



# Oregon Coastal Atlas Tools

**West Coast Regional Coastal  
Management Meeting  
San Francisco, January 2007**

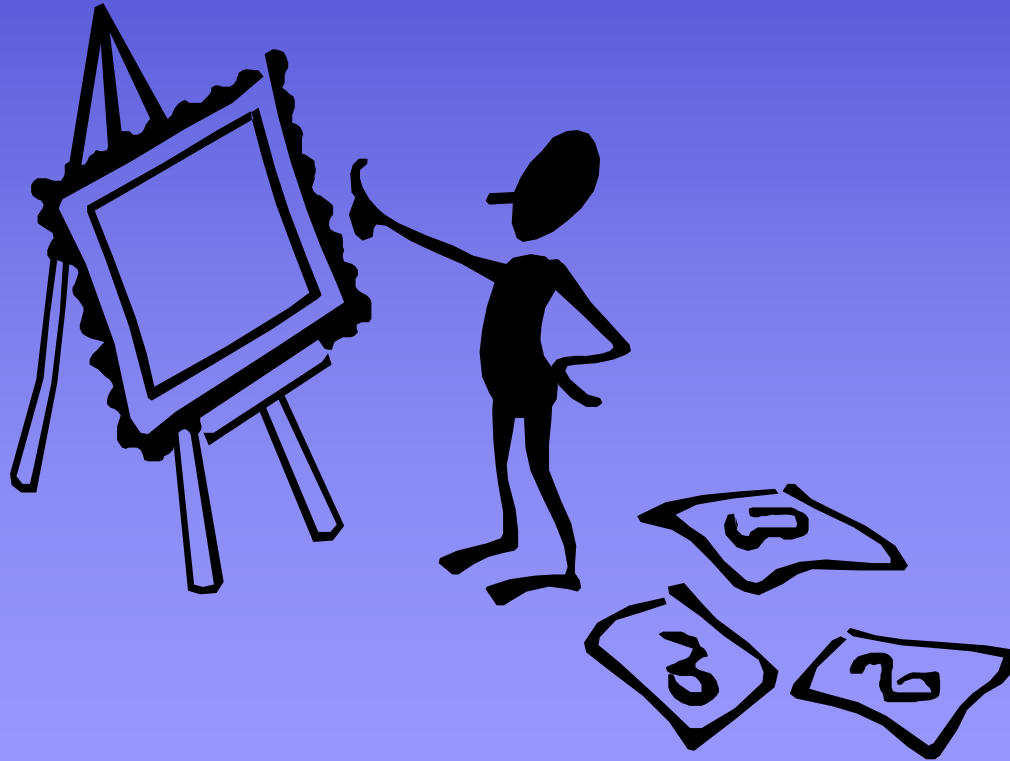
**Tanya C. Haddad  
Oregon Coastal Management Program**

# The Oregon Coastal Atlas

- The Oregon Coastal Atlas is a web depot for traditional and digital information used in decision-making relating to the Oregon Coastal Zone.
- It is a coastal managers web site which provides background information for different coastal systems, access to interactive mapping, geo-spatial analysis tools, and direct search & download access to natural resource data sets relating to coastal zone management.

# Functional Design

- What will people do with the Atlas?



Search

Learn

Use

Map

Oregon Coastal Atlas Home - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlus.net/ Go

Disable CSS Forms Images Information Miscellaneous Outline Resize Tools View Source

# OREGON COASTAL ATLAS

Tuesday November 15, 2005

HOME MAPS TOOLS LEARN SEARCH Site Index:

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## Welcome to Oregon's Coastal Atlas

We hope you enjoy your visit to our website! The Oregon Coastal Atlas is a [multi-group](#) project that has the ambitious goal of being a useful resource for the various audiences that make up the management constituency of the [Oregon Coastal Zone](#). The project is a depot for traditional and digital information which can be used to inform decision-making relating to the Oregon Coastal Zone. We provide background [information for different coastal systems](#), access to [interactive mapping](#), online geospatial [analysis tools](#), and direct download access to various planning and natural resource [data sets relating to coastal zone management](#).

### Guide to Coastal Atlas Resources

			
<b>Maps</b> For users who want to get familiar with the landscape	<b>Tools</b> For Users who want to apply what they know	<b>Learn</b> For Users who want to know a little more	<b>Search</b> For Users who know they want something specific

Done

Oregon Coastal Atlas GIS Data Archive Search - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlant.net/search/index.asp

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## Search Coastal Atlas Archives & Partners

The Coastal Atlas will have links to many different archives which can be searched to help you find the data and information you are looking for. For now, simple searching of the GIS datasets that are documented and downloadable is available below. More data and metadata are being added every day.

**Search GIS Data by Coastal Setting**

Select a Setting and a Site Name Submit

**Search GIS Data by Keyword, Source or Scale**

Fill in only the fields you would like to limit in your search

Keyword: or Originator or Scale Submit

The GIS datasets in this archive are viewable using ArcExplorer freeware made available by ESRI. [Click here to download ESRI's ArcExplorer.](#)

[There are **3385** searchable GIS data sets]

Done

# Search

For users who know what they want

GIS Layers

Metadata

Archive Status

Oregon Coastal Atlas Learn - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlus.net/learn/index.asp

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## Learn from the Coastal Atlas

In this section you will find all kinds of information about the Oregon Coast. Is there a specific beach or estuary you are interested in? Check out "[Coastal Settings](#)" to see what we have to offer. Is there a coastal mangement issue on the Oregon coast you are interested in? See if it is discussed under "[Coastal Topics](#)". If you are wondering about more technical aspects of Atlas, maybe our "[Technical Stuff](#)" section will answer your questions.

### Coastal Settings

 <p><b>Estuaries</b> Oregon's 22 major estuaries play a vital role in the ecological and economic health of the coast and the entire state.</p>	 <p><b>Sandy Shores</b> Headlands divide the Oregon coast into as many as 21 sandy shore compartments, or littoral cells, ranging from less than 10 km to over 100 km in length.</p>	 <p><b>Rocky Shores</b> More than 1400 rocks and islands are sprinkled along the nearshore zone of the Oregon coast. These dramatic picturesque areas are valuable habitat ...</p>	 <p><b>Ocean Areas</b> Oregon ocean areas stretch approximately 360 miles from the mouth of the Columbia River to the California border and extend some 14 to 40 miles into the ocean.</p>
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### Cool Links

- [Lewis & Clark Legacy: Astoria Canyon: A Natural Laboratory](#)
- [Washington Coastal Atlas](#)
- [Australian Coastal Atlas](#)
- [Ecotrust's Inforain: bioregional information system](#)
- [Fisheries & Oceans Canada: By the Sea](#)
- [NOAA's polar orbiting and geostationary satellite Imagery](#)
- [NOVA's Into the Abyss](#)
- [NASA's Landsat Map of the US](#)
- [USGS Coastal Erosion due to El Nino](#)
- [NOAA Real Time Wave](#)

### Coastal Topics

 <p><b>Access</b> There are two major</p>	 <p><b>Hazards</b> Oregon's ocean</p>	 <p><b>Water Quality</b> The Oregon Beach</p>	 <p><b>Tsunami</b> Tsunamis rank as</p>
--	--	--	--

# Learn

For Users who are curious to know more

Information about:

Coastal Settings

Coastal Topics

Technical Stuff

Oregon Coastal Atlas Tools - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlus.net/tools/index.asp


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Tuesday November 15, 2005

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## Coastal Atlas Management Tools



**Maps:** The very first tool in the Oregon Coastal Atlas is our interactive [Maps](#) tool. Features available under the "Map" section include some typical of many web-mapping applications, as well as some less common. Users can browse preformatted datasets in the form of raster backdrops with vector overlays for the entire Oregon coastal zone including the territorial sea. In addition, archive datasets identified by a user's [Search](#) may be interactively added to the base map to provide maps of personal interest. Users may dynamically switch between HTML and Java Applet-based interfaces, and once a custom map has been created, output to a PDF is possible.

## Atlas Management Tools Under Construction

			
<p><b>Coastal Access</b></p> <p>For Users who need to find locations and facilities of Coastal Access Points</p>	<p><b>Beach Water Quality</b></p> <p>For Users who want to see the Water Quality test results of specific Beaches</p>	<p><b>Marine Visioning</b></p> <p>For Users who want to understand factors that shape the Marine landscape</p>	<p><b>Watershed Assessment</b></p> <p>For Users who want to do OWEB Watershed Assessment Manual tasks</p>

Done

# Tools

For Users who want to apply what they know

Planners

Public

Researchers

Contributors

Oregon Coastal Atlas Maps - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print

Address <http://www.coastalatlant.net/maps/index.php> Go

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### COASTAL ATLAS MAPS

Java Mode Disabled  
Click to Enable



© COASTAL ATLAS 0 27 54 81 mi

Quick View Your County Quick View Your Town Jump Back out to Original Extent Help

 **View a Prepared map :** [Click here to Redraw the Map](#)

The Coastal Atlas contains many GIS datasets which can be used to create interactive maps of coastal areas. For quick presentation we have a few lists of prepared map themes you can browse... or [search our archives](#) for the data you want and make your own map.

Info Layers	Overlays	Backgrounds
<input checked="" type="checkbox"/> info	<input checked="" type="checkbox"/> overlay	<input checked="" type="checkbox"/> background
<input type="checkbox"/> Estuaries	<input type="checkbox"/> Landmarks	<input type="checkbox"/> No Background
<input type="checkbox"/> Sandy Shores	<input type="checkbox"/> Hydrography	<input type="checkbox"/> Shaded Elevation
<input type="checkbox"/> Rocky Shores	<input type="checkbox"/> County Lines	<input type="checkbox"/> Shaded Bathymetry

Internet

# Maps

For Users who want  
landscape context

Prepared Maps


Custom Maps

Detail Information

Personal Output

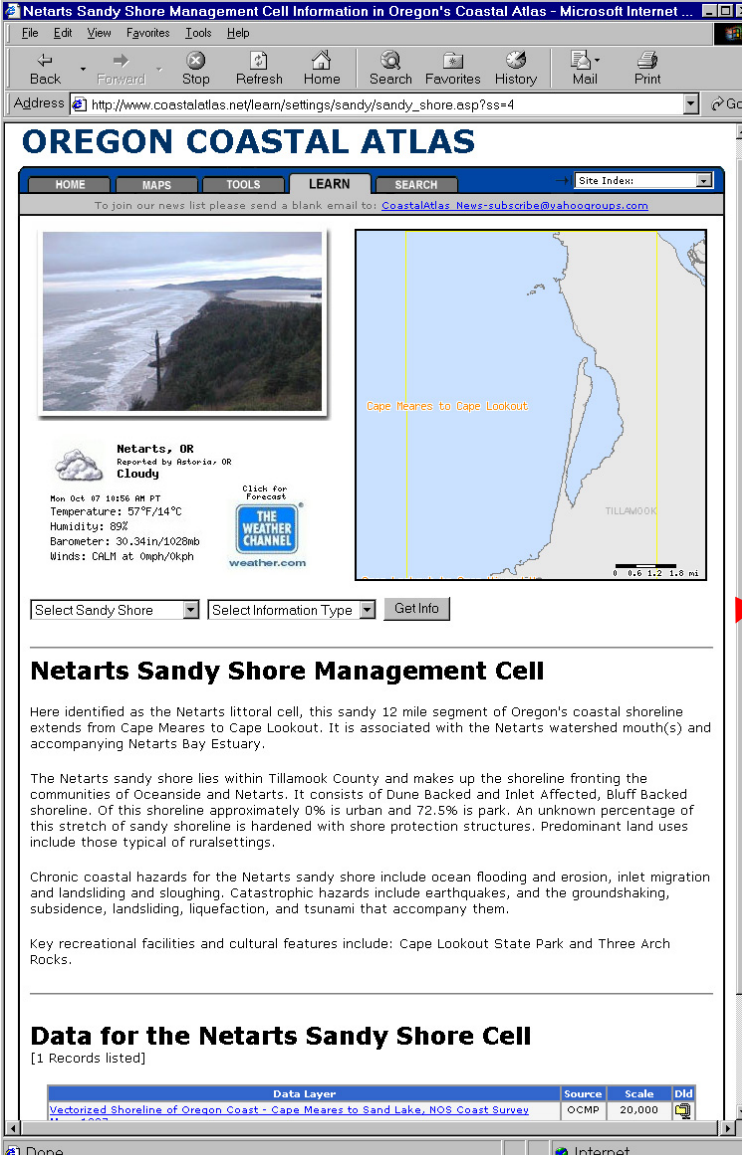


# Cross Functions: Data Retrieval



**Learn**

- For Users who are curious to know more
- Information about:
- Coastal Settings
- Coastal Topics
- Technical Staff



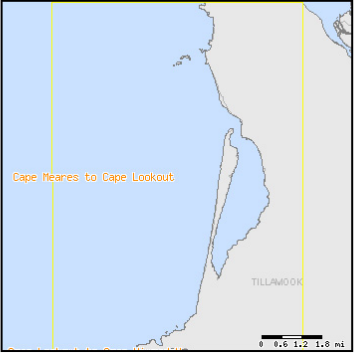

Netarts Sandy Shore Management Cell Information in Oregon's Coastal Atlas - Microsoft Internet ...

Address: [http://www.coastalatlus.net/learn/settings/sandy/sandy\\_shore.asp?ss=4](http://www.coastalatlus.net/learn/settings/sandy/sandy_shore.asp?ss=4)

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Cape Meares to Cape Lookout

Netarts, OR  
Reported by Astoria, OR  
**Cloudy**

Mon Oct 07 10:56 AM PT  
Temperature: 57°F/14°C  
Humidity: 89%  
Barometer: 30.34in/1028mb  
Winds: CALM at 0mph/0kph

Click for Forecast



Select Sandy Shore: [dropdown] Select Information Type: [dropdown] Get Info

### Netarts Sandy Shore Management Cell

Here identified as the Netarts littoral cell, this sandy 12 mile segment of Oregon's coastal shoreline extends from Cape Meares to Cape Lookout. It is associated with the Netarts watershed mouth(s) and accompanying Netarts Bay Estuary.

The Netarts sandy shore lies within Tillamook County and makes up the shoreline fronting the communities of Oceanside and Netarts. It consists of Dune Backed and Inlet Affected, Bluff Backed shoreline. Of this shoreline approximately 0% is urban and 72.5% is park. An unknown percentage of this stretch of sandy shoreline is hardened with shore protection structures. Predominant land uses include those typical of rural settings.


Chronic coastal hazards for the Netarts sandy shore include ocean flooding and erosion, inlet migration and landsliding and sloughing. Catastrophic hazards include earthquakes, and the groundshaking, subsidence, landsliding, liquefaction, and tsunami that accompany them.

Key recreational facilities and cultural features include: Cape Lookout State Park and Three Arch Rocks.

### Data for the Netarts Sandy Shore Cell

[1 Records listed]

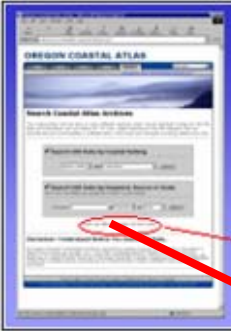
Data Layer	Source	Scale	Dtd
Vectorized Shoreline of Oregon Coast - Cape Meares to Sand Lake, NOS Coast Survey	OCMP	20,000	



**Maps**

- For Users who want landscape context
- Prepared Maps
- Custom Maps
- Detail Information
- Personal Output

# Cross Functions: Data Visualization

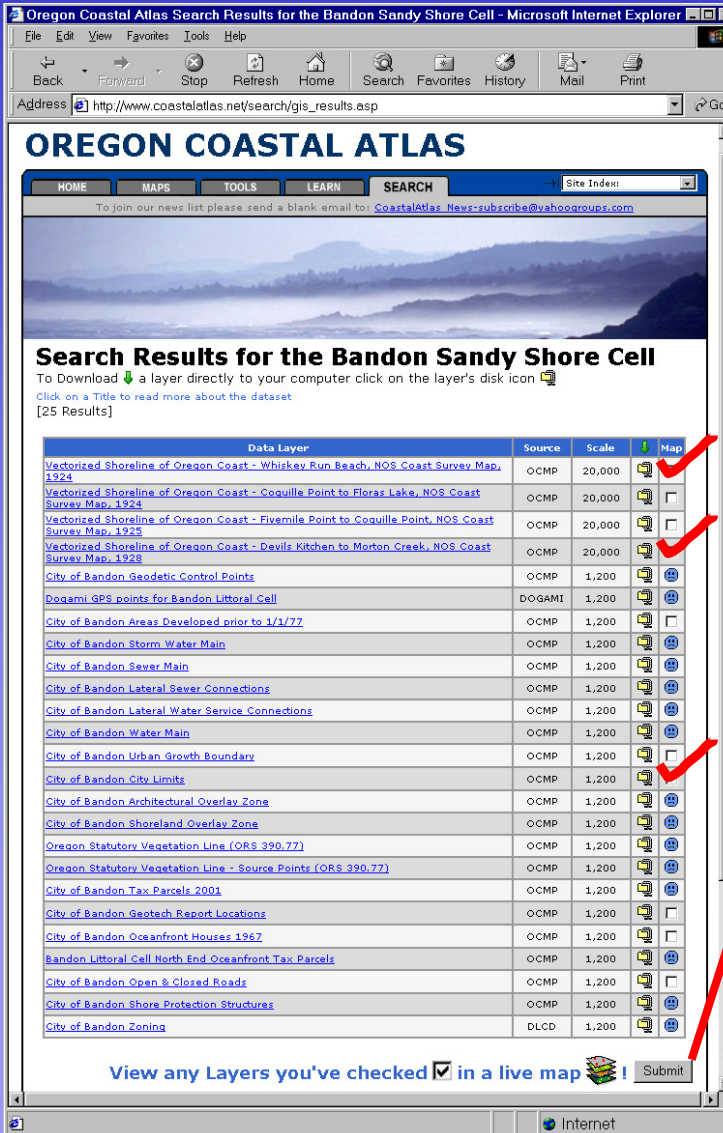


**Search**

For users who know what they want

GIS Layers  
Paperic

Active Data



**OREGON COASTAL ATLAS**

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### Search Results for the Bandon Sandy Shore Cell


To Download a layer directly to your computer click on the layer's disk icon

Click on a Title to read more about the dataset

[25 Results]

Data Layer	Source	Scale	Map
<a href="#">Vectorized Shoreline of Oregon Coast - Whiskey Run Beach, NOS Coast Survey Map, 1924</a>	OCMP	20,000	<input checked="" type="checkbox"/>
<a href="#">Vectorized Shoreline of Oregon Coast - Coquille Point to Floras Lake, NOS Coast Survey Map, 1924</a>	OCMP	20,000	<input type="checkbox"/>
<a href="#">Vectorized Shoreline of Oregon Coast - Fivemile Point to Coquille Point, NOS Coast Survey Map, 1923</a>	OCMP	20,000	<input checked="" type="checkbox"/>
<a href="#">Vectorized Shoreline of Oregon Coast - Devils Kitchen to Morton Creek, NOS Coast Survey Map, 1928</a>	OCMP	20,000	<input checked="" type="checkbox"/>
<a href="#">City of Bandon Geodetic Control Points</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">Dogami GPS points for Bandon Littoral Cell</a>	DOGAMI	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Areas Developed prior to 1/1/77</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Storm Water Main</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Sewer Main</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Lateral Sewer Connections</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Lateral Water Service Connections</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Water Main</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Urban Growth Boundary</a>	OCMP	1,200	<input checked="" type="checkbox"/>
<a href="#">City of Bandon City Limits</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Architectural Overlay Zone</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Shoreland Overlay Zone</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">Oregon Statutory Vegetation Line (ORS 390.77)</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">Oregon Statutory Vegetation Line - Source Points (ORS 390.77)</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Tax Parcels 2001</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Geotech Report Locations</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Oceanfront Houses 1967</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">Bandon Littoral Cell North End Oceanfront Tax Parcels</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Open &amp; Closed Roads</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Shore Protection Structures</a>	OCMP	1,200	<input type="checkbox"/>
<a href="#">City of Bandon Zoning</a>	DLCD	1,200	<input type="checkbox"/>

View any Layers you've checked  in a live map Submit



**Maps**

For Users who want landscape context

Prepared Maps

Custom Maps

Detail Information

Personal Output

# What is a Tool?

- **Something built specifically to aid a user with the completion of a repetitive task,  
e.g. a shovel, a chainsaw, a bulldozer**
- **In the context of a Coastal Atlas, different kinds of users have different abilities and different kinds of “tasks” they are dealing with resolving:  
- e.g. a homeowner vs. a Local Planner**

# Archive Search Tools

- For catalogues of like data
- Results may be linked to from multiple applications
- Examples: GIS Archive, COMCI, Coastal Photo Database

The image displays two screenshots of web search interfaces for the Oregon Coastal Atlas. The left screenshot shows the 'Search Coastal Atlas Photos' interface, which includes a navigation menu (HOME, MAPS, TOOLS, LEARN) and a search section with three options: 'Search by Keyword', 'Search by Specific Coastal Location', and 'Search by Photo Subject'. The right screenshot shows the 'Catalogue of Oregon Marine & Coastal Information' (COMCI) search interface, which includes a navigation menu (HOME, MAPS, TOOLS, LEARN, SEARCH) and a search section with three options: 'Search by Keyword', 'Search by Person', and 'Search by Topic Group and Major Themes'. Both interfaces feature search input fields and 'Submit' buttons. The right interface also includes a note at the bottom: '[There are 566 searchable COMCI data sets]'. The browser windows are titled 'Oregon Coastal Atlas - Mozilla Firefox' and 'Oregon Coastal Atlas - COMCI Search - Microsoft Internet Explorer'.


# Report Tools

- **Serve templated reports containing text, images, maps, charts, data, download links etc.**
- **Initiated by a user selection or query**
- **Results may be from, or lead to multiple data sources**
- **Examples: Rocky Shores Inventory, Coastal Access Facilities, Beach Water Quality Reporting, Beach Morphology Monitoring**

http://www.coastalatlus.net - Search for an Oregon Coastal Access Site

File Edit View Go Bookmarks Tools Help

Disable Cookies CSS Forms Images Information Miscellaneous



## Search for an Access Site :

1 → Search for access points in : All Counties

Oregon Coastal Access Site Detail - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlus.net/learn/topics/access/access.asp?ac=448



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Tuesday January 23, 2007

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Tillamook, OR

Get the 10 day forecast

Pollen Reports  
Airport Delays  
Special Events

The Weather Channel  
weather.com

38 °F  
Cloudy

Feels Like: 38°F  
Humidity: 90%  
Wind: SE at 1 mph  
Enter city/zip

Download Desktop Weather

[Click Here to Search for another Access Site](#)

Oregon Coastal Access Sites Found - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.coastalatlus.net/tools/public/access\_results.asp?co=%25


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## 7 Access Sites Found :

Be aware that some sites listed may be intended for  Visual Access only.

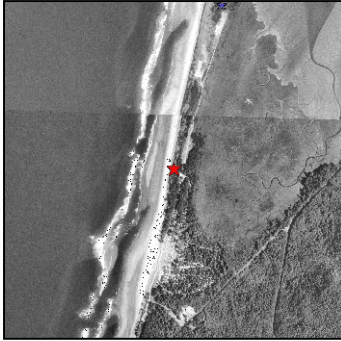
Location	Maintained By	Path to Beach
<a href="#">Ft. Stevens SP/Area C</a>	State Parks	unpaved
<a href="#">Nehalem Bay SP</a>	State Parks	unpaved
<a href="#">Cape Lookout SP/Day Use</a>	State Parks	unpaved
<a href="#">S. Beach St. Park</a>	State Parks	paved
<a href="#">Carl Washburn Mem. S.P.</a>	State Parks	paved
<a href="#">Flora Lake central</a>	Curry County	unpaved
<a href="#">Humburg Mtn. S.P./Brush Cr.</a>	State Parks	unpaved

[7 Sites Found]

Home Maps Tools Learn Search Background About Us Funding Links

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## Cape Lookout SP/Day Use Access



### Access Site Information

**Location:** Cape Lookout SP/Day Use

**Access Type:** beach

**Path to Beach:** unpaved

**Managed by:** State Parks

**Parking:** paved

**Fee:** yes

### Facilities

	yes
	no
	yes
	yes
	no
	no
	none

### Activities

	no
	no
	yes
	yes
	no
	no
	no
	yes

**REMEMBER:** Oregon beach users are fortunate enough to have open access along the sandy beach area and at regulated sites leading to the ocean shore. This does not mean that the public has a right to access the beach from anywhere or that private property can't block access along the ocean shore. Please don't abuse this privilege! Use the designated access sites, don't trample on private property, and be respectful of the public's resource.

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# Issue-centric Tools

- Demonstrate use of data & science to answer questions that repeat in space or time
- Examples: Erosion Hazards Tool Suite, Watershed Tool



## Dune Overtopping

For Users who want to plan for Dune Undercutting or Overtopping



## Dune Undercutting

For Users who want to plan for Dune Undercutting or Overtopping



## Bluff Recession

For Users who want plan for possible Storm induced Bluff Recession



## Coastal Inundation

For Users who want to Visualize near Real-time Coastal Storm Flooding



## Watershed Assessment

For Users who want to do OWEB Watershed Assessment Manual tasks

# Story-centric Tools

- Method for highlighting unique datasets

The screenshot shows a web browser window displaying the Oregon Coastal Atlas website. The main content area features a large aerial photograph of a coastal inlet, with a video player overlaying it. The video player is titled "1987 Video Log of the Oregon Coast" and shows a filmstrip of frames from the video. Below the video player, there are controls for the video, including a progress bar and a "Jump to another location" button. The website header includes navigation tabs for HOME, MAPS, TOOLS, LEARN, and SEARCH. The date "Tuesday November 15, 2005" is displayed in the top right corner.

The screenshot shows a web browser window displaying the Oregon Coastal Atlas website. The main content area features a large aerial photograph of Tillamook Bay, with a vertical filmstrip overlaying it. The filmstrip shows a sequence of images from 1929 to 1994, illustrating the erosion of the bay. The website header includes navigation tabs for HOME, MAPS, TOOLS, LEARN, and SEARCH. The date "Friday January 3, 2003" is displayed in the top right corner. The main heading is "OREGON COASTAL ATLAS" and the sub-heading is "Tillamook Bay The Erosion of Bayocean Spit". The text below the filmstrip describes the history of the bay, including the construction of a hotel and the impact of erosion.



# Current & Future Plans

- **Continue to migrate useful existing datasets into Atlas Archives**
- **Integrate new Topic modules and tools as needed**
- **Expand & Improve Archives Search**
- **Update design & some design-related functionality**
- **Update map interface and improve cartography**
- **Update backend & unify content management schemes**

# Credits

## Contributors

**OCMP** - Paul Klarin, Randy Dana, Tanya Haddad,  
Bob Bailey, David Revell, John Marra

**OSU** - Dawn Wright, Ken Crouse, Peter Bower  
Chris Zanger, Danielle Pattison, Colin Cooper,  
Mike Tavakoli, Amythyst O'Brien, Christina Ryan,  
Jessica Adine, Anthea Fallen-Bailey, Jenny Allen  
Ryan Field

**Ecotrust** - Michele Daily, Ben Donaldson, Mike Mertens

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NOAA Coastal Services Center

Federal Geographic Data Committee

**[www.coastalatlantia.net](http://www.coastalatlantia.net)**

**Thanks!**