GIS Overview Panel

Pathfinder to Map Resources

Cathy Vitale

February 24, 2006

Contact Info:

[cathy@arlis.org](mailto:cathy@arlis.org)

(907)786-7663
Pathfinder to Map Resources

Cathy Vitale

February 24, 2006

Using the Internet select

www.arlis.org

Select Pathfinders & Links from green banner at top

Select Maps (click search)

Maps

ADF&G Division of Commercial Fisheries
Alaska Department of Fish & Game’s resources on commercial fisheries.
Notes: Topical
Simple to use
Regulatory and research information on commercial fishing of salmon, shellfish, groundfish, and herring in Alaska. Opening dates, regulations, permits/licenses/forms, genetics, fish runs, technical reports, subsistence, maps, and statistics are a few of the services offered on this website. There are links to the four administrative regions, as well as to specific locations (e.g., Cook Inlet, Kuskokwim). More Info

Alaska Department of Fish & Game (ADF&G)
Permits, regulations, and information about fishing and hunting in Alaska.
Notes: Topical
Simple to use
ADF&G maintains this official Alaska State Government website. Among the available resources is information on permits, regulations, licenses (including online fishing/hunting licenses applications ), aquatic farming, current fish activity in individual rivers throughout the state, employment opportunities, and administrative contacts. There are sections with resources on viewing wildlife, conservation, hunting, trapping, and fishing, wildlife fact sheets, bird migration, and animal habitats. Education pages for sport enthusiasts, teachers, and students are also available. Links from this page include all Alaska State Refuges, Sanctuaries, and Critical Habitat Areas, and the live walrus cam on Round Island. More Info
Alaska Department of Natural Resources (DNR) Division of Mining, Land and Water
Coal and mineral mining resources from the Alaska DNR.
Notes: Topical
Available on this site are explanations of the function of DNR in mineral property records, placer and large mine permits, abandoned mine lands, coal regulations in Alaska, recent decisions, coal regulatory program, forms (mining, land, and water), fact sheets (e.g., Alaska hydrological survey, annual labor, fee schedules, dam safety), maps, large mine index, a booklet of mining laws and regulations, and contact information. Recent decisions and news releases are on the homepage. More Info

Alaska Fire Service
Wildland fire management information.
Notes: Topical
This site of the Alaska Fire Service, a division of BLM, provides information and photos about fires in Alaska, as well as current fire and lightning information. The “Fire planning” section contains the complete BLM Alaska Land Use Amendment, which includes data on the effects of fire on air, water, threatened species, and Native Alaskans, with maps and statistics (1988-2002 fires on BLM land). The “Firewise” page includes a fire risk rating section and “Firewise Alaska,” which is a large document of practical fire planning suggestions for home/business owners. More Info

Alaska Geospatial Data Clearinghouse
Geospatial maps of Alaska with datasets from multiple agencies.
Notes: GIS professional; Motherlode of map resources
Aquatic resources, digital elevation models, ANWR geospatial data, forest health, wetlands inventory, and Alaska parks are a few of the topics available by accessing the geospatial maps and data from the National Park Service, US Fish and Wildlife Service, US Department of Agriculture, Forest Service, Natural Resources Conservation, US Department of Commerce, US Census Bureau, the Municipality of Anchorage, Kenai Peninsula Borough, Alaska Department of Transportation, and Alaska Department of Natural Resources, and ecosystem initiatives through this entry portal website. More Info

Alaska Natural Heritage Program (AKNHP)
The UAA information clearinghouse containing resources on threatened/endangered Alaskan plant species, animal species, and natural communities and nonnative invasive plants.
Notes: Topical
This program of UAA’s Environment and Natural Resources Institute gathers, verifies, and disseminates information on Alaska native plant and animal species, ecological systems, and invasive plants of “environmental concern.” The website provides access to data from AKNHP research (some of which is available in digital text), as well as links to data from other states, countries, and agencies. There are also bibliographies for all topics. The botany pages list rare plants, vascular plants, and floristic surveys and include drawings and photos. Under ecology are lists of ecosystem projects. In addition to tracking lists of birds, mammals, fish, and amphibians, the zoology pages contain more detailed information, lists, facts, sound recordings, photos, distribution maps on bats, loons and grebes, the Alaska Wood Frog, Amphibians and Reptiles of Alaska, and the ADF&G Featured Species Reports. The maps section has a Traditional Native Corporations (TNC) map of Alaska. All other maps are of the Cook Inlet ecosystem. Map resolution is poor. Links to each of the sections work best from the homepage. More Info

Alaska Natural Resources Conservation Service (NRCS)
Data on multiple aspects of conservation of agricultural land from the NRCS Division of the US Department of Agriculture (USDA).
Notes: Topical
This is an USDA website of conservation information specific to Alaska, including wetlands, river erosion, legislation, digital datasets, maps, imagery, data, air and water quality, and snow and soil surveys. A browse search is available for resources specific to homeowners, farmers/ranchers, teachers/students, volunteers, and communities, as well as programs and government documents specific to land management and conservation. There are links to additional national information on forestry, soil erosion, climate, drought, water quality, wetlands, photographs, state of the land, plant database, plant selection, invasive species, and nutrient and pest management. More Info
**Alaska PaleoGlacier (APG) Atlas**
The APG Atlas is a web-based summary of Pleistocene glaciation across Alaska.
Notes: Topical
Created by the U of Colorado, maps of Alaska glaciation during the late Wisconsin glaciation and maximum extent of glaciers during the last three million years and in modern time are available on this website. They can be viewed for the entire state or separated into the Brooks Range, Seward Peninsula, Yukon Tanana Upland and NE Alaska Range, Kuskokwim Mts, Ahklun Mts, Alaska Peninsula, and Anchorage Region. Maps may be downloaded and printed. The “Glacial Geology: Fun Facts and Images” section links to several sites with facts, photos, and explanations of the shaping of the landscape by glaciers and glacier flooding. More Info

**Alaska Public Lands Information**
Maps of the national and state parks, preserves, and refuges in Alaska.
Notes: Topical
This website features a map of Alaska divided into north, northwest, interior, southcentral, southwest, and southeast sections. Each region shows all national parks, preserves and wildlife refuges, state parks, and major roads and cities. Information on camping, locations of campgrounds, cabin rental from the USFS, NPS, BLM, and State of Alaska is available. Links to the websites of these parks and refuges provide further information on educational resources, roads, animals, history, natural resources, environment, and visitor services. A tab to the homepage accesses additional information on the Iditarod, bear viewing, Anchorage programs, the Alaska Marine Highway System, and virtual tours of each region. More Info

**Alaska Science Center**
Research in biology, geology, geography, water, and hazards in Alaska from the USGS.
Notes: Topical
The Alaska Science Center website provides a large amount of information and resources on the subjects of biology, geology, geography, water, and hazards in Alaska from the scientists at USGS. The biology section covers research results, databases, and information on the topics of Alaska ecological systems and habitats (e.g., coastal and marine, Exxon Oil Spill), mammals (e.g., brown and polar bears, caribou, sea otter, walrus, wolves), birds (e.g., sea, land, shore, waterfowl, loons, telemetry), fish, and technical programs (e.g., genetics, GIS/remote sensing, wildlife veterinarian medicine).
Assessments of land surfaces, environment, and geographic data and maps are available in the geography section. Geography covers the quality, occurrence, and quantity of mineral and energy resources in Alaska. Volcanoes and earthquake resources are covered in the Hazards section.
In the Water section are resources on glaciers, historical and real time stream flow levels and water quality and quantity information for streams, lakes, wells, and springs. Try other keyword searching such as “Bering Land Bridge” or “Historic Alaska” or “Chukchi Sea” for additional articles on Alaska. More Info

**Antiquarian Maps**
Eighty-two maps of the world with a large percentage of the western hemisphere.
Notes: Historic
An interesting perspective on historical geographical knowledge is provided by these maps of the world from the 15th to the 19th centuries at this site from Reed College. Searchable by title, mapmaker, area (nice click on world map by quadrants function ) or by browsing the dates. More Info

**Archived US Fish and Wildlife (USFWS) Report on ANWR**
2001 report on possible effects of oil and gas development on the coastal plain of Alaska’s Arctic Refuge from the USFWS.
Notes: Topical
This is the archived full-text document of the 2001 USFWS report entitled “Potential Impacts of Proposed Oil and Gas Development on the Arctic Refuge’s Coastal Plain: Historical Overview and Issues of Concern.” Maps, photos, and a bibliography of reports are used to discuss the impact on wildlife, birds, and the environment. There are links to later information and press releases, as well as to the official ANWR website. More Info
Arctic Maps

Links to maps of the Arctic created by NOAA.

Notes: Historic; Simple; Many maps

This website is a source of maps of the Arctic created for the Arctic Theme Page of NOAA. The list is clearly labeled and includes historical and expedition as well as contemporary maps. More Info

Arctic National Wildlife Refuge

The USFWS website on the Arctic National Wildlife Refuge (ANWR).

Notes: Topical

This is the official USFWS website for the ANWR with maps, lists of animals and fact sheets, animated explanations of the formation of ice wedges, pingos, and permafrost, photos, maps, animal and bird migration, and history and mission of ANWR. Visitor, hunting, fishing, and commercial and recreational activities and permit information is included as are short sections on oil and gas exploration and Indigenous communities. More Info

Arctic Research Consortium of the United States (ARCUS)

A nonprofit organization for the advancement of research and education about the Arctic.

Notes: Topical

ARCUS identifies and provides links to data and websites of institutional, educational, and scientific organizational resources on arctic research to promote the synergy of information. Use the site index or “navigation” to access research on permafrost, the Bering Sea, hydrology, marine science, climate change, “Witness the Arctic” newsletter online (various issues from 1997-2005), links to information on projects such as BEST (Bering Ecosystem Study), arctic GIS with maps and data, Arctic Social Sciences, Arctic Logistics, workshops, calendars, and related websites. More Info

Arctic System Science (ARCSS) Data Coordination Center

The Arctic System Science Data Coordination Center at the National Snow and Ice Data Center (NSIDC).

Notes: Topical

ARCSS collects and coordinates research data on land/atmosphere/ice and ocean/atmosphere/ice interactions. Topics covered include agriculture, atmosphere, biosphere, frozen ground, glaciers, hydrosphere, land surfaces, oceans, paleoclimate, spectral/engineering, solid earth, sea ice, snow and land ice, solid earth, and sun-earth interaction. Searchable by subject, project, or investigator, data also includes maps and photos. More Info

Avibase

Database of taxonomy information, maps, and images on 10,000 bird species.

Notes: Topical

‘Avibase is an extensive database information system about all birds of the world, containing more than two million records about 10,000 species and 22,000 subspecies, including distribution information, taxonomy, synonyms in several languages, and more. This site is managed by Denis Lepage and hosted by Bird Studies Canada, the Canadian copartner of Birdlife International.’ (From website, 8/17/05.) A simple search box allows searching by common or scientific name. Clicking on “Google Images” provides photos of each bird. More Info

Bering Climate

Ecological and climatic information for the Bering Sea ecosystem.

Notes: Topical

This NOAA website is a collaborative effort by NOAA’s Fisheries-Oceanography Coordinated Investigations (FOCI) Program, the North Pacific Research Board (NPRB), and NOAA’s Environmental Services Data and Information Management (ESDIM) Program. Focused on the Bering Sea, a major fishing area undergoing significant climate change, the site contains atmosphere, ocean, fishery, biology, and sea ice data, along with a discussion of relevance and recent trends. Special features include essays by noted marine science experts, a photo gallery, maps, satellite images from NASA, and links to related organizations and sites. More Info
**Bird Links to the World**  
Thousands of websites about birds, bird watching, bird conservation, and related aspects of birds.  
**Notes: Topical**  
A website from the conservation organization Birdlife International on map, scientific, and information website resources on multiple aspects of birds. Features on the homepage include the Top 10 most linked bird websites, best bird websites, checklists, bird names and taxonomy, general web pages, worldwide organizations, and other. A sidebar provides webpages sorted by the regions of Africa, Asia, Central America, Europe, Middle East, North America, Oceania, and South America. Twenty-two additional choices include topics such as atlas projects, backyard birds, humor, magazines, images, sounds, and webcams. In 2005 there were 18,934 web links from this site. [More Info]

**Charting and Navigation ******  
National Oceanic and Atmospheric Administration (NOAA) Charting & Navigation  
Website of products and services for air and marine transportation.  
**Notes: Topical; Historic; GIS Professional; Many levels**  
This division of NOAA provides “world-class information products and services to aid domestic and global commerce, promote safe and efficient marine and air transportation, and add to our understanding of the world's oceans.” (From website, 9/21/05.) Resources and services include nautical charts (e.g., electronic nautical charts, real time coastal observations and forecasts, GIS products, chart updates, obstruction information), an historical map and chart collection of 20,000 maps and charts from the late 1700s to the present, tide and tide current tables including real time water levels, and hydrographic surveys of underwater bottom surfaces and location of obstructions. Some of the products are coastal aerial photography, coastal survey maps, environmental sensitivity index maps (used to plan for oil spill incidents), and bathymetry and topographic data. Some resources are available online; others can be ordered from NOAA. [More Info]

**Coastal Alaska**  
Video imagery, biological and geological data, thematic maps of the Gulf of Alaska.  
**Notes: Topical; GIS**  
Areas covered are the Outer Kenai, Katmai Coast, Cook Inlet, Aniakchak Coast, and Kodiak Island. Thematic maps provide geographic and biological data. Fly the Alaska Coastline is a virtual flying experience along the coast. Mapping data provide the information used to create the maps. A tutorial is available as using the maps can be complicated. These are large graphic files, and use with a high speed connection is recommended. This site is sponsored by Exxon-Valdez Oil Spill Trustee Council, UAF, NOAA, USFWS, Coastal Impact Assistance Program, and Cook Inlet RCAC. [More Info]

**Community Database Online, Alaska**  
A list of information about Alaska communities from the Alaska Department of Commerce (DOC).  
**Notes: Topical**  
This database includes all legally incorporated municipalities (cities and boroughs) and all federally recognized Native villages. It includes photos, histories, descriptions, and grant opportunities. Everything is about and for small villages. Wonderful photos of villages are included  [More Info]

**Conservation Geographic Information System (GIS) Center**  
GIS maps of Alaska, British Columbia, Washington, and Oregon with a conservation emphasis.  
**Notes: Topical, Good maps, Definite agenda**  
Conservation GIS is a non-profit organization dedicated to providing maps and assistance creating maps for conservation purposes using GIS technology. Data includes Alaska, British Columbia, Washington, and Oregon. Digital maps dealing exclusively with Alaska include statewide maps (e.g., land ownership, proposed natural gas line routes, wildlife corridors), regional maps (e.g., Arctic, Northwest, Denali, Tongass and Chugach National Forests), and local maps (e.g., assembly districts, Anchorage lakes with nesting loons). Data and resources pages include the ability to create maps is primarily focused on the temperate rainforest in North America extending from Oregon to Southern Alaska using available GIS data, a database of watershed and land trust agencies, archive maps, and online tools, in addition to other maps. Examples of archive map topics include “The Caribou Herd in the Arctic Refuge Coastal Plain,” “Physical Geography of
the Bering Sea and Aleutian Islands," and "Oil Development on the Arctic Slope." Online tools is a list of websites with information on organizations and sources for information on personal and global conservation efforts concerning fish, watersheds, water, and forests. Contact information for purchasing higher quality print maps from Inforain is provided. More Info

**Current Wildland Fire Information**
Wildland fire locations, assessments, weather, and outlook.
Notes: Topical
Live daily reports on the national fire situation and wildland fire information, as well as statistics from 1997-2004, photos, weather, seasonal and monthly outlooks and assessments, maps, prevention tips, and a glossary of fire terms can be accessed on this website maintained by the National Interagency Fire Center in Boise, ID. More Info

**Department of Interior (DOI)**
DOI’s Website with links to subagencies.
Notes: Topical
Information on forests, conservation, mining, water, wildlife, and Native peoples from the perspective of the Federal Government’s DOI and the following agencies under its jurisdiction: Bureau of Land Management (BLM), National Park Service (NPS), US Geological Survey (USGS), Bureau of Reclamations, Mines and Minerals, Bureau of Indian Affairs (BIA), Office of Surface Mining, and US Fish and Wildlife Service (FWS). The homepage of each of these agencies can be accessed here. More Info

**eBird from Audubon Society**
An electronic database of bird sightings in North America.
Notes: Topical
On this site from the Audubon Society, individuals can contribute to a collective database on bird observations in North America. Individuals can create a record of their bird observations, view the data of other observers, and create maps and records of the database. Information entered will become available to other scientific and amateur observers. A tutorial, map, glossary, and FAQ section are available to assist during the data entry and observation learning processes. More Info

**Energy Analysis of the ANWR**
Resources from the USGS on the Arctic National Wildlife Refuge (ANWR) 1002 Area.
Notes: Topical; PDFs of topical maps
This website from the USGS Energy Resources Program gathers agency-generated information on the petroleum reserves in the ANWR 1002 Area plus links to related sites.

Resources include:

Links to:
1. USGS Central Energy Team - Alaska Resources Page.
4. Department of Energy's Strategic Center for Natural Gas-Policy Facts on ANWR.
5. The Arctic Refuge Coastal Plain Terrestrial Wildlife Summaries report.
6. Evaluation of additional potential development scenarios for the 1002 Area of ANWR (supplement to #5 on this list). More Info
**Energy in Alaska**  
USGS Energy Resources Program website on energy in Alaska.  
Notes: Topical  
This website provides maps, photos, and geo-spatial data of coal, oil, and gas energy reserves, as well as news releases, organizations, government agencies, and publications dealing with coal, oil, and gas in Alaska. The reports on energy resources on the North Slope, the National Petroleum Reserve in Alaska, and ANWR are available. There is a link to the main USGS page for national data and environmental impact reports. [More Info]

**Exploring Earth**  
The Local Resources portion of McDongall Littell’s Classzone website on the subject of the earth.  
Notes: Topical  
Oriented toward middle and high school students, this website explores the physical earth in the categories of investigating (atlas), matter (e.g., mineral resources, EPA superfund sites), dynamic (e.g., volcanoes, FEMA disasters), changing surface (e.g., soils, dams, stream flow), and atmosphere/weather, oceans, space, and history (e.g., fossils, location of the continents through history). [More Info]

**Firewise**  
Building, landscaping and maintenance suggestions for reducing fire danger.  
Notes: Topical  
National fire news and fire weather predictions, maps, fire safety, hazards, and preparation materials for homeowners, firefighters, and businesses is available on this website “for people who live or vacation in fire-prone areas of the United States.” (From website, 7/20/05.) Documents include suggestions for creating fire-safe buildings and communities. Supported cooperatively by the USDA-Forest Service, the Department of Interior, the National Association of State Foresters, the U.S. Fire Administration, and the National Fire Protection Association, this website is also available in Spanish. [More Info]

**Fisheries Global Information System (FIGIS)**  
Fact sheets, statistics, data on global fisheries from the UN Food and Agriculture Organization (FAO).  
Notes: Topical  
FIGIS is a source of global fisheries statistics, maps, and data from FAO. Categories include issues (e.g., ecosystems, utilization, governance), marine fisheries (e.g., stocks, reserves, management, aquatic species (e.g., bony fish, algae, mammals, turtles), fishing technology, aquaculture, geo info (e.g., major fishing areas, stock assessments), statistics (e.g., global production, capture, fishing fleets), and maps. There are additional databases on media, news, and legal topics in FAQ. Searching is available by keyword, species (common or scientific name), or browsing the categories. There are also links to other fisheries resources. [More Info]

**Forest Products**  
Sources of information on forests and timber products from the Alaska Department of Commerce.  
Notes: Topical  
Forest Products is a portion of the website of the Alaska Department of Commerce Office of Economic Development. Funding sources, international exports, sources of timber supply in Alaska, trade leads, Southeast Timber Task Force Report, 2000 International Market Survey, preferred preference program, maps of state forests, and commercial timber species resources are found on this site. [More Info]

**GeoData Explorer (Geode)**  
GIS maps of world resources and hazards from all geologic programs of USGS.  
Notes: Topical  
Shaded relief maps with a convenient legend can be accessed from a list of available locations throughout the world on this site from the USGS programs in coastal geology, earth surface dynamics, geologic mapping, volcano hazards, and
mineral resources. Large data files in html or java formats on coal, petroleum, oil and gas resources, volcanoes, earthquakes, and more may require long download times. More Info

**Google Maps**
Directions and maps on the Google search engine.
Notes: Topical; easy to use
Using an address or zip code, "Maps by Google" allows searching by address or topic (e.g., pizza, hospitals). Results are available in a line map format, a satellite or hybrid view. Satellite provides an actual aerial photo of the area allowing viewing of buildings and topography. A hybrid version will superimpose names onto an aerial version. Maps can be dragged to view adjacent features versus waiting for new screens to open. Satellite images are not real time, and coverage and detail varies for different areas of the country. More Info

**Home Town Locator Gazetteer**
Physical and cultural features and census data for towns in the US.
Notes: Topical
Access maps and aerial photos of cultural and physical features; 2000 census data for villages, towns, and cities; look up distances, community profiles, and zip codes using this gazetteer. More Info

**Hubert Wenger Eskimo Database**
Early Eskimo literature collected by Hubert and Bernice Wenger and housed at UAF.
Notes: Topical; Historic
The Hubert Wenger Eskimo Database includes approximately 200 book and journal article titles in an electronically searchable bibliography with digitally retrievable text of written literature from the period of the early contact between Europeans and northern cultures. There is also an extensive database of early maps taken from these sources. This collection is housed at the Rasmuson Library at UAF which has a copyright on the materials. Conditions for use are provided. More Info

**Human Genome Project**
Databases from the Human Genome Project completed in 2003 by the Department of Energy (DOE) and the National Institute of Health (NIH).
Notes: Topical
The Human Genome Project (1990-2003) was a cooperative project of DOE and NIH to identify and map the human genes in DNA, store the information in databases, transfer the data to the private sector, and address ethical, legal, and social issues (ELSI) of the project. Through this website it is possible to assess information on the project in the categories of: basic information (e.g., acronyms, glossary, publications), history and goals, medicine and the new genetics (e.g., gene testing, therapy, counseling, pharmaceuticals), ELSI (e.g., privacy, patenting, forensics), education (e.g., teachers, students, images, videos, presentations), research (e.g., sequencing, mapping, bioinformatics, recent abstracts), and publications (e.g., Human Genome News, Primer Molecular Genetics). Technical level of the information varies from elementary student to research scientists. Some of the sites are available in Spanish. More Info

**International Time Zone Map**
Map of world showing standard time zones.
Notes: Topical
Produced by the US Naval Observatory, this page has a world map with time zones, the International Dateline, and standard and universal time calculation information. More Info

**Land Records Information**
Land records, maps, and geological information for Alaska.
Notes: Topical; GIS
Multiple maps and data related to land ownership and use in Alaska is available from this entry portal. State Recorder's Office, plat and survey information from BLM and DNR, DNR map library, case files, and property tax for Anchorage,
Fairbanks, NANA lands, and the Kenai Peninsula, as well as state and federal mining claims are all accessible from this site. To determine all of the options, be sure to notice the selection choices across the top of the web page. LASMapper is the data map of state owned lands (e.g., sub surface minerals, water rights, ownership, disposal, use) and can be searched by entering a location or using a point and click map. More Info

Library of Congress (LOC) American Memory Project
Photos, video and sound recordings, documents, and maps on America’s past from the LOC.
Notes: Topical; Historic
Digital images or location information in the form of documents, maps, photos, videos, and sound recordings arranged into collections is available on this website created by LOC. For other resources, this site can also be searched by browsing under “topics” (e.g., Native American History, maps, environment/conservation, architecture/engineering), “time period” (1400 to present), “location,” and “collection contains” (e.g., maps, videos). Keyword searching using “Alaska” plus another topic (e.g., dredging, mining, Natives, railroad) provides resources from all collections. More Info

Maps of the Arctic
Maps of the Arctic as defined by varying parameters.
Notes: Topical; Historic: Easy to Use
Using ten different definitions of “Arctic” (e.g., temperature, Arctic Circle, tree line, or cold places, Northwest Passage), this Athropolis Productions website explores the northern regions in a casual, light-hearted manner. Sunrise/set data, weather, map links, Arctic fact of the day, and the home page make this a site for middle/high school students and the general public. More Info

Maritime Safety Information
Links to websites with relevant maritime safety information from the National Geospatial Intelligence Agency.
Notes: Topical
Websites with maritime safety information included on this site are: General information/points of interest, Geographic locator (region/subregion), Digital nautical chart home page, US Notice to Mariners, NGA Hydrographic products catalog, NGC ON-line navigation publications, Miscellaneous navigation products, Marine navigation calculator, USCG Navigation information, Broadcast warning messages, Anti-shipping activity messages, ONI Worldwide threats to shipping, Mobile Offshore drilling units. Additional links for weather, maritime safety, and hazards. More Info

Meeting of Frontiers (Library of Congress)
Bilingual digital library of the story of the exploration and settlement of the American West and Siberia and the Russian Far East; includes the meeting of the frontiers in Alaska and the Pacific NW.
Notes: Topical; Historic
“Meeting of Frontiers is a bilingual, multimedia English-Russian digital library that tells the story of the American exploration and settlement of the West, the parallel exploration and settlement of Siberia and the Russian Far East, and the meeting of the Russian-American frontier in Alaska and the Pacific Northwest.”

“It is intended for use in U.S. and Russian schools and libraries and by the general public in both countries. Scholars, particularly those who do not have ready access to major research libraries, also will benefit from the mass of primary material included here, much of which has never been published or is extremely rare.” (From website, 7/12/05.) More Info

Minerals Management Service (MMS) Alaska Division
Resources on outer continental shelf oil and gas production in Alaska.
Notes: Topical
Multiple aspects of offshore oil and gas exploration, leasing, and production in Alaska are included on this website from the DOI. Environmental studies, leasing activities, resource evaluation, and offshore topics are covered with statistics, maps, and descriptive information for all present and proposed drilling sites. Search the entire MMS system or click on
“topic index” for a list of topics specific to Alaska. Links are provided to the National, Mexican Gulf, and Pacific Offshore homepage sections of MMS. Educational pages for children are included. More Info

**National Atlas ****
Digital National Atlas of the United States with resources to create maps.
Notes: Wonderful map source
Interactive maps of the U.S. with features to create, layer, and print are available from this site created and maintained by the Federal Government. Search by the topics of agriculture, biology, boundaries, climate, environment, geology, government, history, mapping, people, transportation, and water for articles, printable maps, and map layers. Services for mapping professionals, wall maps, and pre formatted maps (e.g., electoral districts, federal/Indian lands, national wildlife refuge system) are also available. More Info

**National Biological Information Infrastructure (NBII)
Enter portal to data and resources on biological topics.
Notes: Topical
“The NBII links diverse, high-quality biological databases, information products, and analytical tools maintained by NBII partners and other contributors in government agencies, academic institutions, non-government organizations, and private industry.” (From website, 8/15/05.) Some databases require registration and a password. Topics include the biology disciplines of botany, fisheries and aquatic resources, genetic biodiversity, reptiles and amphibians, and systematics/scientific names, biological issues (e.g., coral reefs, biodiversity, bird conservation, invasive species, West Nile Disease, wildlife disease), geographic perspectives divided into U.S., international, or regions of the U.S. (includes maps), teacher resources, and data and information resources (e.g., conferences, image library, metadata, references and journals). More Info

**National Geochemical Survey of US
Maps and database of soil samples survey and analysis performed by USGS.
Notes: Topical; GIS professional
In 1997 USGS began compiling previous data and resurveying all counties of the U.S. to determine geochemical composition of the soil. Soil sediment from streams, lakes, and springs was the primary source of samples, with soil samples used where sediment does not occur in sufficient quantities. The survey is not complete; however, the majority of Alaska has been surveyed. This database provides the history, maps, datasets, methodology, research documentation, and survey status information. Icons give a simple interface between sections. More Info

**National Geologic Map Database
Geologic maps and products from USGS.
Notes: Topical
Access more than 70,000 maps and products, 3,000 online maps, a lexicon of names, geoscience programs and databases, reports, state geological surveys, and topographic maps on geology, hazards, earth resources, geophysics, geochemistry, geochronology, paleontology, and marine geology from this USGS site. More Info

**National Marine Fisheries, Alaska Region
Resources on Alaska marine fisheries from the NOAA Alaska Regional Office.
Notes: Topical
Pages on marine fisheries relevant to Alaska including fishery permits, fishing regulations, protected species, oil spills, habitat conservation, enforcement, catch reports and statistics, maps, habitat restoration, educational resources, and international treaties and organizations are available here. More Info

**National Wetlands Research Center (NWRC)
Information from the Wetlands Ecology Division of USGS.
Notes: Topical
The USGS National Wetlands Research Center (NWRC) researches the ecology of fresh and saltwater wetlands including management, restoration, and plant and animal habitat. Publications, maps, species profiles, habitat modeling,
biological reports, and coastal wetlands are examples of resources found on this site. Look under Research for education modules defining and explaining the importance of wetlands. More Info

**Nature Serve**
Scientific information for the promotion of plant, animal, and ecosystem conservation.
Notes: Topical
NatureServe is a non-profit conservation group dedicated to providing scientific information for the purposes of the conservation of rare, endangered, and threatened species and ecosystems. Among the full-text digital data available on this website are bird distribution maps, biological inventories, ecosystem mapping, animal, plant, and ecological data, rare species data by county or watershed, and the “Coastal/Marine Systems of North America: Framework for an Ecological Classification Standard” developed with NOAA. Custom data service is available for a fee. Resources cover the U.S., Canada, Latin America, and the Caribbean. More Info

**NOAA Arctic Theme Page**
An entry page to multiple websites and resources about the Arctic from NOAA.
Notes: Topical
Using this homepage provides access to multiple National Oceanic and Atmospheric Administration websites, data centers, maps, and photos. The climate index, change indicators, pollution, northern lights, exploration, marine life, and a North Pole web cam images are a few of the topics covered. Also, access a web page about the First International Polar Year from this site. More Info

**NOAA Ocean Service (NOS)**
Links to NOAA’s three theme pages on oceans, coasts, and charts and navigation.
Notes: Topical
From this entry page, individuals can access three separate web pages covering oceans, coasts, and charts and navigation. Each has educational information, data, publications, website recommendations, topic discussions, and news. The site is searchable by keyword or the site index. News is archived from January 2003. There are links to the NOS office and other NOAA ocean science program web pages. Ocean topics are coral reef conservation, international collaboration, marine protected areas, national marine sanctuaries. Coasts covers decision-making tools, ecosystem science, management, monitoring/observations, contaminants, ecological forecasting, algal blooms, estuaries, research reserves, natural hazards assessment, resource restoration, and training/capacity building. Under Charts and Navigation topics are aerial photography/shoreline mapping, global positioning, height modernization, hydrographic surveying, marine navigation, and tides/currents. More Info

**North Slope Science Initiative Information Portal**
The North Slope Science Initiative (NSSI) to promote communication about developing resources on the North Slope.
Notes: Topical
Established in 2003, “The North Slope Science Initiative (NSSI ) consists of 15 Federal, Alaska State, and Native agencies and corporations with a mission to provide research, inventory, and monitoring needs as they relate to development activities on the North Slope.” (From website, 8/8/05.) Resources include biology, atmosphere, aquatic, terrestrial, and climate and global change science, current research from the National Science Foundation Arctic project database, citation database, project database, maps, laws/legislation/treaties, and links to the homepages of the cooperating agencies. Site is searchable by keyword. More Info

**NPS Maps**
Maps from all NPS brochures available to download.
Notes: Topical
Maps produced by NPS for use in their park brochures are featured on this site. Maps are in the public domain and require the user to agree to accept responsibility for their use before access is granted. From a computer browser, maps are available in PDF or JPEG (topographic relief) forms. NPS Maps, National Trails, Natural Earth (topographic), and
American Revolution at a Glance are the map categories. Instructions, explanations, and contact information are available. There is also a link to historic photos of National Parks.

NPS Nature and Science
Air, biology, water, sounds, geology information from the NPS.

Notes: Topical
This is the NPS entry page with maps, data, management plans, policies/laws, and current scientific information on the broad topics of air, biology, water, natural sounds, and geology. Organized on the themes of protecting/restoring, science/research, social science, and teacher/student, each topic has multiple further subdivisions:
Air—pollution sources, laws and policies, monitoring data, studies, a web camera with photos, updated every fifteen minutes, from air monitoring stations in the national parks.
Biology—ecosystem restoration, invasive species management, wildlife health and management, bird migrations, threatened/endangered species, and pest management.
Geology—minerals management, mining and oil and gas, land restoration, park geology, paleontology, coastal geology, geohazards, soils, caves.
Natural Sounds—soundscapes, air traffic management, laws and policies, tapes of sounds from national parks.
Water—fisheries, water quality, wetlands, marine conservation, watershed condition assessments.
Additional information for students/teachers, about permits, and about parks and refuges is available. This site and the entire NPS system can be searched from this page.

Ocean Biogeographic Information System (OBIS)
Data and information about marine life from scientists worldwide.

Notes: Topical
OBIS was established by the Census of Marine Life program (www.coml.org). It is an evolving federation of organizations and people sharing a vision to make marine biogeographic data, from all over the world, freely available over the World Wide Web. (From website, 8/12/05.) A search of research can be conducted using the common or scientific name, taxonomic group (distribution maps), date, depth, region, or database. Educational page activities are appropriate for middle or secondary school students and involve problem solving projects on the marine ecosystem.

Park Wise
Educational resources about Alaska’s National Parks for teachers and students.

Notes: Topical; Professional level GIS in student resources
Created by NPS, this website is divided into sections for teachers and students. The student section includes activities and facts such as migration maps, park maps, subsistence use maps, park facts (e.g., statistics, acreage, and visitation), history and culture. Examples of teacher resources include posters, lesson plans on topics such as glaciers in the Kenai Fjords, eagle migration, adaptations by Dall sheep, fossils, and gateway to the Klondike gold rush. Information is available about all 17 parks and preserves in Alaska managed by the NPS. In the students “links” section the homepage for each park can be accessed.

Rangelands
Resources on rangelands of the Western U.S., including Alaska.

Notes: Topical
On this website access information about the science, economics, climate, management, restoration, ecology, recreational use, wilderness, forestry/logging use, and wildlife of rangelands in the Western U.S. There is a link to each state for information specific to that region. For Alaska the types of rangelands are barren tundra, cold grassland, mire/bog/fen, shrub/grass, upland tundra, and woody tundra. The Alaska site includes numerous photos, maps, factsheets, and climatic diagrams, including a link to the reindeer research website.

Recreation
Resources for recreational activities on federal lands.

Notes: Topical
This website gathers all the public land recreation resources produced by the various federal agencies into one easily searched location. Search for lists of federal recreation areas by state, by activity (e.g., hiking, camping, museums, off road activities, on National Recreational Trails, by Scenic Byways, state tourism offices, and more.
Recreation USGS
Resources to prepare for recreational activities from USGS.
Notes: Topical; many maps
Get maps, check water and physical conditions, find trails and campgrounds, learn to use a compass and more to prepare for the recreational activities of nature watching/exploring, boating, camping, climbing, fishing, hiking/biking, and hunting on this USGS created site. More Info

Science.gov
The Federal Government’s portal to scientific research databases and websites by topic.
Notes: Portal
Scientists from 17 U.S. government science organizations within 12 Federal agencies select the maps, photos, research papers and documents from science websites and from scientific databases on their subject that are listed on this website. The resulting database can be searched by websites on twelve pre-selected topics (e.g., science education, biology and nature, earth and ocean science) and/or by keyword searching of the databases. Results provide a brief annotation, citation, and a link to the documents. "This gateway to government science information allows searches across 30 databases and more than 1,700 science Web sites. Science.gov currently accesses over 47 million pages of government science information." (From website, 8/4/05.) More Info

Soil Survey Maps
Soil Information from the National Resources Conservation Service (NRCS) of USDA.
Notes: Topical
Maps, data, news and analysis materials about soil produced by the USDA is available on this site. Soil surveys lists are available by state. The Web Soil Survey tool is an interactive map that allows the user to enter an address and access soil and hydrology data specific to that location. Other information includes technical data (e.g., soil types, watersheds, plants, erosion, inches to bedrock), uses (e.g., salinity, quality, urban), education (e.g., soil facts, posters, K-12 resources), and photo gallery (e.g., profile, landscapes, images). More Info

Soil Temperatures
Cryospheric climate indicators from NOAA at the National Snow and Ice Data Center (NSIDC).
Notes: Topical
Soil temperatures, snow cover, snow melt, sea ice, and greenness data collected in Alaska, Russia, and Canada is compared with changes in climate on this website from the NSIDC. Soil dataset from eight Alaskan sites was collected from 1986 to 2001 and in Russia from 1898-2000. Canadian information had not been added as of September 2005. There are links to maps, the NOAA Arctic Change website, and the Frozen Ground Data Center with additional datasets. More Info

State of Alaska, DNR, Division of Geological and Geophysical Surveys (DGGS)
Maps and data from surveys conducted by the Alaska DNR Division of Geological and Geophysical Surveys.
Notes: Topical; Historic; wonderful source older maps
The Alaska DNR DGGS website provides maps on minerals, metals, fuel, groundwater, construction and geothermal resources in Alaska as well as geologic hazards to building. Also available are photos, DGGS publications, reports, posters, and proposals. There is a section on the Denali Fault earthquake and links to other geologic websites. Annual reports on the mineral industry contain information that may not have been incorporated into other sections. Files are large and some require a viewer download and/or disabling of pop-up blockers. More Info
The Sea-Air-Land Modeling and Observing Network (SALMON)
UAF project in the Northern Gulf of Alaska with real time and archived ocean and weather observation data.
Notes: Topical
This SALMON website is created and maintained by the UAF School of Fisheries of Ocean Sciences to provide service, research, and education on meteorological and oceanographic data primarily on the Northern Gulf of Alaska with some data from the Bering Sea near the Seward Peninsula. The service component provides real time marine weather and ocean current information for the purpose of making ocean forecasts. There is also archived data from 1998. Studies and modeling of marine ecosystem circulation and weather is conducted to increase knowledge and predictive abilities about changes in exploitable living resources is of terrestrial and marine ecosystems to “enhance and protect the livelihoods of those who use this productive water body and depend on its ecosystem for food, livelihood, recreation, and transportation.” (From website, 8/18/05.) Data is available in the form of maps, animations, photos, datasets, and reports on temperature, depth, salinity in relation to fish catch, spring bloom, tidal currents, meteorological conditions, mooring descriptions, simulated circulation modeling, and deployment records of the physical and biological characteristic of the water. Educational resources on physical oceanography include slide shows, lab demonstrations, movies, lesson plans, for junior and high school students and the general public. More Info

Tongass Timber Information Center
Forest management from the view of Sitka Conservation Association Policy.
Notes: Topical; Regional, wonderful maps
The Sitka Conservation Association “tracks the planning and execution of every timber project across the Tongass National Forest” (From website, 7/22/05.) Their website includes maps, a discussion of policy, and photos with the emphasis on conservation and limiting road construction and clear cutting More Info

Topographic National Map
USGS maps and aerial photos viewable with a computer browser.
Notes: Visuals and ordering info
This website features links to services, products, and business partners of USGS which will allow the searching and viewing of USGS maps and aerial photos with a computer browser. Some provide free printing while others are a fee service and each partner has different search and view capacities. There is also a link to the USGS National Map website. More Info

TOXNET
Databases on toxicology and hazardous chemicals from the National Library of Medicine (NLM).
Notes: Topical
Created by the NLM Division of the National Institute of Health, this website allows searching on databases about genetic toxicology, chemical carcinogenesis, hazard substances, integrated risk, international toxicity estimates of risk, toxicology bibliographic information, toxic releases inventory, and chemical synonyms, structures, and names. It is also possible to link to other NLM web pages (e.g., environmental health, toxicology maps, household hazards, occupational health database). More Info

U of Alaska Fairbanks (UAF) Water and Environmental Research Center
Research on water in various forms done in Alaska by UAF.
Notes: Topical
Scientific studies of water in various forms from the UAF Water and Environmental Research Center is provided in full text, summary or bibliography formats. Photos, lists of current and past projects as well as thesis topics are available. Some lists are in bibliographic format while others provide full text. Examples of topics include Hydrology in the Arctic, Permafrost, Humans, Water, and Climate Change, North Slope Rivers and Lakes, and the Seward Peninsula. Additionally there are links to other water related sites. More Info
UN Atlas of the Oceans
An entry point for access to online resources on sustainable development of the oceans from the UN.
Notes: Topical
“The UN Atlas of the Oceans is an Internet portal providing information relevant to the sustainable development of the oceans. It is designed for policy-makers who need to become familiar with ocean issues and for scientists, students and resource managers who need access to databases and approaches to sustainability.” [From website 7/22/05.] It is organized in four sections: “about the oceans” (e.g., maps, statistics, formation, monitory, education, early exploration), “issues” (e.g., economics, food security, governance, pollution, safety, sustainable development) “uses of oceans” (e.g., fishing, recreation, offshore oil, gas, and mining, biotechnology, dumping), and “geography” by region. Each topic provides a variety of resources on publications, research, and web links. More Info

US Coast Guard (USCG) Navigation Center
Resources and real time information from the USCG Navigational Center of Excellence.
Notes: Topical
Multiple aspects of navigation resources provided by the USCG are available on this website. Categories covered are navigation notes, GPS, Differential GPS (DGPS), Nationwide DGPS, LORAN-C (radio navigation), CGSIC (Civil Global Positioning System Service Interface Committee), electronic navigation, maritime communications, local notice to mariners (weekly), navigation rules, light list, vessel traffic services, publications and documents, global maritime disasters and safety system (GMDSS), and waterway safety. A sampling of services includes real time operational status and specifications for all differential GPS sites, coastal maritime safety broadcasts, LORAN-C coverage maps, and US VHF channels and frequencies. More Info

US Forest Service Alaska Region
Information on the Tongass and Chugach National Forests from the US Forest Service (USFS).
Notes: Topical
Accessible on this website is information and links to the homepages of the two National Forests in Alaska, the Tongass and the Chugach. In addition to maps and brochures, other resources include information on recreation (cabins, campgrounds, ferry, trails), passes and permits, current weather conditions, laws and regulations, and a nature watch for the entire State of Alaska. More Info

US Geological Survey (USGS) Educational Resources
Online educational resources compiled by the USGS for K-12, and undergraduate research.
Notes: Topical
Consisting of links to other USGS websites, this resource provides comprehensive lists of links to USGS information on wetlands, maps, volcanoes, earthquakes, landslides, coastal storms, Tsunamis, wildfires, biology, water resources, GIS (geospatial information system), astrogeology, geology in the national parks, and paleontology, as well as news items. While the entire site is designed “to educate the public about natural resources, natural hazards, and geospatial data that affect our quality of life” [From website 8/4/05.], there are also sections organized as appropriate for K-6, 7-12, and undergraduate student levels. The “search USGS” function with keyword or alphabetical browsing provides wide-ranging results. More Info

US Geological Survey (USGS) Library
Catalog of USGS library holdings and links to databases and resources from the USGS.
Notes: Topical; National Map Viewer nmviewogc.cr.usgs.gov/viewer.htm
In addition to searching the library catalog, this entry page to USGS resources also links to databases and resources in the USGS collection. Databases include the Geographic Names Information System (information about physical and cultural geographic features), National Geologic Map Database, Publications Warehouse, and Selected USGS Journal Holdings. Resources include the Geologic Surveys of the US and the World, National Atlas, National Map, USGS Biological Resources Science Centers, USGS Earth Science Photographic Archive, and USGS Local Offices for Water Resources. Information on ordering print copies of maps and publications is also available. More Info
**USGS Earthquakes Hazard Program**  
Information on earthquakes throughout the world provided by USGS.  
Notes: Topical  
This web site of the US Geological Survey Earthquakes Hazards Program is a source of maps and data on recent and historical global and national earthquakes. Also available are resources for kids (including science fair ideas), teacher resources, science and technology information, and preparedness, response, and prediction documents. There are links to other USGS hazard programs and to regional information for Alaska or other location specific data. More Info

**Volcanic Eruptions**  
Smithsonian Institute website with 30 years of information on volcanic eruptions around the world.  
Notes: Topical; What is GIS water.usgs.gov/wsc/gisbasics.html  
The Smithsonian Institute is responsible for this webpage with photos, maps, and data on volcanoes globally. This site has information covering of volcanic activity since 1975 and is searchable by region, date, or name. A short essay, photo, location, geologic information, and status are provided for each volcano. There are also volcanic activity reports, FAQ, and photos organized by types and processes. Additional resources are available through links to other websites on volcanoes. More Info

**Water Resources of the US**  
USGS research, data, maps, and links on ground and surface water in the U.S.  
Notes: Topical; wonderful maps easy to use  
Explore data on stream flow, floods, drought, wetlands, toxic substances, state water research, international water projects, regional studies, USGS programs, ground and surface water, water use, stream flow, real time records, and link to the NWISWeb (National Water Information System Website) and student/teacher resources from this entry portal created by the USGS. More Info

**Wetlands International**  
Wetlands conservation information by a global non-profit organization. Includes the Ramsar Database (List of Wetlands of International Importance).  
Notes: Topical  
Wetlands International conducts scientific research in 120 countries to promote wetlands conservation and management worldwide. In addition to information about the organization and their activities, there are resources on wetlands conservation (e.g., international water bird census, flyway projects) inventory, monitoring, and assessment (e.g., Asian wetland inventory, wetlands directory), wise use of wetlands and peat lands, socio-economics of wetlands, and fact sheets (e.g., Wetlands and the Tsunami, Use of Constructed Wetlands for Water Treatment), and links to resources such as wetland centers, fish/aqua culture, education, and world heritage sites.  
The Ramsar Database is searchable by site name or by using a point and click web map. Data available varies for each site but can include the categories of general and geographic site information, uses and threats, physical data, information on conservation issues, ecological data. More Info

**Wilderness.net**  
General information on wilderness, as well as information on wilderness management, science, and education.  
Notes: Topical  
“Wilderness.net is an Internet-based tool connecting the natural resource workforce, scientists, educators, and the public to their wilderness heritage through ready access to wilderness information. Through Wilderness.net and its partners, you’ll find access to general information about wilderness, stewardship and educational resources, scientific information, agency policies, relevant legislation, communication tools to connect you with others in the wilderness community and more.” (From website, 7/12/05.)  
A detailed site map provides efficient search and link functions. More Info
Wildlife Conservation Division of the Alaska Department of Fish & Game (ADF&G)
Resources on permits and regulations, wildlife, and the environment from the ADF&G Division of Wildlife Conservation.
Notes: Topical
Hunting, and trapping regulations, licenses, and permits, harvest statistics, management plans, publications are available on this site. Online applications, permits, and forms are available. Additional resources under wildlife and education include bird migration and observation, wildlife fact sheets, educational materials for students and teachers, arctic tundra and boreal forest ecosystems, endangered species, wildlife diseases and parasites (including West Nile and Avian Influenza). This page is a portal to information about all Alaska State Refuges, Sanctuaries, and Critical Habitat Areas. A live walrus cam can be found on the Round Island webpage. More Info

WWW Virtual Library (VL)
Library of Internet sites organized by topic.
Notes: Topical
Organized by topics the WWW Virtual Library (VL) is a catalog of websites maintained by volunteer experts in their field. Tim Berners-Lee, creator of html, began the VL in 1991, making it the oldest website index and is "widely recognised as being amongst the highest-quality guides to particular sections of the Web" [From website 9/6/05]. Subjects range from agriculture, art, business and economics, computers, education, humanities, information, international affairs, law, natural science and math, recreation, regional studies, social and behavioral studies, to society. Also available in French and Spanish. More Info