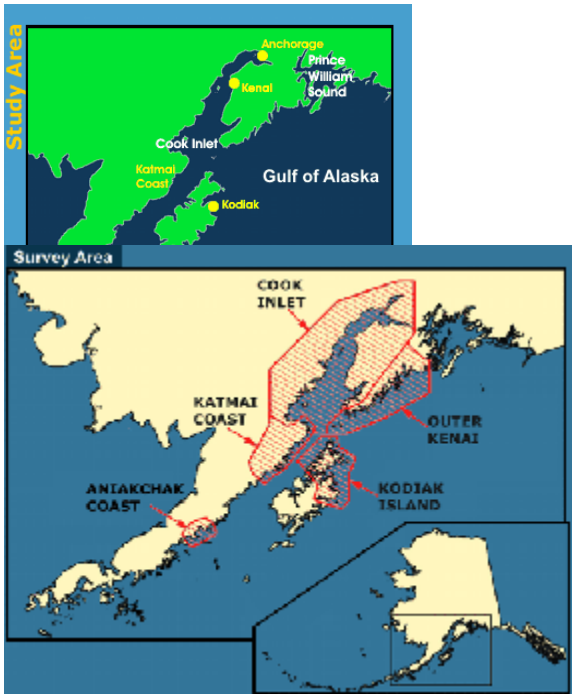
Shoreline Maps for the Gulf of Alaska
Available for downloading at http://www.coastalaska.net

Create your own map for tidepooling, beach field trips, boating, camping, kayaking, fishing, and exploring the beaches in Southcentral Alaska.

Here's an opportunity to download and customize your own ***free*** map at a scale useful to you. The ShoreZone mapping project has characterized the shoreline into segments or units and collected information for each unit that can be accessed from a website and used to design a customized map. The information includes:

- Physical characteristics of the shoreline in the unit:
  - Dominant morphology (rock, sediment, wetland, channels)
  - Sediment type (sand, gravel, mud, wetland)
  - Wave exposure
- Biological communities in the unit:
  - Splash zone
  - Marsh and dune plant communities
  - Barnacle and mussel-dominated communities
  - Seaweed communities
  - Eelgrass communities
- Other environmental characteristics:
  - Degree of shore modification by human activities
  - Oil residence index (vulnerability to sustained impacts of oil spills)



Maps and information is available for the cross-hatched areas.

The shoreline in these areas was flown by two scientists in a helicopter at a low elevation and at low tide. A digital video camera and GPS mounted in the helicopter was used to create a georeferenced film of the shoreline with the latitude and longitude of each shoreline point. The scientists classified each shoreline segment in terms of its biological and physical characteristics.

For more information, contact the Center for Alaskan Coastal Studies, P.O. Box 2225, Homer, AK 99603 or cacs@xyz.net.

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To create maps, follow the steps below. A tutorial is also available on the site to make use of all of the GIS mapping tools available through the site.

1. Go to http://www.coastalaska.net	
2. Click on **View Thematic Maps**	
3. Click on **Click here to launch map viewer!**	
4. This map will be displayed	

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5. The zoom-in tool will be active. Click on the map and move the cursor to draw a box around the area you would like to encompass with your map. In this example, Kachemak Bay was the area highlighted. The next screen displays the new map.

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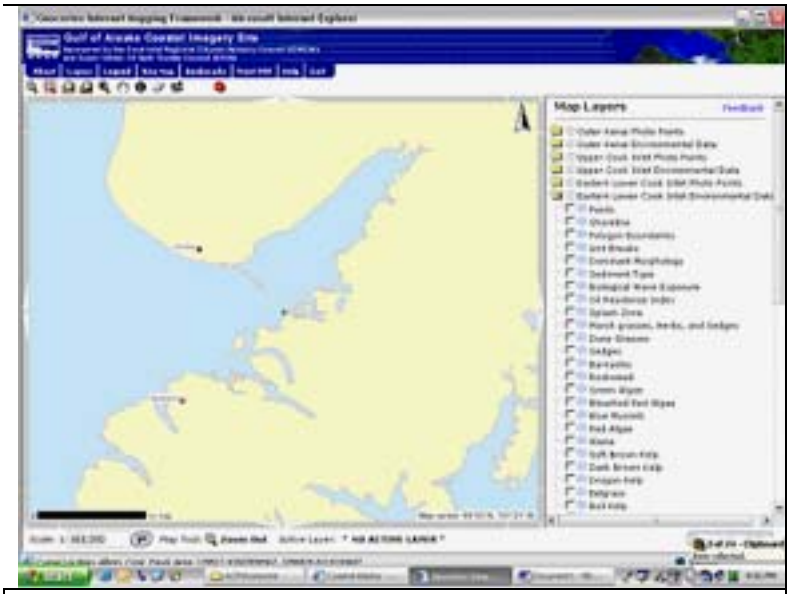
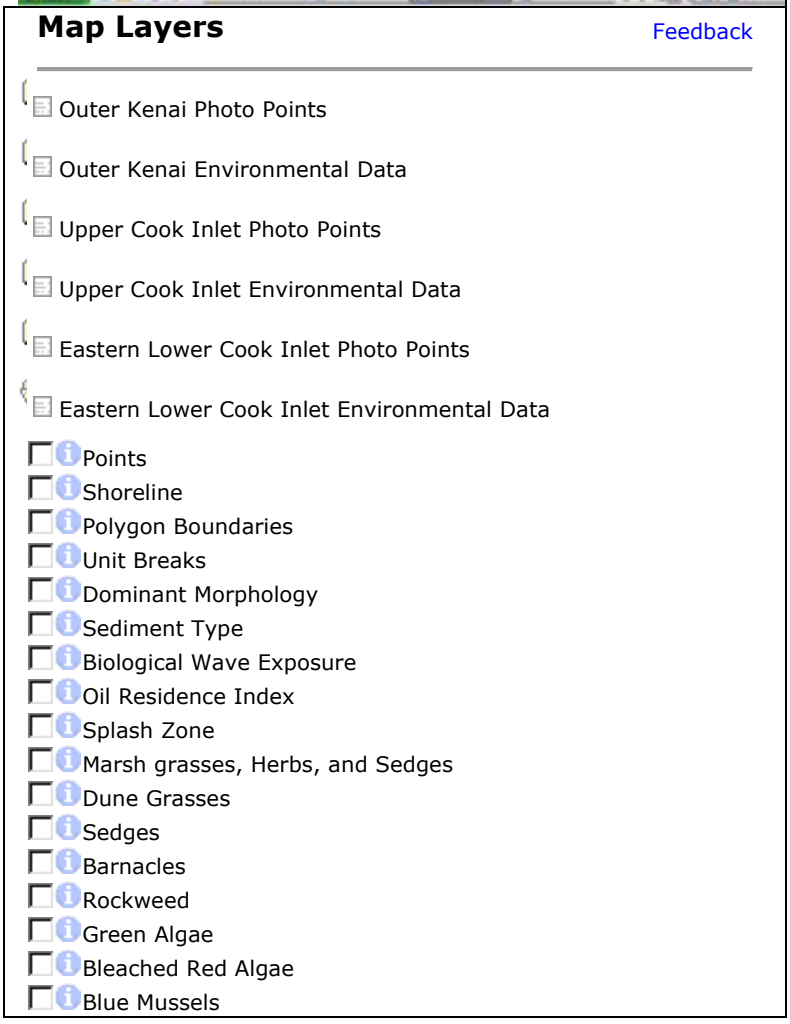


6. The map layers that can be displayed on this base map are shown to the right of the map. Click on the folder for your area to open it.

Map layers can be turned on by clicking both the box and the associated to make it an active layer.



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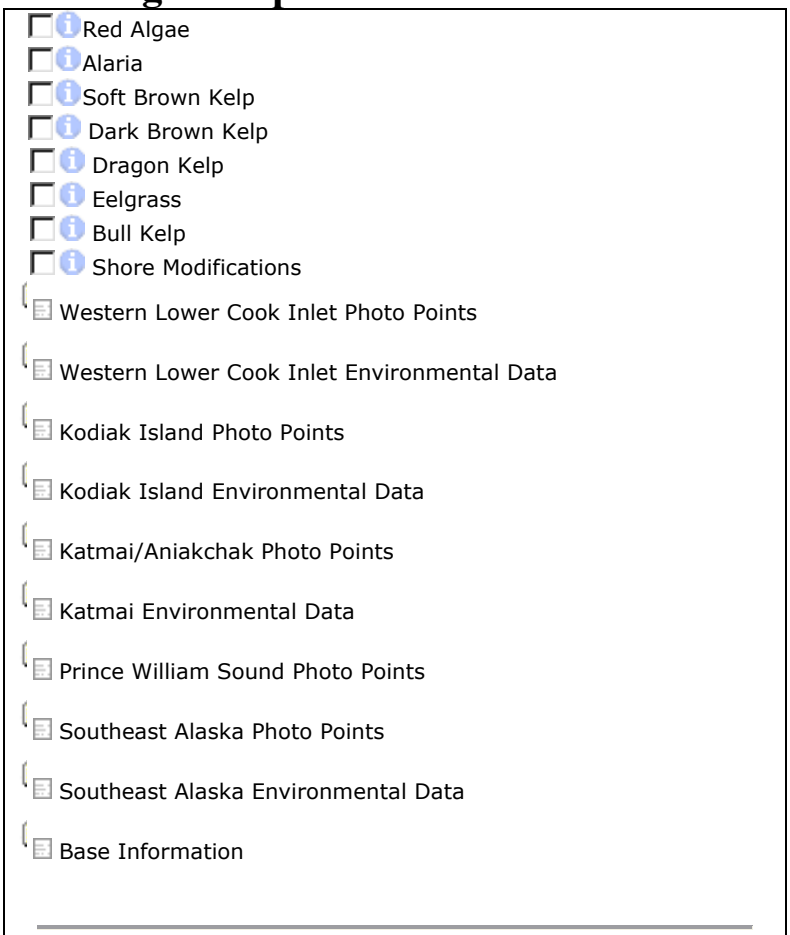
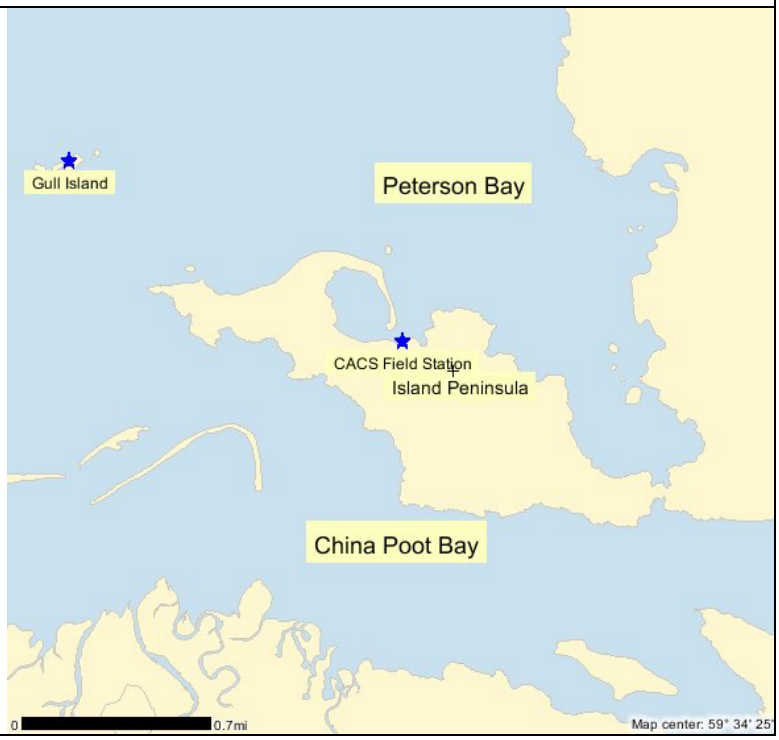


7. This is a map of the area around the Center for Alaskan Coastal Studies Field Station on the Island Peninsula between Peterson and China Poot Bays that was redrawn after the shoreline layer was made active. The map text was added by opening the tool box

on the tool bar line and then by using the  tool. The point locators (the blue stars) and text associated with the location were added with the  tool.



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8. This map was designed by zooming in on Peterson and China Poot Bays in Kachemak Bay and making the shoreline, unit breaks, and eelgrass layers active.	
9. The map legend appears to the right of the map and indicates the classification of the nature of the distribution of a "bio-band" of eelgrass made by the biologist. The areas shown in red are the shoreline units where a continuous band of eelgrass was observed over the entire unit. Some units will have multiple bio-bands between the upper intertidal zone and visible subtidal zone, but only one color-coded band can be displayed at a time.	

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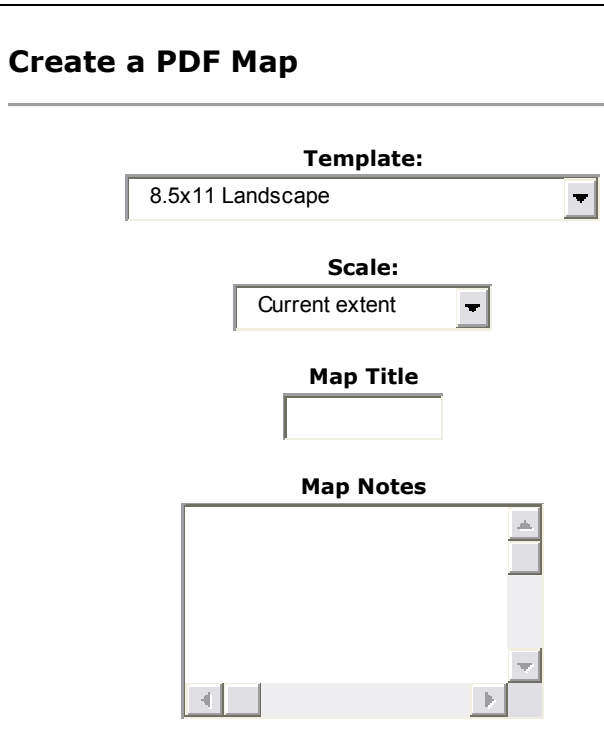
10. This is a map of the area around the Center for Alaskan Coastal Studies Field Station on the Island Peninsula between Peterson and China Poot Bays that was redrawn after the shoreline layer was made active.

The map text was added by opening the tool box

on the tool bar line and then by using the  tool.

The point locators (the blue stars) and text associated with the location were added with the  tool also in the tool box.

When your map is complete, click on the "Print PDF file" tab on the upper left hand side of the page.



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The website has a tutorial that explains how Geographic Information Systems (GIS) can be developed and how to use all of the tools available on the website.	

Additional information is available on the website on each category of physical shoreline type and each biological community, or bio-band, category. For the bio-bands, the species or species group that characterizes the bio-band (e.g., eelgrass, bull kelp, Alaria) is an indicator species for a biological community of seaweeds or plants and marine invertebrates.

Other GIS tools that are available once the map viewer is launched:

- "Drilling down" for the information associated with any point, including the latitude and longitude and all of the associated physical and biological data. **Please note:** the data were collected across the shore, that is, if there were several zones of biological communities or changes in the beach from a cliff to a rocky beach to a mudflat, but the typing will only display the dominant physical beach type that is the greatest percentage of the beach exposed at low tide.

- Measuring distances between two points on the shoreline

- Measuring an area highlighted on the map.

- "Flying the coastline" and seeing the actual video of the shoreline between any two map points.

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Project Sponsors

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