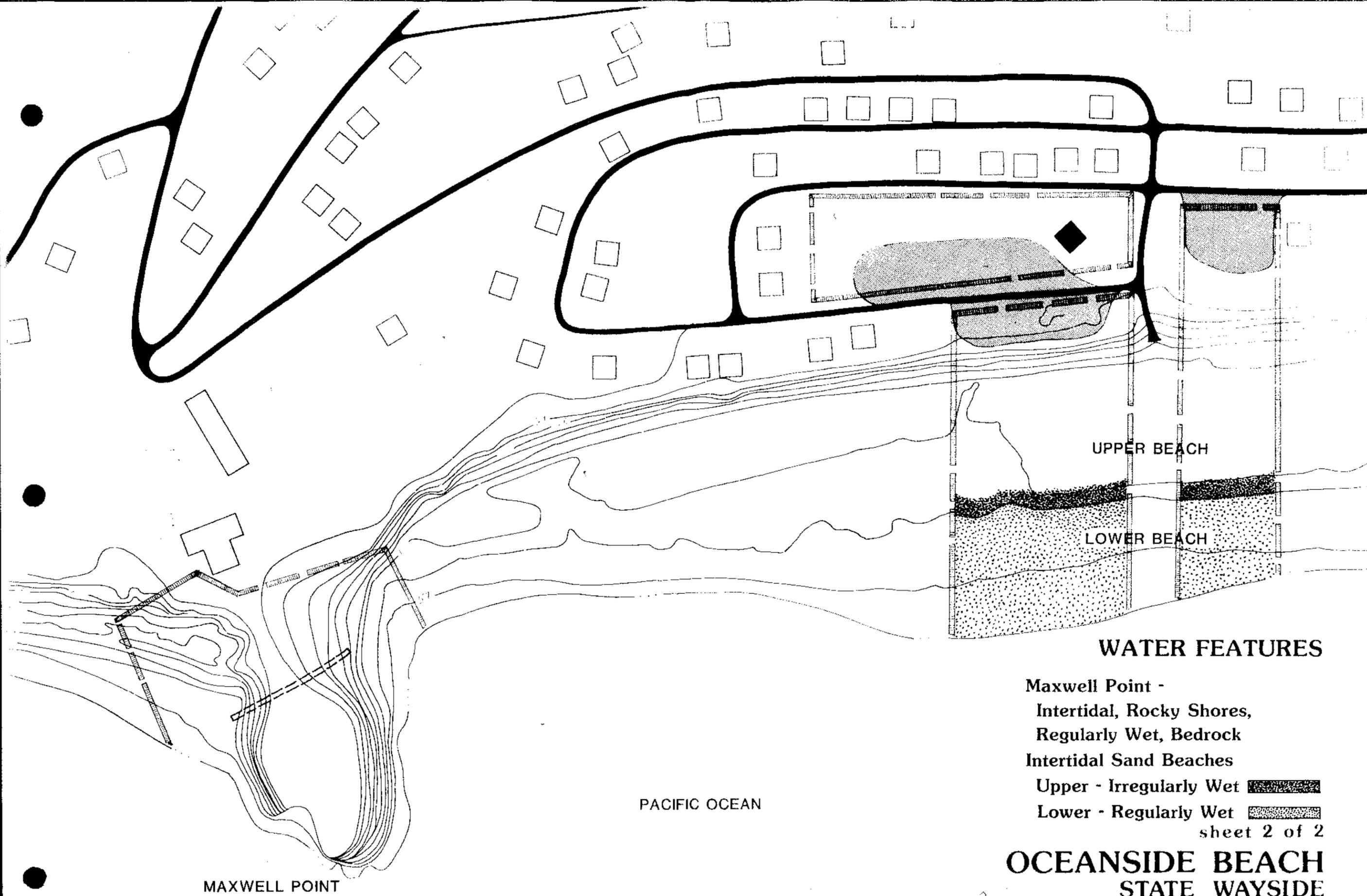
- Intertidal Sand Beaches
- Upper - Irregularly Wet
- Lower - Regularly Wet

sheet 1 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**



1984 OREGON STATE PARKS



UPPER BEACH

LOWER BEACH

**WATER FEATURES**

- Maxwell Point -
- Intertidal, Rocky Shores,  
Regularly Wet, Bedrock
- Intertidal Sand Beaches
- Upper - Irregularly Wet 
- Lower - Regularly Wet 

sheet 2 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**



0 100 200 300  
Feet

1984

OREGON STATE PARKS

MAXWELL POINT

PACIFIC OCEAN

VEGETATION

OCEANSIDE BEACH

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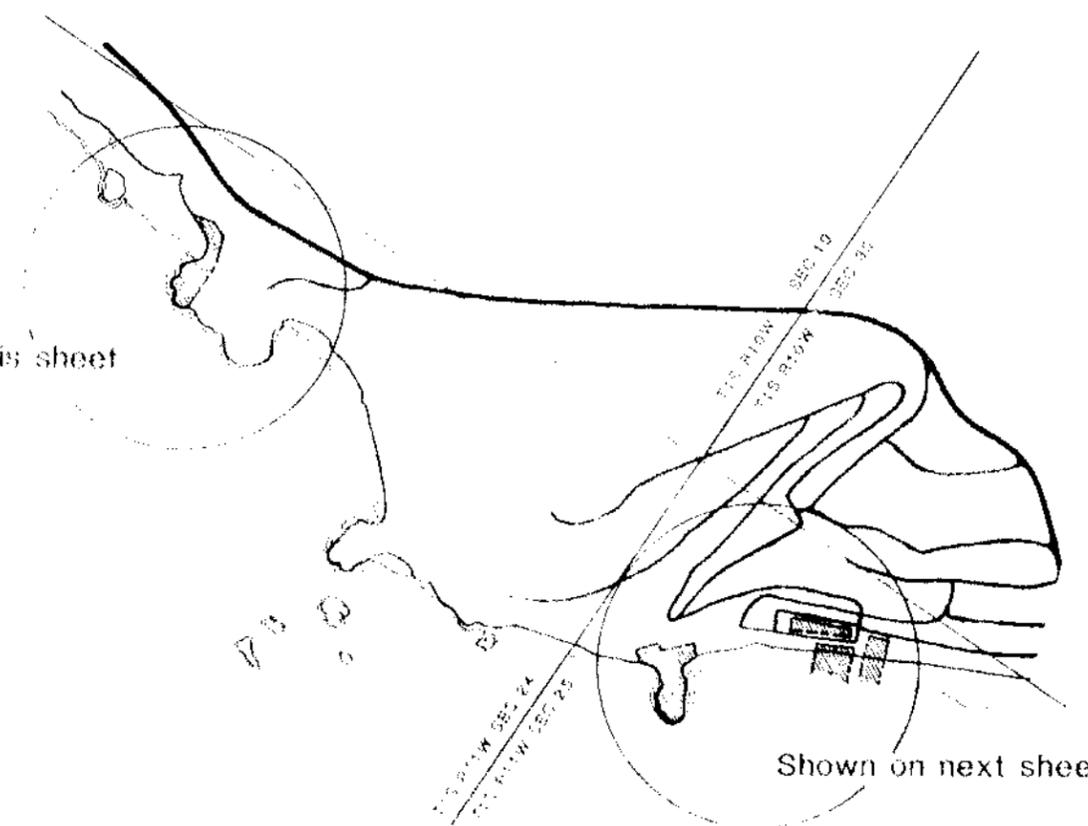
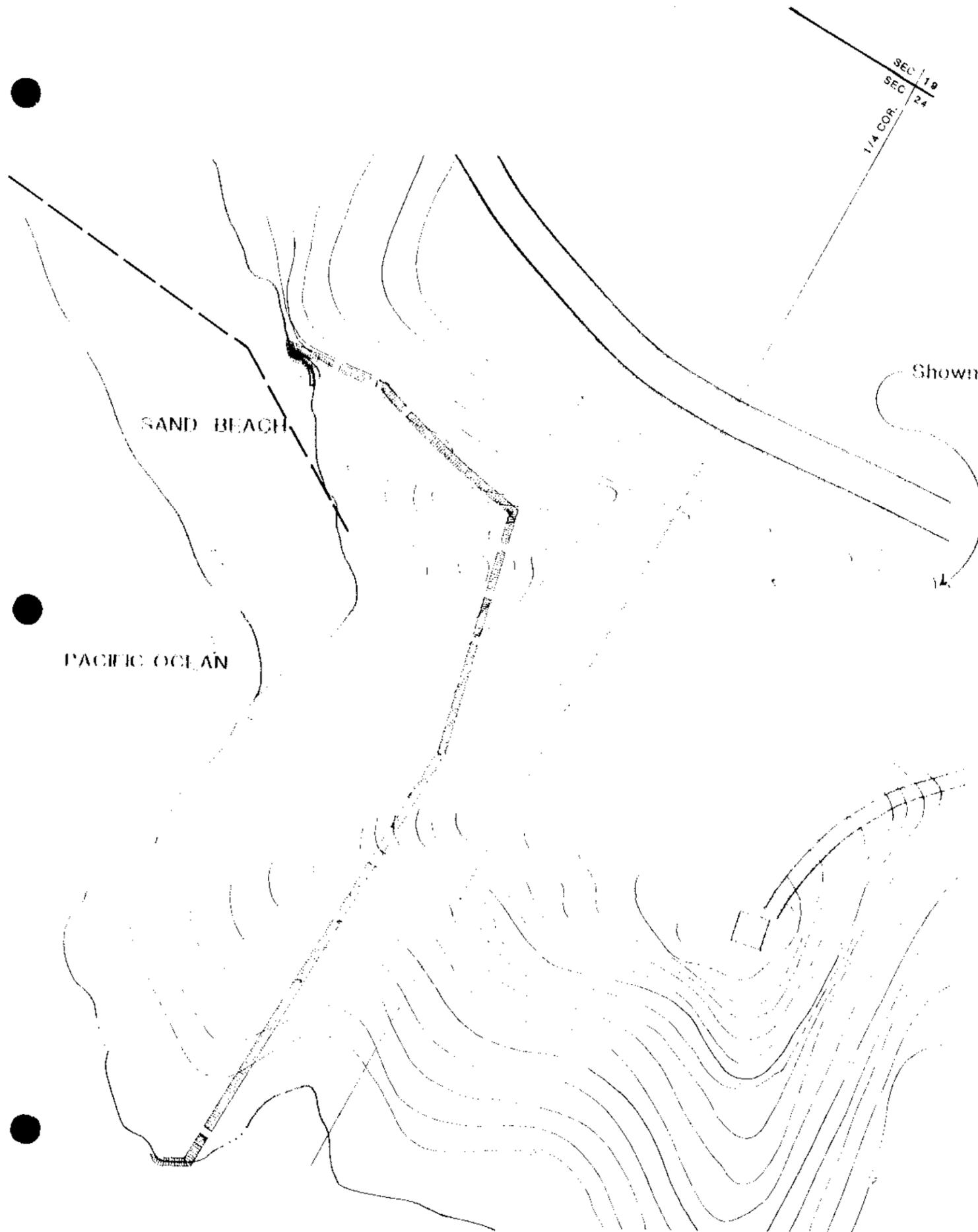
NATIVE PLANT COMMUNITIES

None.

ALTERED VEGETATION

RARE AND ENDANGERED SPECIES

None known.



**VEGETATION**

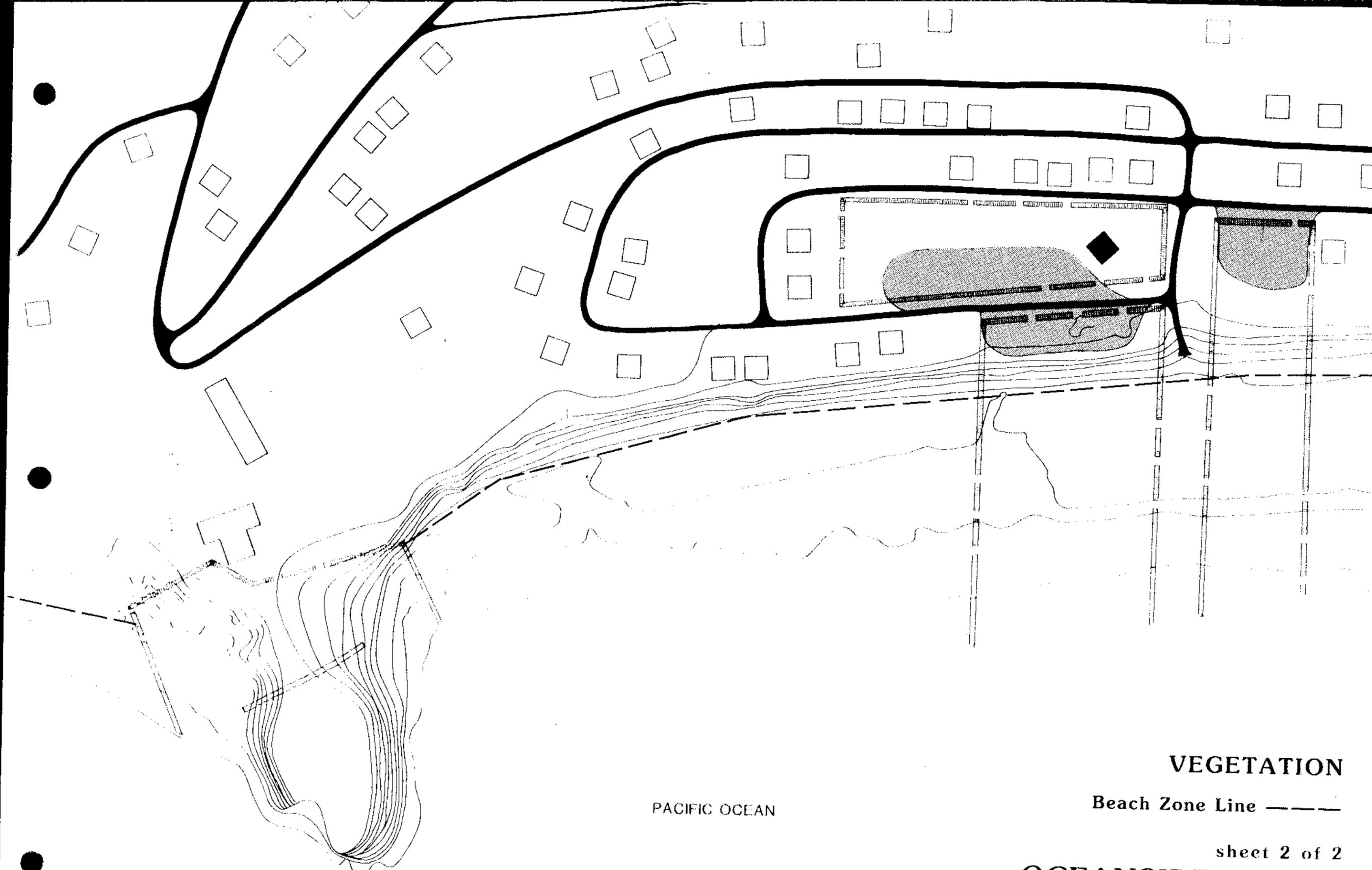
Beach Zone Line ———

sheet 1 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**



1984 OREGON STATE PARKS



**VEGETATION**

Beach Zone Line - - - -

PACIFIC OCEAN

sheet 2 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**



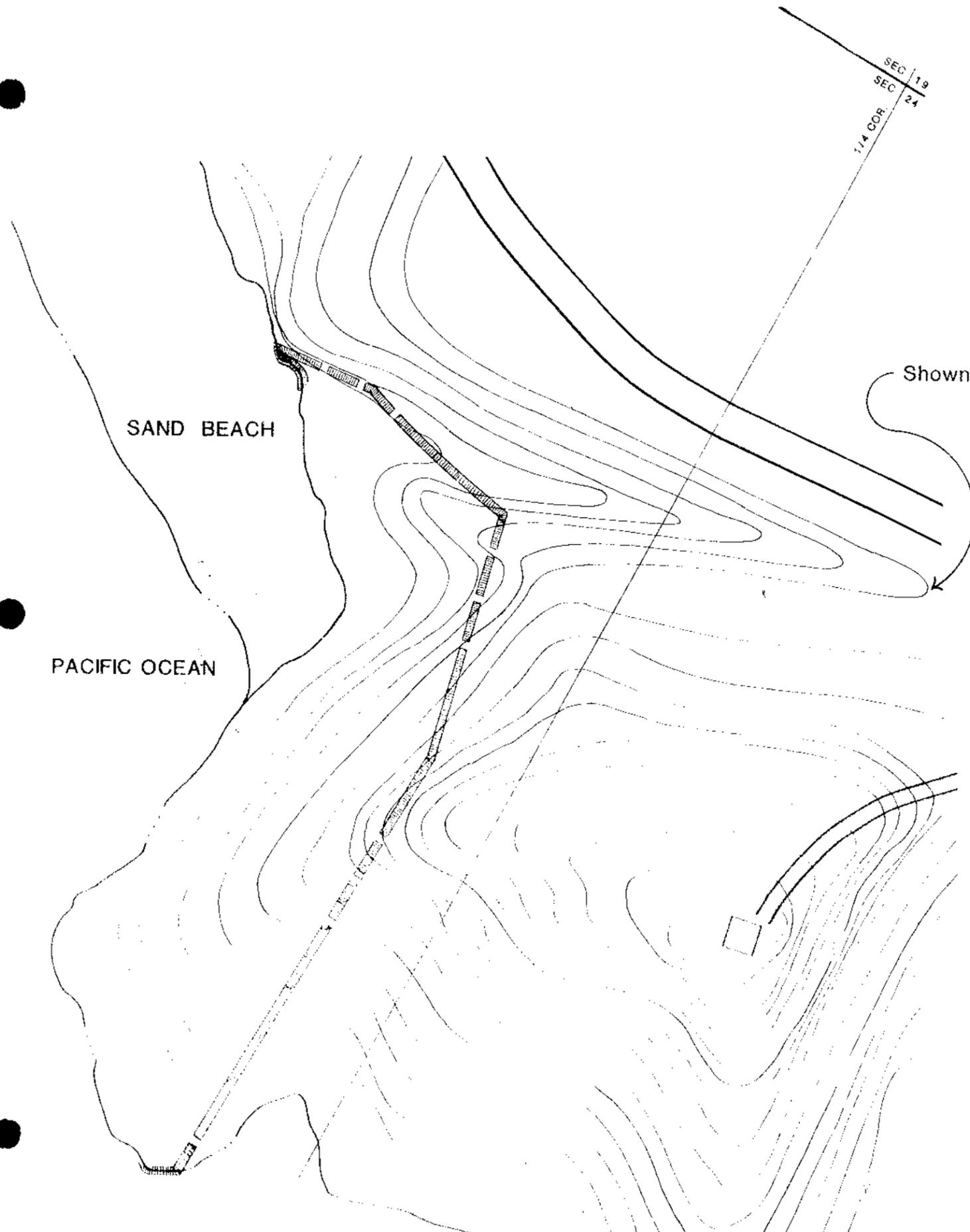
HABITATS

ROCKY INTERTIDAL

The area around Maxwell Point has good rocky intertidal habitats. Within these areas are found mussels, starfish, sea urchins, chitons, limpets, crabs and barnacles.

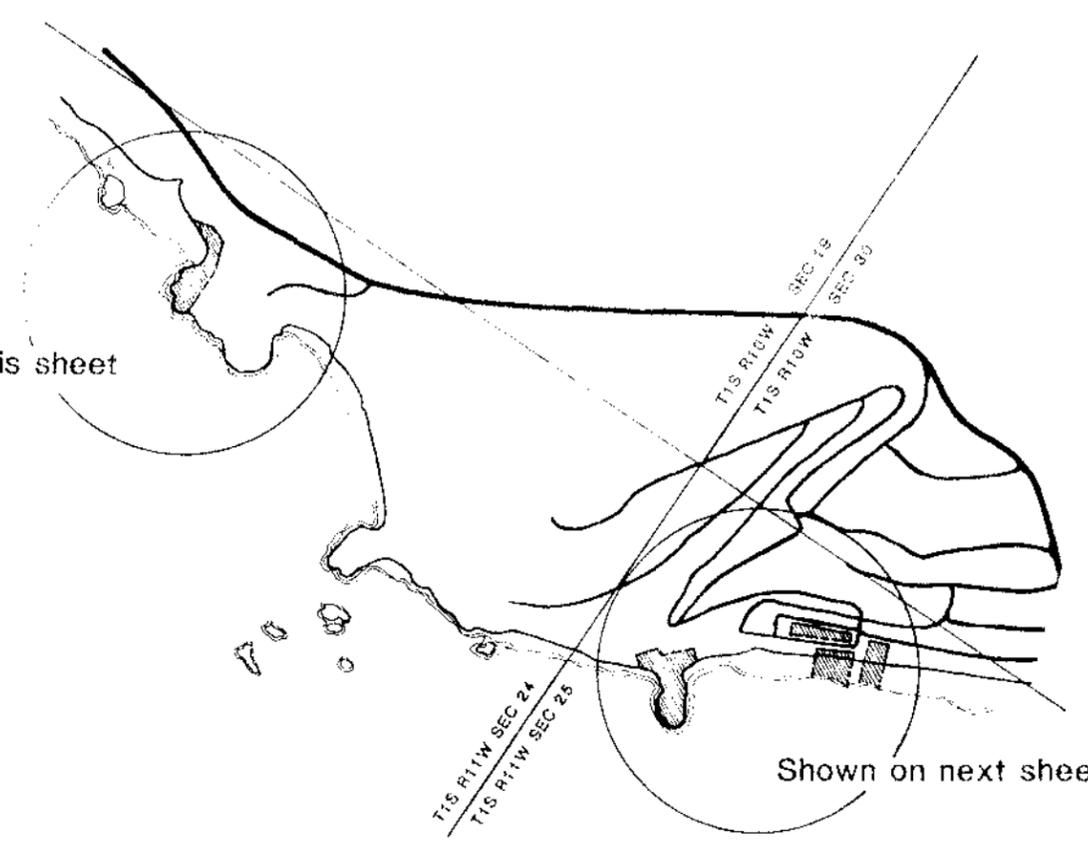
SAND BEACH

This area is habitat for razor clams and sea gulls.



SEC 19  
SEC 24  
1/4 COR.

Shown on this sheet



Shown on next sheet

T15 R11W SEC 24  
T15 R11W SEC 25

T15 R10W SEC 18  
T15 R10W SEC 20

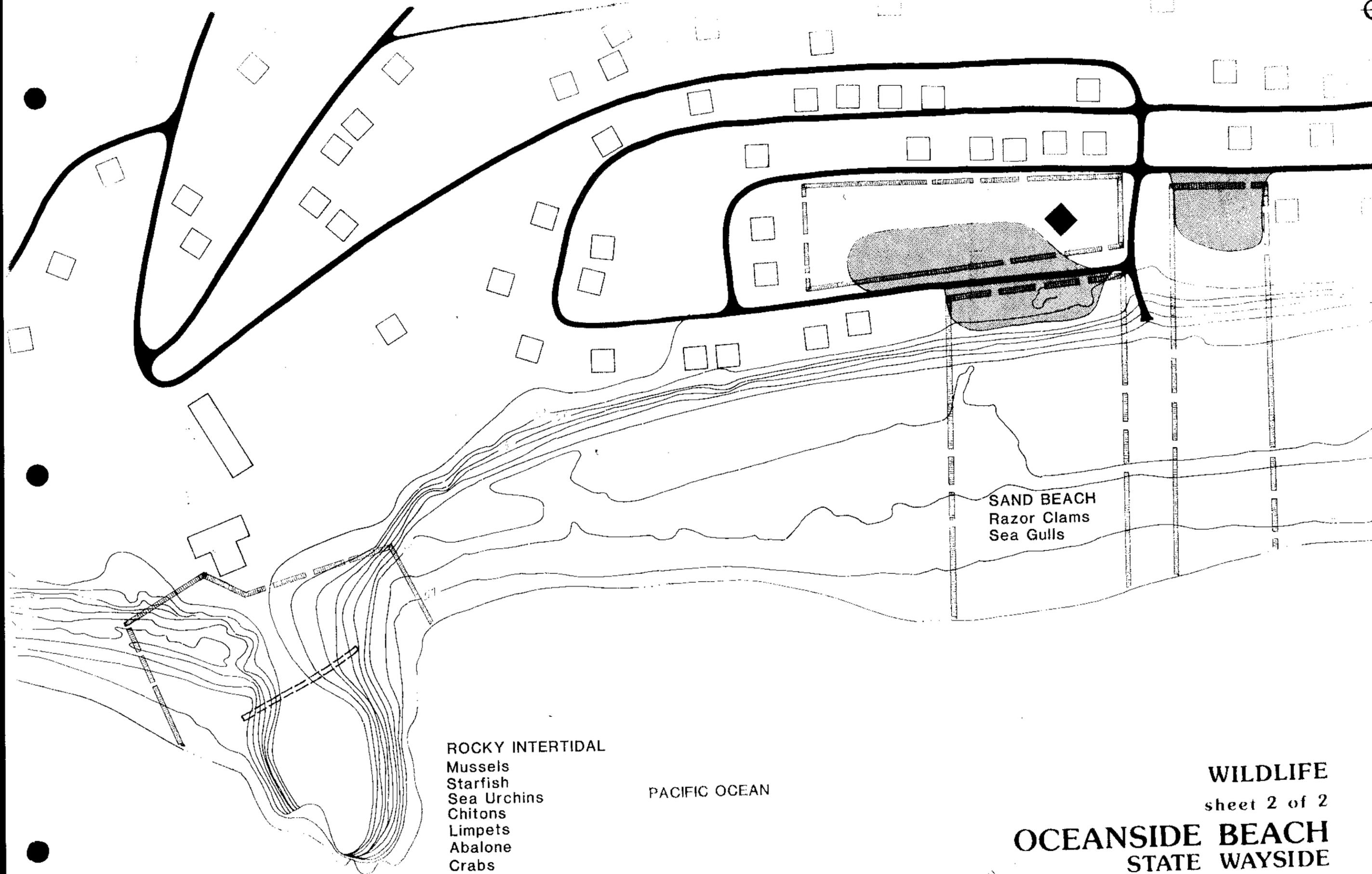
**WILDLIFE**  
sheet 1 of 2  
**OCEANSIDE BEACH**  
**STATE WAYSIDE**

1984

OREGON STATE PARKS

T15 R11W SEC 24, 25 Tillamook County





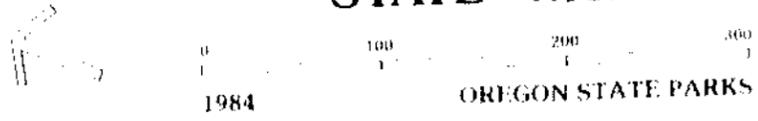
SAND BEACH  
Razor Clams  
Sea Gulls

ROCKY INTERTIDAL  
Mussels  
Starfish  
Sea Urchins  
Chitons  
Limpets  
Abalone  
Crabs  
Barnacles

PACIFIC OCEAN

WILDLIFE  
sheet 2 of 2

**OCEANSIDE BEACH  
STATE WAYSIDE**



This wayside includes Maxwell Point, a prominent local feature, and a nice stretch of sand beach. From the wayside, there are excellent views of the off-shore rocks which are part of the Three Arch Rocks National Wildlife Refuge where migratory birds can be viewed.

County Comprehensive Plan Designation: Scenic overlay.

This area is a designated scenic area.

HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

In 1978, testing was done at Oceanside prior to construction of new park facilities. At that time, it was discovered that the site held a well preserved coastal midden. A three to six foot deep layer of landfill had protected the site for many years. The bulk of the site is located within the boundaries of the state wayside.

This site is located in an area which would have been favorable for occupation. Shellfish and sea mammals were present year-round as food sources. Seasonal food sources would have included migratory seabirds and their eggs on the rocks located just offshore.

Stone artifacts, shell, bone and fire-cracked rock were found at the site. The site was probably a late prehistoric site.

At the present time, most of the site is now covered by an asphalt parking lot. This precludes any further investigation of the site and it also provides a good measure of protection to the archeologic remains.

PARK BACKGROUND

The first land for this wayside came as a gift of 1.9 acres from Orin and Lorraine Rosenberg in 1968. Other gifts and purchases have brought the park to 7.32 acres.

Zoning RM - Recreation Management with Shoreland Overlay

Jurisdiction Tillamook County

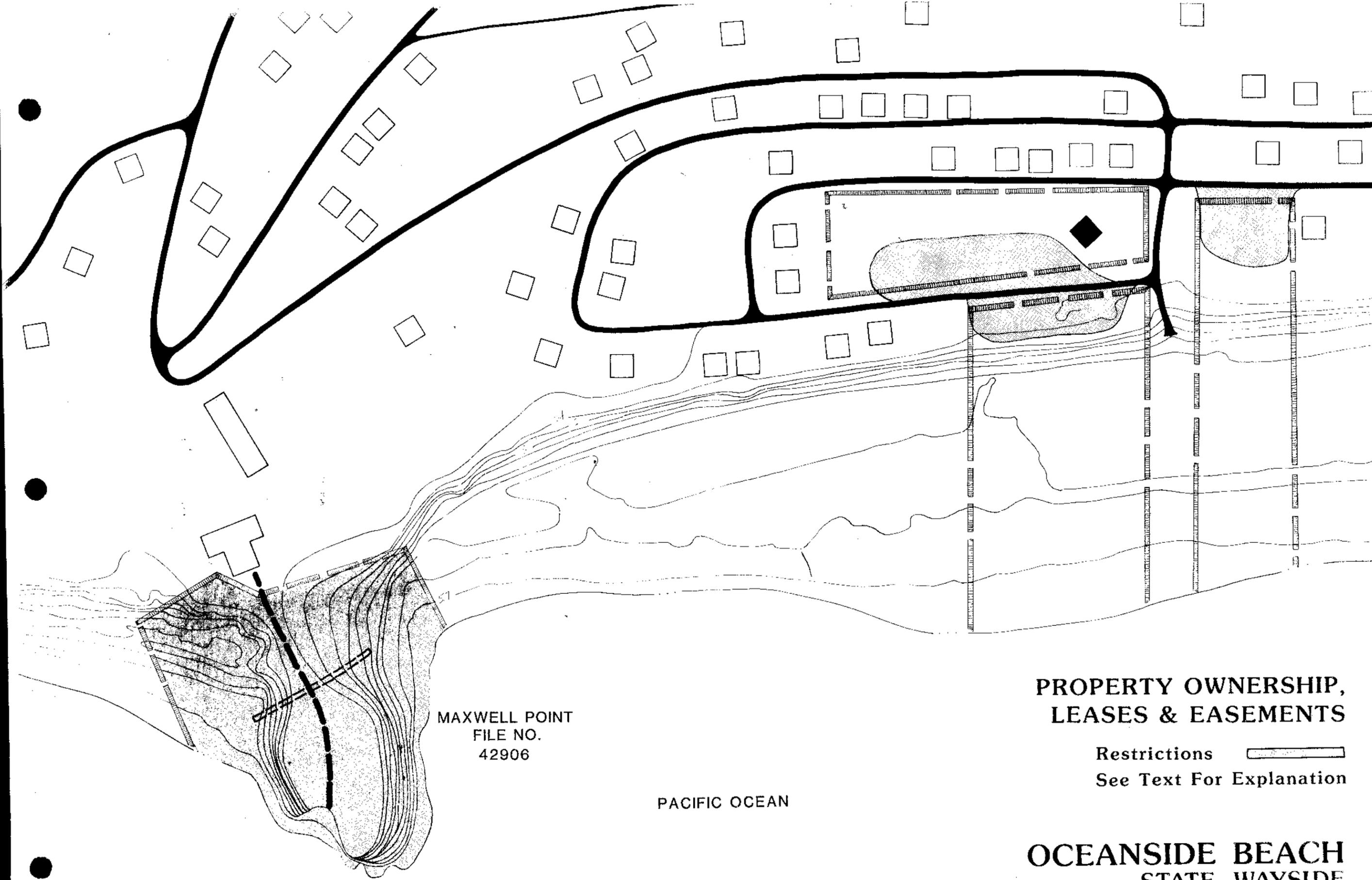
Tillamook County  
Comprehensive Plan Needed for water-dependent and water related uses. Exceptional aesthetic resource.

Area between Oceanside and Cape Meares identified as area with "Potential for Exceptional Coastal Experience" in Visual Resources Analysis of the Oregon Coast Zone.

Oceanside Beach consists of 7.32 acres of land in 5 separate parcels. A 2.2 acre parcel is 3/4 miles north of the community of Oceanside and consists of the northerly face of a prominent headland. Access to a sand beach is available.

Three parcels of approximately 3.2 acres are at the parking lot and restroom building. There are no conditions attached to these parcels.

The remaining parcel is the 1.9 acre Maxwell Point site. This site was given to the State with the understanding that it be used for recreational purposes only, be kept in good condition, and that particularly, the tunnel in the property be kept in "good, usable and passable condition at all times so that all members of the public may use and pass through said tunnel". If this is not done, the land is to revert to the Grantors. Keeping the tunnel open has proved difficult since the material over the tunnel is extremely prone to sliding. In 1981-82, a concrete extension to the tunnel was constructed in order to protect the south opening to the tunnel from being blocked by rock slides. In 1983, a series of rock slides blocked the opening. No attempt has been made at this time to reopen the tunnel. Contact was made with grantor of the property who expressed her desire that the property remain in Parks' ownership even though we do not plan to reopen the tunnel.



MAXWELL POINT  
 FILE NO.  
 42906

PACIFIC OCEAN

**PROPERTY OWNERSHIP,  
 LEASES & EASEMENTS**

Restrictions   
 See Text For Explanation

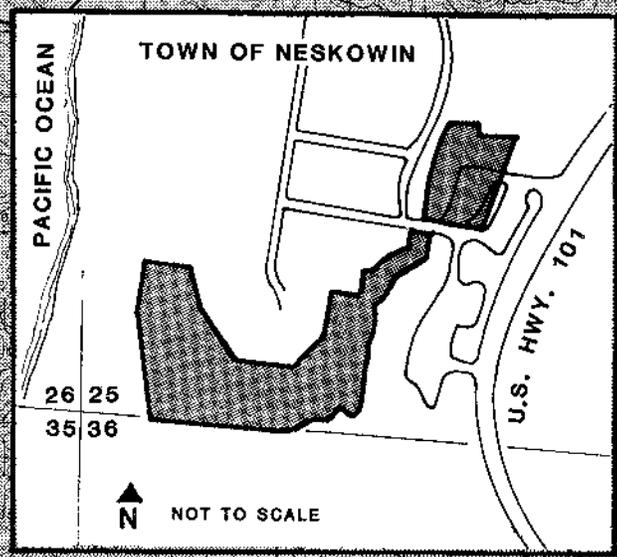
**OCEANSIDE BEACH  
 STATE WAYSIDE**

0 100 200 300  
 1984 OREGON STATE PARKS

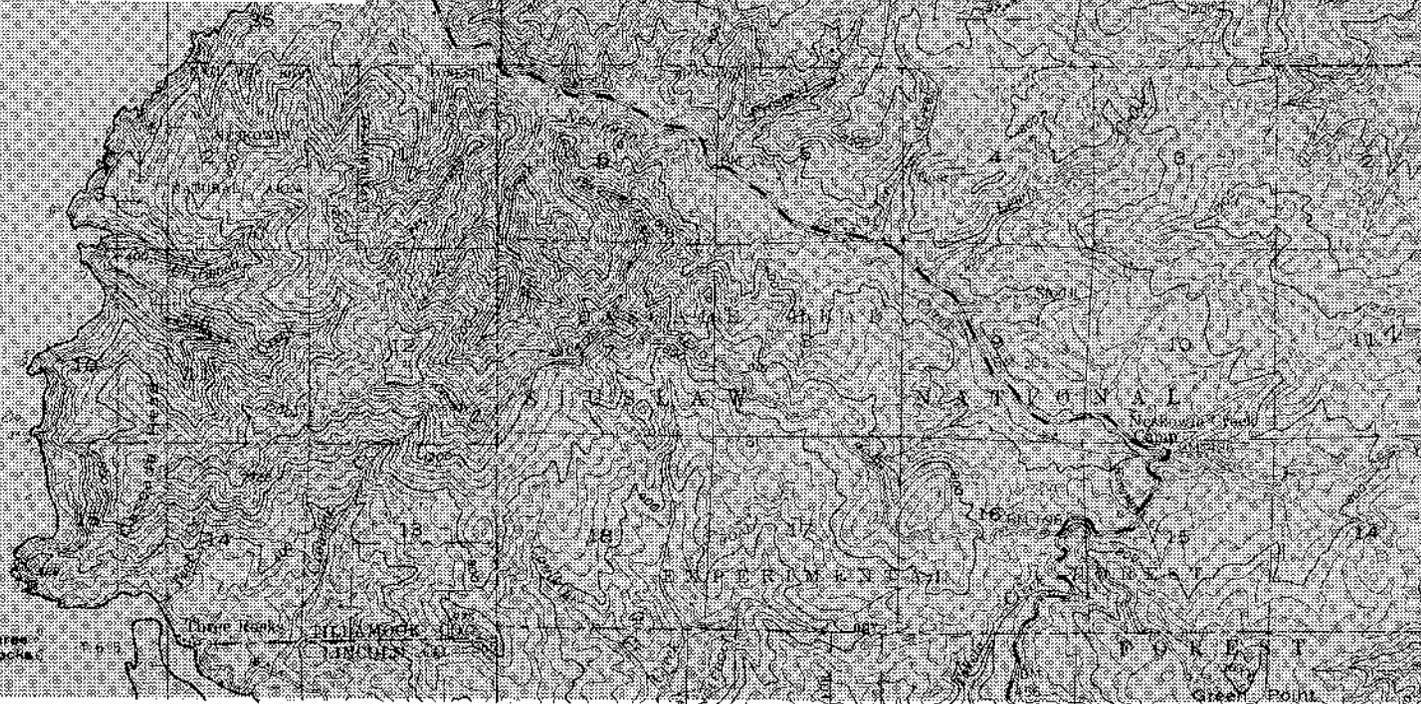
PACIFIC OCEAN

4901  
4999  
4900  
4997  
4996  
4995

Porter Point  
Camp Winema  
Daley Lake  
Neskowin Beach  
Neskowin Crest  
Neskowin  
Proposed Road



SEE ENLARGEMENT



# NESKOWIN BEACH STATE WAYSIDE

T5S R11W SEC 25  
TILLAMOOK COUNTY



EXISTING CONDITIONSNESKOWIN BEACH

Location: In community of Neskowin, on U.S. 101, Tillamook County.

Acreage: 7.95 Acres.

Description: This wayside is located in a scenic area of the coast near two streams and a wooded basalt outcropping called Proposal Rock.

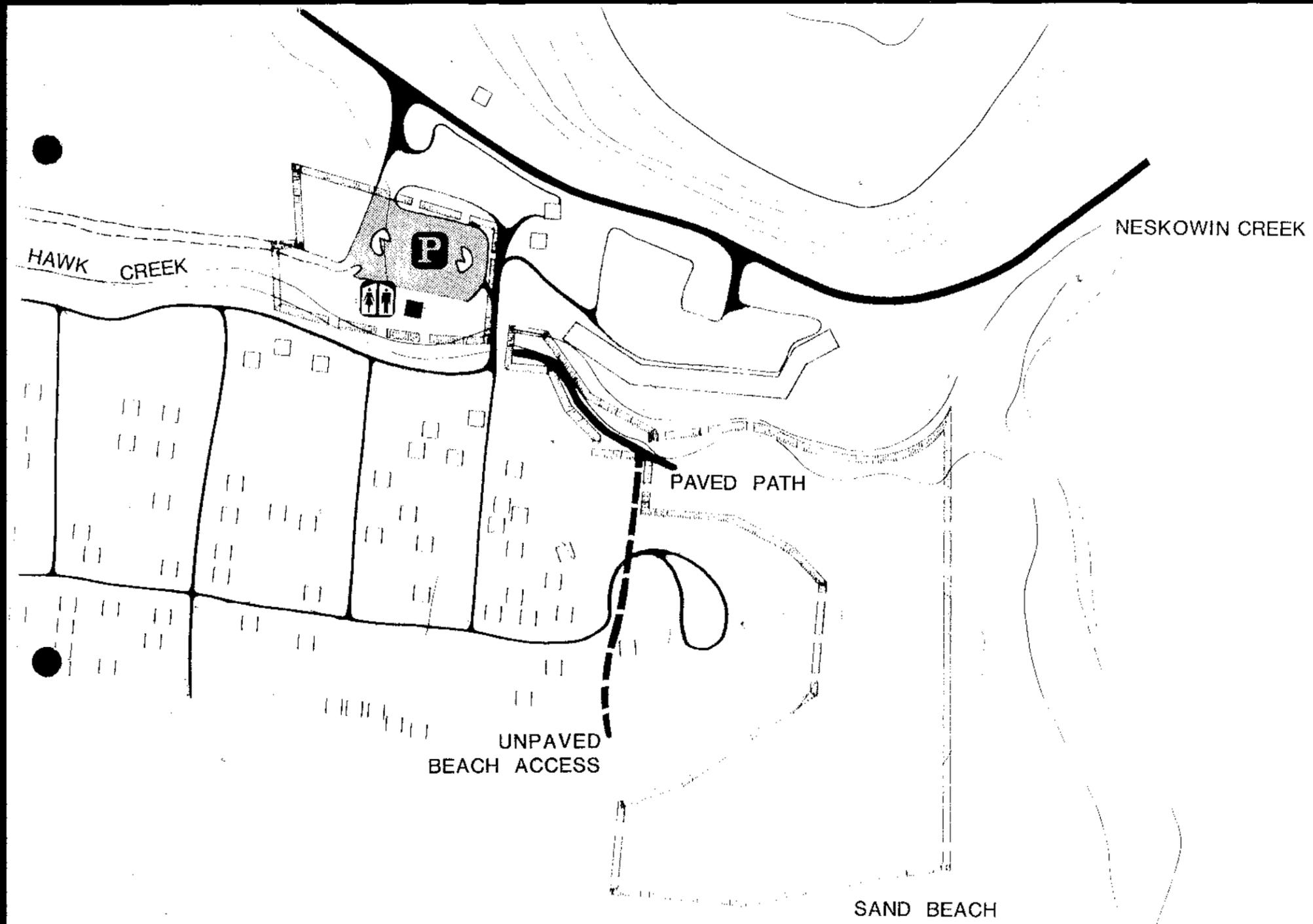
This wayside has a parking lot, restrooms and beach access.

Day-Use Facilities: Parking lot, restrooms, paved path to beach.

Average Annual Day-Use Attendance 1980-1985: 112,400.

Recreation Capability: This park is not capable of supporting further recreation development.

Recreation Activities: Beach activities, swimming.



EXISTING CONDITIONS  
& FEATURES

# NESKOWIN BEACH STATE WAYSIDE

PACIFIC OCEAN

( PROPOSAL ) ROCK

1984

OREGON STATE PARKS

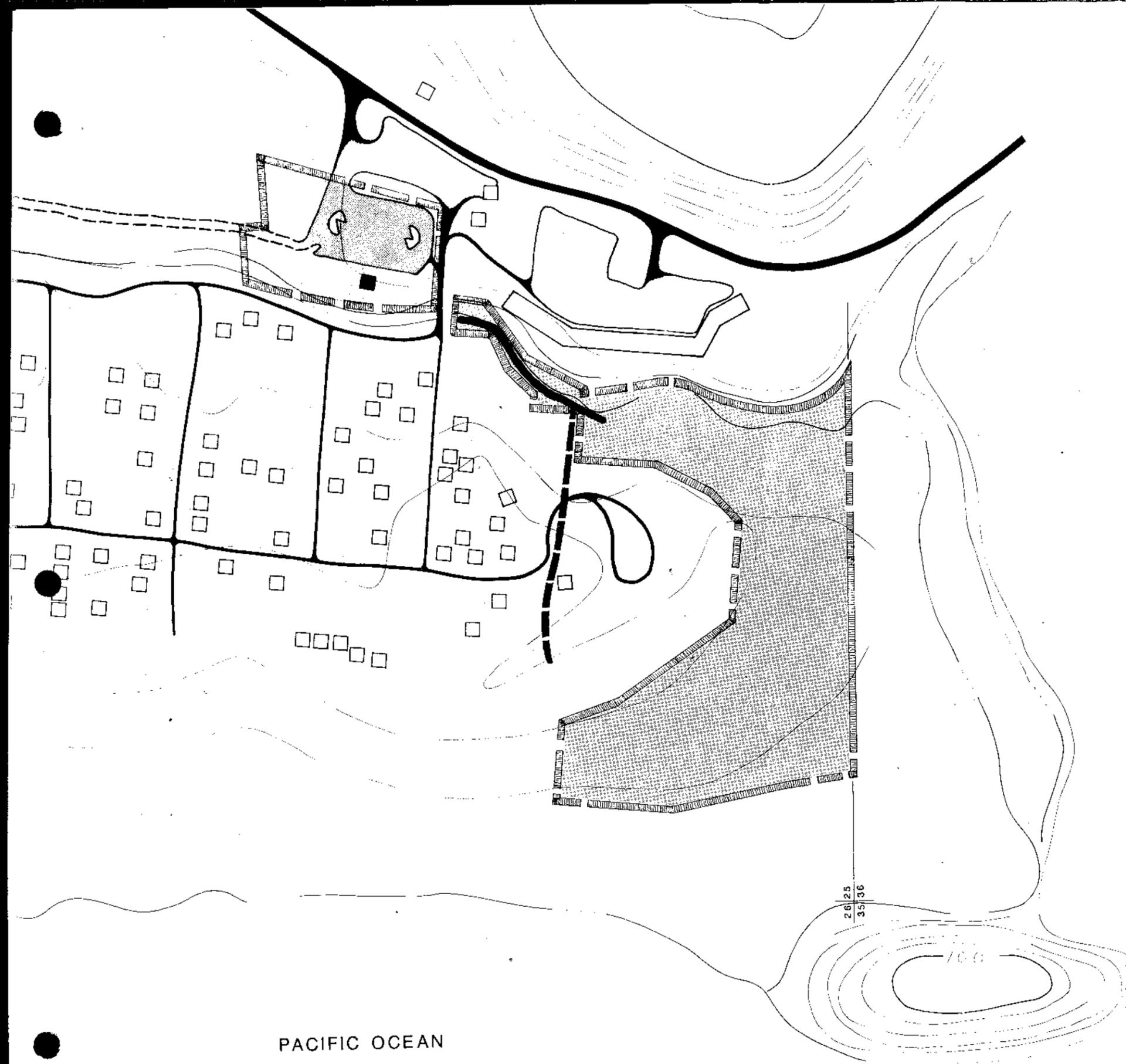
PROTECTION None

MANAGEMENT 6.25 Acres 79%

The path to the beach, the stabilized dunes and the open beach are all in the Management class. These areas have been altered from the natural and require some maintenance.

DEVELOPMENT 1.7 Acres 21%

The area around and including the existing parking lot and restrooms is in the Development class.

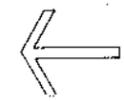


**LAND USE PLAN**

Management   
 Development 

PACIFIC OCEAN

**NESKOWIN BEACH  
 STATE WAYSIDE**



1984 OREGON STATE PARKS

T5S R11W SEC 25 Tillamook County

DEVELOPMENT PLAN OBJECTIVES

Maintain the park facilities in their present condition.

Make minor design changes to the parking lot when future improvements to the county bridge over Hawk Creek are made.

RECREATION OPPORTUNITIES

This wayside has a large parking lot and restroom and provides access to the beach. All the available flat area is developed and the remainder consists of sand dunes and beach area.

This wayside is not capable of supporting further recreation development.

HANDICAP ACCESSIBILITY

The facilities at Neskowin Beach are handicap accessible.

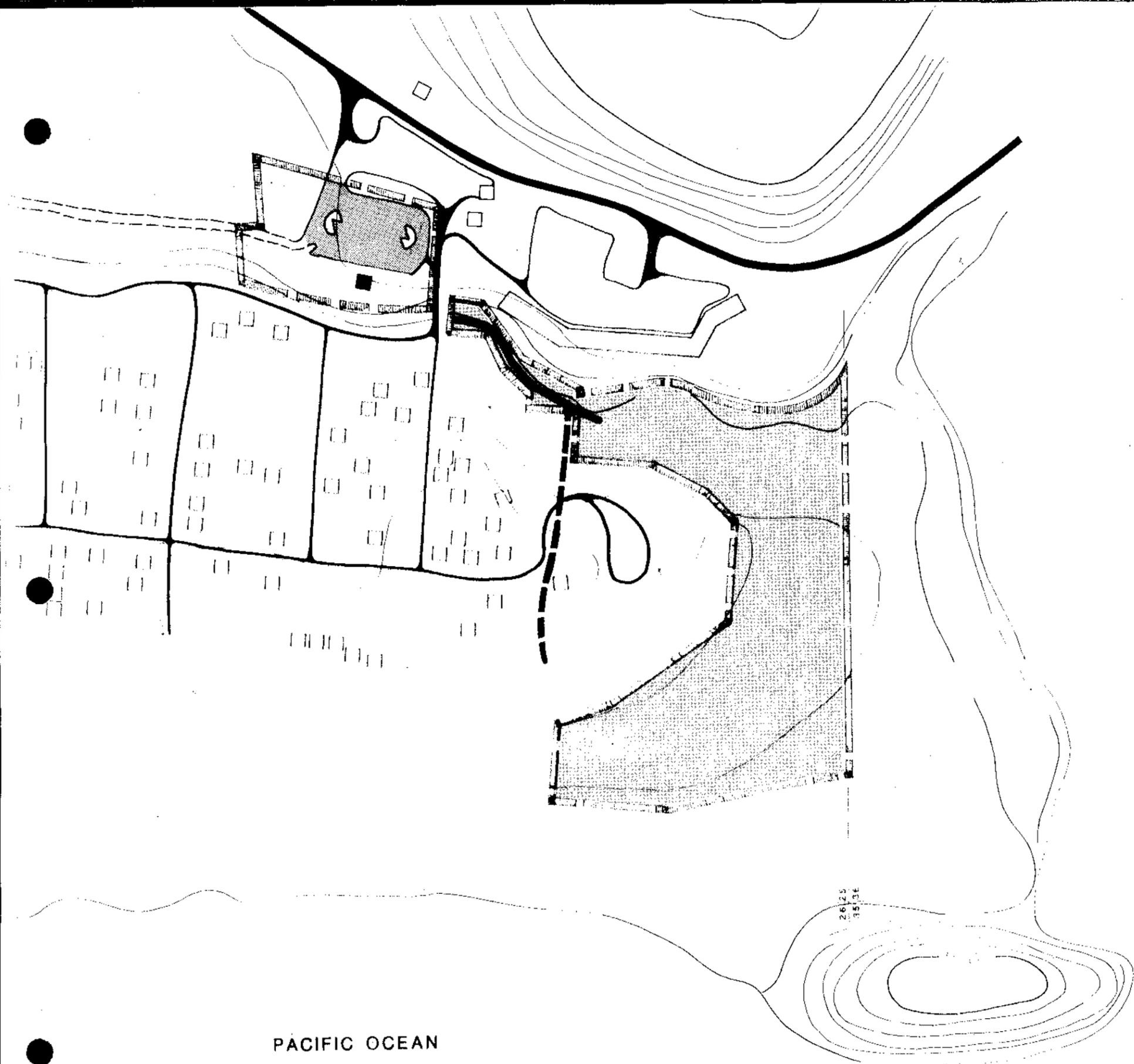
BEACHES AND DUNES

The central facilities at Neskowin Beach are located in stable dunes well back from the shore. Hawk Creek runs through this central area, adjacent to the open sand area before emptying into the ocean near Proposal Rock, the basalt remnant of a once larger Cascade Head. Tree stumps in that beach area have a radiocarbon date of 2,000 years.

GEOLOGIC HAZARDS

Erosion of the beaches and dunes is a continuing geologic process.

Soils at the state waysides are primarily sandy beach soils. These beach and dune soils are useful for many kinds of recreation, but not for development.



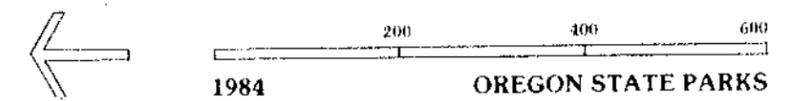
**SOILS**

Soil Restriction Ratings for  
Recreation Development

Moderate   
Severe 

PACIFIC OCEAN

**NESKOWIN BEACH  
STATE WAYSIDE**



1984 OREGON STATE PARKS

T5S R11W SEC 25 Tillamook County

HAWK CREEK

Hawk Creek flows through Neskowin Beach State Wayside and joins with Neskowin Creek at the southern edge of the Wayside. The two creeks flow west around Proposal Rock, out to the ocean. Both of these creeks are classed as lower perennial riverine systems. Both are permanent and flood intermittently.

SAND BEACHES

Neskowin Beach State Wayside also has a large expanse of sandy beach, a portion of which is subject to daily tidal inundation.

HIGH WATER TABLE

This wayside is in an area of high ground water, six inches or less below the surface of the ground.



HAWK CREEK

NESKOWIN CREEK

UPPER BEACH  
LOWER BEACH

PACIFIC OCEAN

**WATER FEATURES**

- Creeks - Hawk & Neskowin
- Permanent,
- Intermittently Flooded
- Intertidal Sand Beaches
- Upper - Irregularly Wet
- Lower - Regularly Wet

**NESKOWIN BEACH  
STATE WAYSIDE**

VEGETATION

NESKOWIN BEACH

NATIVE PLANT COMMUNITIES

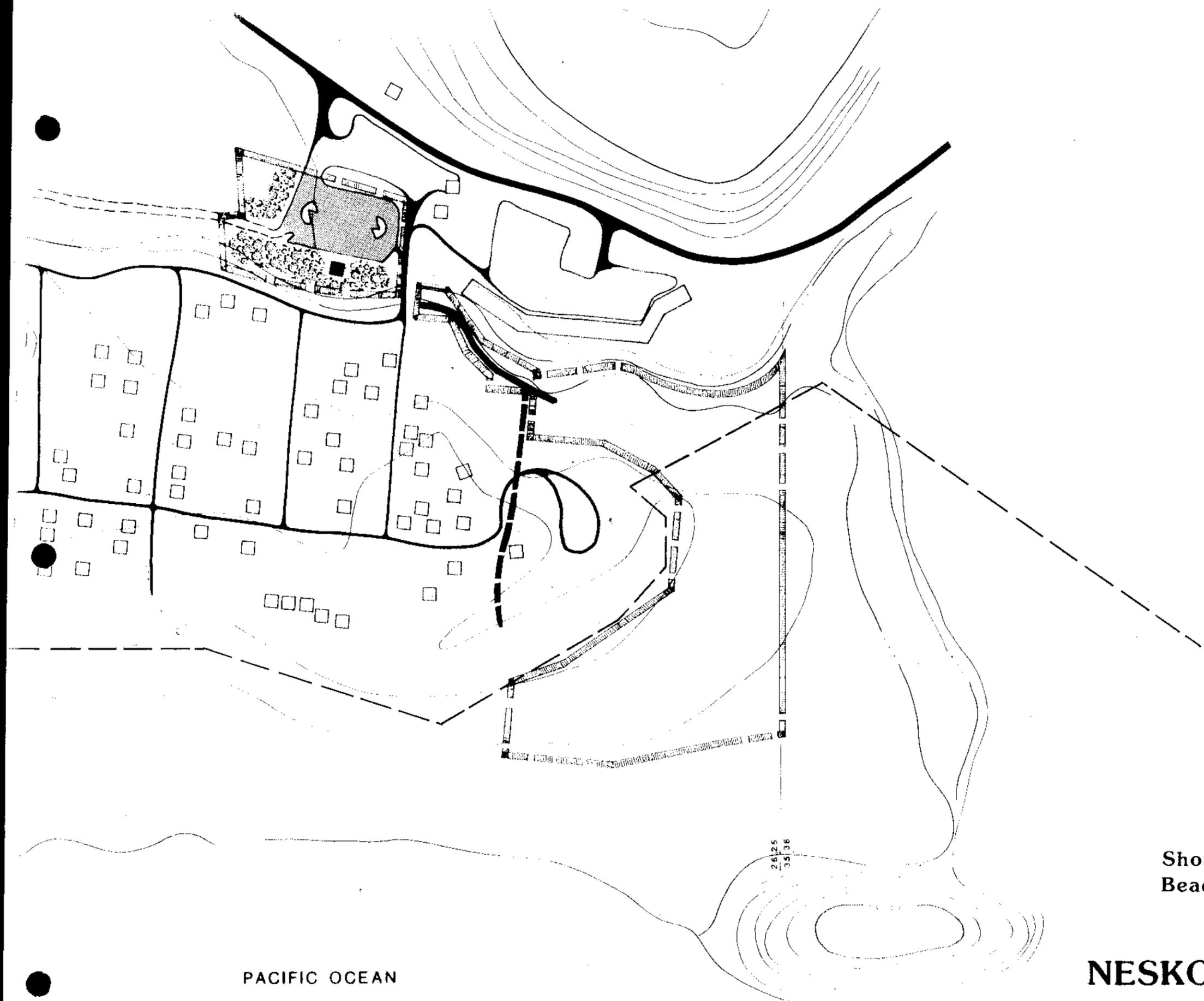
None.

ALTERED VEGETATION

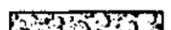
Shore pine and shrubs exist near the developed area of the park.

RARE AND ENDANGERED SPECIES

None known.



**VEGETATION**

Shore Pine   
 Beach Zone Line 

PACIFIC OCEAN

**NESKOWIN BEACH  
 STATE WAYSIDE**

1984   
 OREGON STATE PARKS

This small wayside takes advantage of many scenic attractions which are located adjacent to the wayside. Proposal Rock, an isolated basalt outcropping, sits just at the edge of the ocean. Two creeks flow at the boundaries of the wayside and there is an excellent sand beach.

County Comprehensive Plan Designation: Scenic overlay.

The area around the community of Neskowin is a designated scenic area.

HISTORIC FEATURES

None.

ARCHEOLOGIC FEATURES

It is reported, but not confirmed, that there was a village near the present community of Neskowin. It was thought to be near the confluence of Hawk and Slab creeks, but little is known since it was abandoned before the pioneers arrived.

PARK BACKGROUND

The land here came from William Howe in a land exchange. Other purchases and acquisitions have brought the acreage to 7.95.

ZONING AND COMPREHENSIVE PLANS

NESKOWIN BEACH

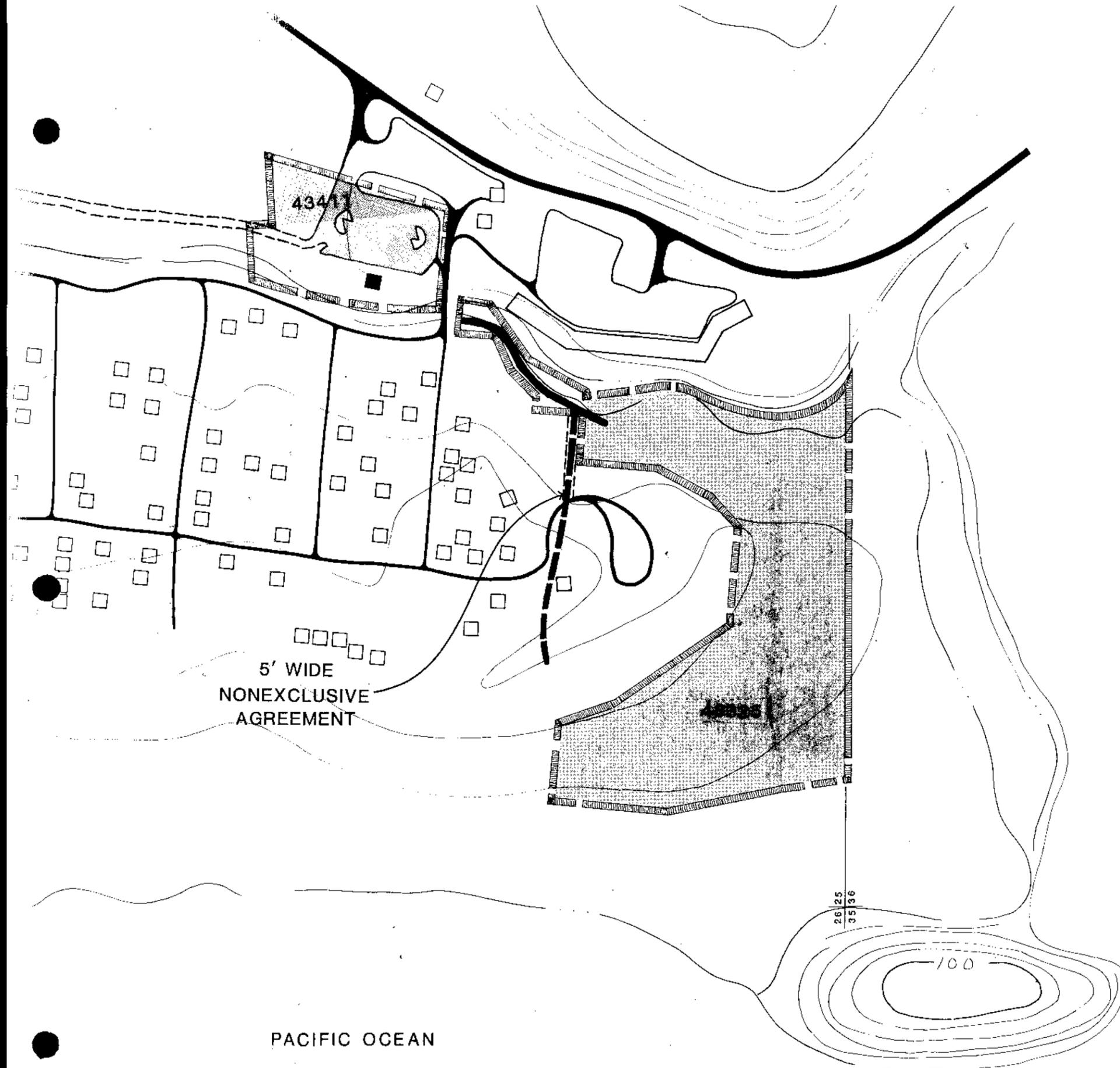
Zoning	RM - Recreation Management with Shoreland Overlay
Jurisdiction	Tillamook County
Tillamook County Comprehensive Plan	Needed for water-dependent and water related uses.

Neskowin Beach consists of 7.95 acres, owned free and clear, with the following exceptions.

File No. 43411 This land was acquired with an existing permit which allows the Neskowin Rural Fire District to erect and maintain a temporary fire house in the northwest corner of the property.

File No. 43325 Property granted for public recreation purposes only, with the following terms and provisions:

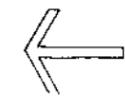
1. Parks will not construct any buildings, improvements and structures without the written consent of the Grantors. No sand, rock or earth is to be removed. Parks may construct a 6' wide asphalt path and may construct and maintain a revetment along the stream banks.
2. The Grantors have the right to maintain the existing bridge and to erect signs or barriers on bridge identifying bridge as private property.
3. If Parks uses the property for commercial purposes, it will revert to the Grantors.
4. 5' non-exclusive agreement. Tillamook County granted to the State a non-exclusive 5' easement on which a public beach access trail may be constructed.



**PROPERTY OWNERSHIP,  
LEASES & EASEMENTS**

Restrictions   
See Text For Explanation

**NESKOWIN BEACH  
STATE WAYSIDE**



1984 OREGON STATE PARKS

See Volume I for Planning Data and Appendices.