

Appendix 1

Annual Report
Damage Assessment GIS
March 1, 1992 - February 28, 1993
Project Number 93057

I. Executive Summary

Recent damage assessment products from the Alaska Department of Natural Resources Geographic Information Systems (GIS) Project include:

- Publication quality maps for ADFG harlequin ducks study
- Publication quality maps for ADFG clam study
- Mapping and data support for Coastal Habitat
- Continued distribution of past reports and maps
- Final compilation of shoreline oil by shoretype for Kodiak and the Alaska Peninsula
- Completion of final maps for HAZMAT surface oiling model
- Begin stocking Oil Spill Public Library (CACI) with damage assessment maps
- Two poster sessions at Oil Spill Symposium

II. Project Descriptions

Harlequin Ducks

Sam Patton of the Bird Study 11, harlequin ducks, requested 8.5" x 11" maps for his final report. This request came to us in February, however, the request and the data required to fulfill the request went under considerable revisions from the original request. As a result, a complete database has been established as well as accurate maps produced. Patton has taken the final copy of the maps and incorporated them into his report, due out on April 2. There were six maps produced: one index map, three brood site maps (1990, 1991 and 1992), and two mist nest result maps (1991 and 1992). The maps work very well to help explain the results of this study.

Clams Studies

Jay Johnson, ADFG Cordova, requested 11" x 17" color maps for his final report. These maps are to include the species collected at each sample location for 1989, 1990 and 1991 and the mean dibenzothiophenes for these locations and years. A draft has been sent and is pending review.

Coastal Habitat

Dennis Jung requested 8.5" x 11" color maps of

- 1.) Cumulative oiling for PWS, and
- 2.) Habitat sample locations with cumulative oiling.

He also requested these products in slides. ADNR staff worked to get these final products out, breaking new ground to get the plot files into a form a consulting slide producer could use digitally. The slides were a success!

Map Inventory, the Public Library, and the Plotfile Database

The comprehensive inventory of all final maps produced by TS3 was recently updated. Historical plot files are now well organized on our optical disk system. We are printing a single original of all maps for the first floor library in the CACI building. The first set of fifty maps will be reviewed by Dept. of Law this week before placing them in the library. A copy of the maps added to the database between March 1, 1992 and February 28, 1993 are included as Appendix 2 of this report.

Integrated Shoreline Oiling Data, Kodiak and the Alaska Peninsula

The oil change information for Kodiak Island - Alaska Peninsula is complete and is in final review. This database includes fall '89 and spring '90 oiling, and ESI (shoretype) data.

Tasks summarizing shoreline oiling by shoretype for Kodiak Island - Alaska Peninsula (KAP) are drafted and in final review. These include statistics for cumulative oiling, fall '89 oiling, and spring '90 oiling for the ten different shoreline classifications. Oiling categories range from heavy to very light. Shoretypes range from exposed rocky shores to marshes. In total, 648 miles of shoreline oil were observed in this region during the summer of 1989. We will include spring '91 oiling and land status into the final report for all three regions. Advance copies of the new tables are provided in Appendix 3.

Oil Change Maps

Oil change maps have been produced for Herring Bay and Bay of Isles in the Prince William Sound. These map products show oiling change between fall '89 and spring '90 beach walk surveys by ESI shoretype. The maps demonstrate how mobile the oil remains in these areas.

The Prince William Sound oil change map is being redone. New software allows for more colors and line types. This should allow for a clearer message and a more useful map product.

Programming for Documentation

The oil spill documentation program is being modified to allow for expanded printing features, such as user definable reports and mass printing of entire workspaces. This coincides with additional postscript programming that was done to take advantage of those added features. The dataset history update section is also being updated.

Oil Spill Symposium

Poster Presentations -

Two posters were presented at the Oil Spill Symposium held February 2 - 5. The first, "Surface Modeling of Floating Oil, The 1989 Exxon Valdez Oil Spill, Prince William Sound, Alaska" was the GIS interpretation of the NOAA HAZMAT data. The second, "Integration of Shoreline Oiling Data Sets" demonstrated the results and methods used to combine disparate shoreline themes. Our paper on the surface modeling of floating oil was made available; it will be included with our final report.

Coastal Habitat -

Kim Sundberg requested maps for a poster presentation of the Intertidal Site Selection Utilizing a Geographic Information System. These maps include controlled and oiled sites for the 1991 Coastal Habitat A1 project for the three regions.

During the presentations of the intertidal studies, we noticed a GIS map, which we thought had fallen to the wayside, appeared as slides for at least three different presentations.

Clams Studies -

Dr. Charles (Pete) Peterson requested slides of selected hydrocarbon maps produced for the clams studies. These include Common Names (1989 and 1990), Sum Aromatics (1989 and 1990) and Sum Dibenzothiophenes (1989 and 1990).

Oiling Statistics -

Dr. Charles (Pete) Peterson requested a copy of the shoreline oiling report. He presented summary oiling statistics during his talk, based on these figures.

Coastal Habitat - Herring Bay

During the discussion at the Symposium, Peter Van Tamelen requested two maps, similar to the Herring Bay maps. He has since sent me the pertinent material. Communication to clarify the project request has been through E-mail. This also makes it easy to keep the PI's abreast of how the project is doing.

Coastal Habitat - 1991 Sites

A set of the maps for Kim Sundberg was sent to Dave Doudna for his records. Prior to the Symposium, we verified controlled versus oiled sites. Since then, minor improvements were made. A new set of maps has been done and approved by Dave. These new maps were sent to Kim Sundberg, Mike Stekoll and Larry Deysher.

Beach Treatment -

A letter to Alan Mearns of NOAA is currently being drafted, and the beach treatment map is currently being restored in order to 1) request verification of the map, and 2) request the beach treatment data for other years (we have 1989).

Symposium - Opening Remarks-

We had a request for the approximate area of Prince William Sound from the Governor's Office. The information was intended to be used as part of the opening remarks at the Spill Symposium.

Documentation - TNC report

The Nature Conservancy will organize a report of available data from all agencies. A draft of the report form has been reviewed by ADNR GIS; a meeting with TNC is planned to schedule the work, clarify the limits of the task, and address issues concerning publication and distribution.

NOAA HAZMAT - Surface Oiling Maps

A number of requests have come in for the HAZMAT maps. The final set is complete and the data is now documented. We have produced and delivered a number of sets. These maps reflect surface oiling as identified by NOAA HAZMAT.

Bathymetry

As with the HAZMAT maps, bathymetric maps have been requested, produced and delivered. Much of the requests were triggered from the Oil Spill Symposium. There are five maps in this series.

Oiling Extent Maps

General public information maps showing the ADEC maximum surface oiling against both Alaska's coast and the eastern seaboard were provided to Dan Lawn who planned to share the information with response staff from the Shetland Islands spill.

REPORTS -

Dr. Barber of UAF requested a copy of our report on shoreline oiling. This was delivered same day.