

**Infrastructure for Data Sharing,  
Spatial Analysis, Resource Decision-  
Making and Societal Impact  
The Oregon Coastal Atlas**

**ITR/IM Digital Govt. Grant EIA-011359**

**Project end date: 12/15/04**

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# Collaboration

**Oregon State University**, Dept. of Geosciences -

Dawn Wright, lead PI

Graduate students: Chris Zanger, Colin Cooper

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REU intern: Mike Tavakoli

Undergraduates: Amythyst O'Brien, Christina Ryan,

Anthea Fallen-Bailey, Ryan Field,

Jenny Allen, Jessica Adine

**State of Oregon Ocean-Coastal Management  
Program -**

**Paul Klarin, Tanya Haddad, Randy Dana, Bob Bailey,**

**David Revell, John Marra**

**Ecotrust, Non-Profit Environmental Organization -**

**Michele Daily, Mike Mertens, Ben Donaldson, Sarah Klain**

# Research Objectives

- **Develop computational infrastructure**
  - data sharing, spatial analysis tools and increased use of up-to-date interdisciplinary geo-spatial resource data in local coastal management related resource decision making.
- **a coastal manager's web depot for digital and traditional information**
  - interactive mapping
  - direct search & download access to natural resource data sets
  - geo-spatial analysis tools
  - streamline decision-making relating to the Oregon Coastal Zone
- **above and beyond ...**
  - background information on different coastal systems (sandy shores, rocky shores, ocean areas, coastal hazards)

# Opening Page

Oregon Coastal Atlas Home

## OREGON COASTAL ATLAS

Friday, May 20, 2004

HOME TOOLS LEARN SEARCH Site Index

Oregon Coastal Atlas Home



### Welcome to Oregon's Coastal Atlas

We hope you enjoy your visit to our website! The Oregon Coastal Atlas is a [multi-media](#) 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](#).

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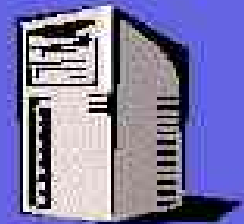
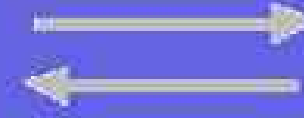
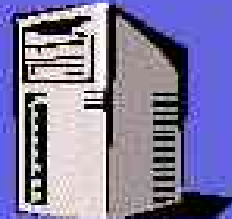
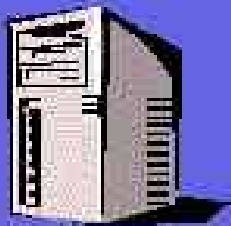
### Guide to Coastal Atlas Resources

			
<h4>Maps</h4> <p>For users who want to get familiar with the landscape</p> <p>The Coastal Atlas includes an Internet Map Server which can be used by visitors to view a variety of site data. In addition, a commonly requested data</p>	<h4>Tools</h4> <p>For Users who want to apply what they know</p> <p>Tools are an important component. In the case of Coastal Atlas tools we've created a list of a variety of <a href="#">tools designed to help address the typical coastal users' concerns</a></p>	<h4>Learn</h4> <p>For Users who want to know a little more</p> <p>The Coastal Atlas provides simple introductory information for a range of coastal management issues. <a href="#">Coastlines</a>, <a href="#">Sand/Shores</a>, <a href="#">Kelp</a>, <a href="#">Nourishment</a>, <a href="#">Dredging</a>, <a href="#">Oregon's Coastal Atlas</a>, <a href="#">coastal atlas</a></p>	<h4>Search</h4> <p>For Users who know they want something specific</p> <p>The heart of the Coastal Atlas is an <a href="#">archive of</a> a myriad of data collected over the years by various projects performed in the Oregon-Oregon Coastal</p>

# Some Accomplishments

- **The Functional online atlas**
  - [www.coastalatlantlas.net](http://www.coastalatlantlas.net)
  - Featured in NOAA's *Coastal Services* and *The Oregonian*
- **The geospatial tools**
  - Hazards Management: Mitigate the Losses
  - Watershed Assessment: Identify Potential Actions
  - Protecting Ocean Areas: Visualize the Benefits
- **The community infrastructure**
  - State govt, academia, non-profit, coastal planners in local governments
  - Supplementary funding from NOAA, USGS/FGDC
  - People in Oregon actually understand what we are doing!

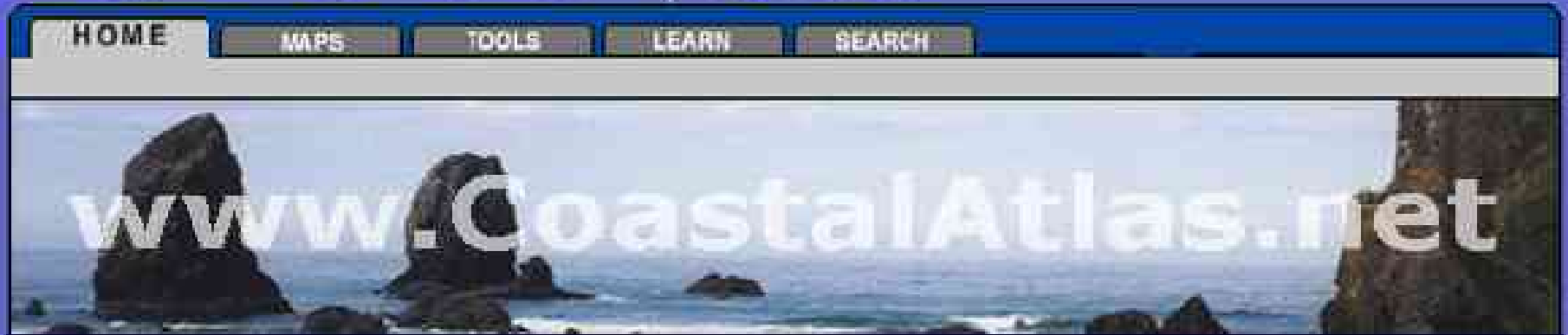
# Management Structure/Technical Architecture



Sun Blade 100  
500 MHz CPU  
256 MB RAM  
66 GB HD  
Solaris 8  
Apache Web Server 2.0  
EGOC site server 2.07.1

Dell PowerEdge 2500  
1x 1.0 GHz CPU  
2 GB of RAM  
150 GB SCSI RAID  
Windows 2000 SP 3  
Microsoft IIS 5.0  
Minnesota MapServer 3.6

Dell Precision 460  
2x 2.66 GHz CPU  
1 GB RAM  
140 MB SCSI HD  
Windows 2000 SP3  
Microsoft IIS 5.0  
ArcIMS 4.1



# Collaboration / Success

**Learn**

- YOU NEED TO KNOW
- YOU NEED TO KNOW HOW
- Information Users
- Learn Settings
- Learn Tools
- Technical Staff



Google Chrome: Oregon Coastal Atlas Hazard Maps - Oregon Department of Transportation

OREGON COASTAL ATLAS

COASTAL ATLAS HAZARD MAPS



View a Hazard map:

Map Layer	Checked	Name
Coastal Hazard	<input checked="" type="checkbox"/>	Coastal Hazard
Seismic Hazard	<input type="checkbox"/>	Seismic Hazard
Flood Hazard	<input type="checkbox"/>	Flood Hazard

**Maps**

- Partners and Users
- Map Settings
- Map Layers
- Map Tools
- Data Information
- Printed Output



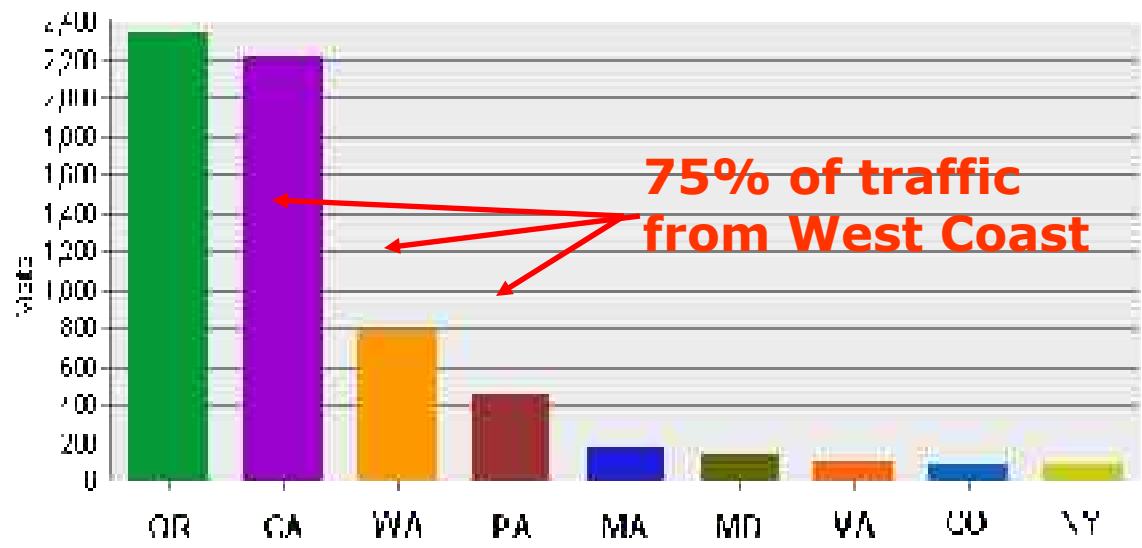
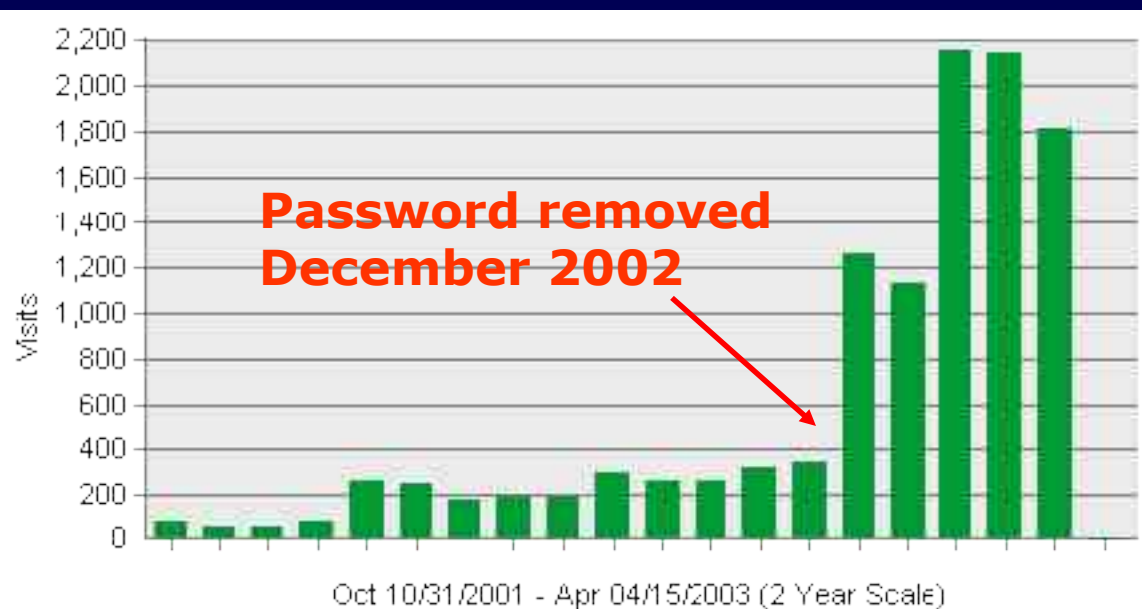




# Current & Future Plans

- Continue to migrate useful existing data sets to Atlas - *holdings have tripled*
- Testing of 3 new online Tools underway:
  - » Chronic Erosion Hazard Tool Suite
  - » Watershed Assessment Tool
  - » Marine Visualization Tool
- Peer-reviewed publication in Spr '05
- Implement OpenGIS WMS
- Fully integrate new COMCI
- Additional NSF submission

# Broad Impact: Atlas Usage



## Downloaded Files:

68% of users composed and downloaded a Personalized Custom Map

vs.

27% of users who downloaded "raw" GIS data from the archives

In general 44% of all activity is in the interactive map tools

# Future Plans - cont.

- **ISSUE: Improved searching**
  - Develop ontology catalog and tool w/SDSC
  - Coastal terminology examples
    - Shoreline vs. coastline, seafloor vs. seabed
  - Semantically interoperable query system
- **Support of CLOSS, NOAA CSC, Coastal Marine Resources Centre in Ireland**
- **EU connection with Irish partners and compare/contrast with Marine Irish Digital Atlas ([mida.ucc.ie](http://mida.ucc.ie))**

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

**[coastalatlantlas@lists.oregonstate.edu](mailto:coastalatlantlas@lists.oregonstate.edu)**