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State of Alaska
Department of Natural Resources
Division of Land And Water

# Restoration Technical Services Study #2


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**Restoration Technical Services Study #2**
**Restoration Inventory Database**

## Introduction

The Restoration Inventory Database described herein as "Resinv" is the product of the Alaska Department of Natural Resources Oil Spill Project Office (ADNR/OSPO) for Restoration Technical Support Project #2. The *Resinv* database is intended to assist in the selection of candidates for restoration. The database may also be useful in prioritizing segments for cleanup.

The database includes data acquired from ADNR/OSPO, Alaska Department of Environmental Conversation Oil Spill Response Center (ADEC/OSRC), and National Park Service (NPS). ADEC data includes information from the fall 1989 survey through fall of 1991 ADEC data also includes information about local response groups and place descriptions. NPS data includes outer coast usage information. ADNR data includes information from the PWS Area Plan, PWS Conservation Alliance, and ADNR Status Plats. Please see the appendix for further detail. The database and its driving application are assembled in Rbase for DOS by Microrim. They require Rbase to be present in order to operate.

## Method

The individual tables and columns that make up the database are displayed exactly as received from the various agencies. Columns containing data not relevant to the study were omitted. Several columns in the table *Resource* were obtained from Macintosh HyperCard stacks at ADNR/OSPO. This data was converted by extracting delimited ASCII text from the Macintosh application, loading the text into an IBM, formatting the text into rows and columns with a text editor (IBM PE II), and then loading the structured data to the database.

The menu selections use views and projections to build temporary tables containing data relevant to usage and location. These data are obtained from the tables *Tetreau* and *Resource*. The application then searches for the most recent survey date and the character of oiling observed on that date. The source of the survey data is the ADEC database known as *DSA*. The *DSA* database has been renamed *Survey* for use in this application. The application then builds a final temporary table containing the segments,subdivisions, uses, and characterizations for each segment and subdivision where the data exists. This data is then printed with a report header that indicates the date of the report and the nature of the query. The database is rather voluminous so some of the queries can take some time. This database contains a large volume of information that is not accessable from a menu. This information includes impact data from the early days of 1989 through the MaySAP surveys of spring 1991. These data can be accessed from the "command line" or the "Prompt By Example" menu-driven query capability of Rbase.

**Documentation**

Appendix A is a listing of all columns including a description of each column. Appendix B is a printout of the database schema. Appendix C is a source code listing for the driving application. Although the documentation is current at the time of this writing it is dated information. The database will be updated with information from the MaySAP surveys. The database will also be expanded to include new information as that information becomes available. Updated versions of the database and its documentation will be made available on request. Please refer to the appendix for source chronology.

**QA/QC**

There as been no effort to implement a definitive QA/QC program for this database. If time and funding permit a reasonably detailed spot check of record accuracy will be performed. The methodology used in the application software attempts to avoid the use of subjective data where that data is contained in this database. Only a small portion of the data contained herein is original to this office. Please contact the listed source agency for details regarding the methodology used in collecting the data.

**Appendix: A**

**Table "LRP"**
**Source: ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| LRP | LRP | Local response group |
| LRP | ADDRESS | Lrp group address |
| LRP | CITY | Lrp City |
| LRP | STATE | Lrp state |
| LRP | ZIPCODE | Lrp ZIP |
| LRP | PHONE | Lrp phone |

**Table "Tetreau"**
**Source: NPS**

| Table Name | Column Name | Column Description |
|---|---|---|
| Tetreau | Segment | Segment number |
| Tetreau | Location | Location description |
| Tetreau | Exposure | Wave exposure |
| Tetreau | BirdArea | Critical bird area y/n |
| Tetreau | BirdDesc | Birds observed in area |
| Tetreau | MMamArea | Critical marine mammal area y/n |
| Tetreau | MMamDesc | Marine mammals observed in area |
| Tetreau | W/Lsight | Wild life sightings |
| Tetreau | LndOwner | Land owner |
| Tetreau | CultRcsc | Cultural resource sight y/n |
| Tetreau | CultDesc | Description of cultural resources |
| Tetreau | Rec_site | Recreational sites yes/no |
| Tetreau | Rec_desc | Description of recreational sites |
| Tetreau | Fisherys | Fisheries y/n |
| Tetreau | FishDesc | Description of fisheries |
| Tetreau | Trt_Type | Treatment type |
| Tetreau | Trt_Date | Date of treatment |

**Table "Asaptrak"**
**Source: ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| ASAPTRAK | SEGMENT | Segment number |
| ASAPTRAK | SUBDIV | Subseg or subdiv number |
| ASAPTRAK | WPFILNAM | Related Word Perfect file (adec) |
| ASAPTRAK | REASES91 | Re asses in 1991 ? |
| ASAPTRAK | OILREMAN | Nature of oil remaining |
| ASAPTRAK | NONTRASP | Post asap decision to demob y/n |
| ASAPTRAK | DEBRIASP | Post asap debris y/n |

| | | |
|---|---|---|
| ASAPTRAK | PAVMNASP | Post asap pavement y/n |
| ASAPTRAK | TARMSASP | Post asap tarmats y/n |
| ASAPTRAK | SPTWSASP | Post asap spotwash needed y/n |
| ASAPTRAK | BIOASP | Post asap bio needed y/n |
| ASAPTRAK | TILLASP | Post asap tilling needed y/n |
| ASAPTRAK | EXCVTASP | Post asap excavation needed y/n |

**Table "Survey" (subset of "DSA")**
**Source: ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| Survey | SEGMENT | Segment number |
| Survey | subdiv | Subdivision |
| Survey | STATION | Beach station number |
| Survey | DATE | Survey date |
| Survey | ENVCONST | Environmental constraints |
| Survey | WAVEEXPO | Wave exposure |
| Survey | SHORSONE | Affected shore zone or zones |
| Survey | CHARSURF | Character of surface oil |
| Survey | CHARSUB | Character of subsurface oil |
| Survey | BIO | Was bio performed |
| Survey | SPOT | Was spot washing performed |
| Survey | MECH | Type of mechanical treatment performed |
| Survey | OTHERREM | Other remedies |
| Survey | EQUIPLST | Equipment used |
| Survey | CONTANMT | Was containment equip used |
| Survey | OILDEBRI | Description of oiled debris |
| Survey | OILSED | Oiled sediments present y/n |
| Survey | OILVEG | Oiled vegetation present y/n |
| Survey | oilother | Other oiled mat. present Y/N |
| Survey | oillogYN | Are oiled logs present Y/N |
| Survey | DEBRISCM | Debris description |
| Survey | PROBLEMS | Problem narrative |
| Survey | OBSERVE | Observation narrative |
| Survey | BERMRELO | Storm berm relocation y/n |

**Table "Place"**
**Source: ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| PLACE | SEGMENT | Segment number |
| PLACE | Subdiv | Subdivision |
| PLACE | STATION | Beach station # |
| PLACE | LOCATION | Location description |
| PLACE | DESCRIPT | Detail description of location |
| PLACE | LRP | Lrp group related to specified place |

**Table "Bchwalk"**
**Source: ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| Bchwalk | SEGMENT | Segment |
| Bchwalk | LOCATION | Location description |
| Bchwalk | SurvType | Survey type |
| Bchwalk | ShorType | Shore type |
| Bchwalk | WAVEEXPO | Wave exposure |
| Bchwalk | SedType | Sediment type |
| Bchwalk | DegOilng | Degree of oiling |
| Bchwalk | ImpArea | Impact area on the beach |
| Bchwalk | MaxThkns | Max. thickness of oil on beach |
| Bchwalk | MaxPentH | Max. penetration of oil into hi-intertidal sediments |
| Bchwalk | MaxPentM | Max. penetration of oil into mid-intertidal sediments |
| Bchwalk | MaxPentL | Max. penetration of oil into lo-intertidal sediments |
| Bchwalk | AvgOilCv | Average oil coverage |

**Table "Resource"**
**Source: ADNR & ADEC**

| Table Name | Column Name | Column Description |
|---|---|---|
| Resource | SEGMENT | Segment number |
| Resource | subdiv | Subdivision |
| Resource | Upl_Ownr | Upland owner from ADNR/OSPO records |
| Resource | Mgmt_int | Management intent from PWS Area Plan |
| Resource | PWSCA | Prince William Sound Conservation Alliance uses |
| Resource | Location | Location description |
| Resource | USE | General usage comments (source unknown) |
| Resource | rec_site | Y/N lookup table |
| Resource | Com_site | Y/N lookup table |
| Resource | Hrv_site | Y/N lookup table |
| Resource | Msc_site | Y//N lookup table |
| Resource | STRDATE | General usage season start date |
| Resource | ENDDATE | General usage season end date |
| Resource | LRP | Related LRP group |
| Resource | 3rd_prty | 3rd party interests from ADNR/OSPO |
| Resource | pwspluse | PWS plan uses from ADNR PWS area plan |
| Resource | Info_src | Source of data in the record |
| Resource | Landownr | Upland land owner data from EXXON |

**Table "Maysap"**
**Source: ADNR**

| Table Name | Column Name | Column Description |
|---|---|---|
| Maysap | segment | Segment |
| Maysap | priority | ADNR priority for 1991 season |
| Maysap | reason | Reason for ADNR Priority |
| Maysap | ADEC_pri | Y/N lookup table for ADEC priority for 1991 |

**Table "Lo_Code"**
**Source: EXXON**

| Table Name | Column Name | Column Description |
|---|---|---|
| Lo_Code | Lo_code | Land owner lookup table |
| Lo_Code | Descript | Land owner code description |

**Appendix: B**
**Database schema**

Tables in the Database RESINV

| Name | Columns | Rows | Name | Columns | Rows |
|---|---|---|---|---|---|
| REPORTS | 2 | 920 | FORMS | 2 | 231 |
| RULES | 8 | 0 | LRP | 6 | 9 |
| tetreau | 17 | 129 | ASAPTRAK | 13 | 658 |
| survey | 24 | 1500 | PLACE | 6 | 191 |
| bchwalk | 13 | 718 | VIEWS | 3 | 0 |
| VIEWWHER | 2 | 0 | resource | 18 | 2463 |
| maysap | 4 | 367 | document | 7 | 108 |
| Lo_code | 2 | 42 | | | |

| Form | Table |
|---|---|
| ALLUSES | ALLUSES |
| LRP | LRP |
| PLACE | PLACE |
| RES2 | RESOURCE |
| RESOURCE | RESOURCE |

| Report | Table / View |
|---|---|
| comm1 | temp3 |
| comm1s | temp3 |
| comm2 | temp5 |
| comm2s | temp5 |
| comm3 | temp5 |
| comm3s | temp5 |
| comm4 | temp5 |
| comm4s | temp5 |
| DOCUMENT | document |
| harv1 | temp3 |
| harv1s | temp3 |
| harv2 | temp5 |
| harv2s | temp5 |
| HARV3 | temp5 |
| harv3s | temp5 |
| harv4 | temp5 |

```
  harv4s     temp5
  harv5      temp5
  harv5s     temp5
  harv6      temp5
  harv6s     temp5
  maysap1    temp3
  misc1      temp4
  misc1s     temp4
  misc2      temp3
  misc2s     temp3
  rec1       temp3
  rec1s      temp3
  rec2       temp5
  rec2s      temp5
  rec3       temp5
  rec3s      temp5
  rec4       temp5
  rec4s      temp5
  rec5       temp5
  rec5s      temp5
  rec6       temp5
  rec6s      temp5

Table: REPORTS          No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 RNAME     TEXT        8 characters yes
2 RDATA     TEXT       80 characters

Current number of rows:     920

Table: FORMS            No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 FNAME     TEXT        8 characters yes
2 FDATA     TEXT       46 characters

Current number of rows:     231

Table: RULES            No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 NUMRULE   INTEGER
```

```
2 AND/OR   INTEGER
3 COLNAME1 TEXT       8 characters
4 TABLE1   TEXT       8 characters
5 BOOLEAN  INTEGER
6 COLNAME2 TEXT       8 characters
7 TABLE2   TEXT       8 characters
8 RULVALUE TEXT      40 characters

Current number of rows:      0

Table: LRP              No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 LRP       TEXT      25 characters
2 ADDRESS   TEXT      50 characters
3 CITY      TEXT      35 characters
4 STATE     TEXT       6 characters
5 ZIPCODE   TEXT      10 characters
6 PHONE     TEXT       8 characters

Current number of rows:      9

Table: tetreau          No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 Segment   TEXT      10 characters yes
2 Location  TEXT      50 characters
3 Exposure  TEXT      16 characters
4 BirdArea  TEXT       8 characters
5 BirdDesc  TEXT      75 characters
6 MMamArea  TEXT       8 characters
7 MMamDesc  TEXT      75 characters
8 W/Lsight  TEXT      75 characters
9 LndOwner  TEXT       8 characters
10 CultRcsc TEXT       8 characters
11 CultDesc TEXT      50 characters
12 Rec_site TEXT       8 characters
13 Rec_desc TEXT      75 characters
14 Fisherys TEXT       8 characters
15 FishDesc TEXT      50 characters
16 Trt_Type TEXT      50 characters
17 Trt_Date DATE

Current number of rows:    129

Table: ASAPTRAK         No lock(s)
```

```
Read Password: No
Modify Password: No

Column definitions
 # Name      Type      Length          Key   Expression
 1 SEGMENT   TEXT       10 characters yes
 2 SUBDIV    TEXT        8 characters yes
 3 WPFILNAM  TEXT       12 characters
 4 REASES91  TEXT        1 characters
 5 OILREMAN  TEXT       30 characters
 6 NONTRASP  TEXT        1 characters
 7 DEBRIASP  TEXT        1 characters
 8 PAVMNASP  TEXT        1 characters
 9 TARMSASP  TEXT        1 characters
10 SPTWSASP  TEXT        1 characters
11 BIOASP    TEXT        1 characters
12 TILLASP   TEXT        1 characters
13 EXCVTASP  TEXT        1 characters

Current number of rows:     658

Table: survey            No lock(s)
Read Password: No
Modify Password: No

Column definitions
 # Name      Type      Length          Key   Expression
 1 SEGMENT   TEXT       10 characters yes
 2 subdiv    TEXT        8 characters
 3 STATION   TEXT       12 characters
 4 DATE      DATE
 5 ENVCONST  TEXT      100 characters
 6 WAVEEXPO  TEXT        8 characters
 7 SHORSONE  TEXT       18 characters
 8 CHARSURF  TEXT       22 characters
 9 CHARSUB   TEXT       15 characters
10 BIO       TEXT        1 characters
11 SPOT      TEXT        8 characters
12 MECH      TEXT       15 characters
13 OTHERREM  TEXT       50 characters
14 EQUIPLST  TEXT       50 characters
15 CONTANMT  TEXT       35 characters
16 OILDEBRI  TEXT       30 characters
17 OILSED    INTEGER
18 OILVEG    INTEGER

Column definitions
 # Name      Type      Length          Key   Expression
19 OILOTHER  INTEGER
20 OILLOGYN  TEXT        1 characters
21 DEBRISCM  TEXT       25 characters
22 PROBLEMS  TEXT      250 characters
```

```
23 OBSERVE  TEXT      250 characters
24 BERMRELO TEXT        8 characters

 Current number of rows:    1500

 Table: PLACE             No lock(s)
 Read Password: No
 Modify Password: No

 Column definitions
 # Name      Type      Length          Key   Expression
 1 SEGMENT   TEXT       10 characters yes
 2 Subdiv    TEXT        8 characters yes
 3 STATION   TEXT       12 characters
 4 LOCATION  TEXT       50 characters
 5 DESCRIPT  TEXT       50 characters
 6 LRP       TEXT       25 characters

 Current number of rows:     191

 Table: bchwalk           No lock(s)
 Read Password: No
 Modify Password: No

 Column definitions
 # Name      Type      Length          Key   Expression
 1 SEGMENT   TEXT       10 characters yes
 2 LOCATION  TEXT       50 characters
 3 SurvType  TEXT       40 characters
 4 ShorType  TEXT       12 characters
 5 WAVEEXPO  TEXT        8 characters
 6 SedType   TEXT       15 characters
 7 DegOilng  TEXT       10 characters
 8 ImpArea   TEXT       10 characters
 9 MaxThkns  INTEGER
10 MaxPentH  INTEGER
11 MaxPentM  INTEGER
12 MaxPentL  INTEGER
13 AvgOilCv  INTEGER

 Current number of rows:     718

 Table: VIEWS             No lock(s)
 Read Password: No
 Modify Password: No

 Column definitions
 # Name      Type      Length          Key   Expression
 1 VIEWNAME  TEXT        8 characters
 2 VCOLNAME  TEXT        8 characters
 3 VTABLE    TEXT        8 characters
```

```
Current number of rows:       0

Table: VIEWWHER          No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key    Expression
1 VIEWNAME  TEXT        8 characters
2 VIEWWHER  NOTE

Current number of rows:       0

Table: resource          No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key    Expression
1 SEGMENT   TEXT       10 characters
2 subdiv    TEXT        8 characters
3 Upl_Ownr  TEXT       15 characters
4 Mgmt_int  TEXT       60 characters
5 PWSCA     TEXT       50 characters
6 Location  TEXT       50 characters
7 USE       TEXT       50 characters
8 rec_site  TEXT        8 characters
9 Com_site  TEXT        8 characters
10 Hrv_site TEXT        8 characters
11 Msc_site TEXT        8 characters
12 STRDATE  TEXT       15 characters
13 ENDDATE  TEXT       15 characters
14 LRP      TEXT       25 characters
15 3rd_prty TEXT       75 characters
16 pwspluse TEXT       45 characters
17 Info_src TEXT       30 characters
18 Landownr TEXT       20 characters

Current number of rows:    2463

Table: maysap            No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key    Expression
1 segment   TEXT       10 characters yes
2 priority  TEXT        8 characters
3 reason    TEXT       50 characters
4 ADEC_pri  TEXT        8 characters

Current number of rows:     367
```

```
Table: document          No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name      Type      Length          Key   Expression
1 DTName    TEXT        8 characters
2 DCNum     INTEGER
3 DCName    TEXT        8 characters
4 DCType    TEXT        8 characters
5 DCLength  INTEGER
6 DCKey     TEXT        4 characters
7 DCDscrpt  TEXT       60 characters

Current number of rows:     110

Table: Lo_Code           No lock(s)
Read Password: No
Modify Password: No

Column definitions
# Name       Type     Length          Key   Expression
1 Lo_code    TEXT     20
2 Descript   TEXT     50

Current number of rows:     42
```

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# RESTORATION TECHNICAL SUPPORT PROJECT NUMBER 2
# STATUS REPORT

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**PROJECT TITLE:**

Assessment of Beach Segment Survey Data

**LEAD AGENCY:**

Alaska Department of Natural Resources

The objective of this project was to review and summarize the beach survey information obtained through response activities. A master database is being created from that portion of this information that is relevant to the needs of restoration planners. In conjunction with Restoration Feasibility Study Number 5 [RFS#5], this database will help identify potential sites that are suitable for restoration. This database will constitute a restoration component of the NRDA database.

To date, more than twenty digital databases and spreadsheets have been reviewed. Primary sources are the Alaska Department of Environmental Conservation and Alaska Department of Natural Resources. The original formats include Apple Macintosh Hypercard stacks, Excel Spreadsheets, MSDOS Dbase, Foxbase and Rbase. The master database derived from these formats utilizes MSDOS Rbase that could be ported to any relational database manager. The restoration database incorporates four major tables with row counts ranging from 676 to 2461. All the data in this database is geo-referenced via segments and subdivisions so that integration with a variety of Geographic Information Systems is feasible. The data tables that contain data from a variety of sources indicate the source of the data on a record by record basis.

In the near future, the Prince William Sound Area Plan, in database format by segment, will be incorporated in to the restoration data base. Data from various non-governmental groups such as the Prince William Sound Conservation Alliance will also be reviewed . Resource and usage data are being sought from the affected administrative units such as the Kenai Borough and the Kodiak Borough.

When the data collection/data integration phase of this project is complete, ADNR will attempt to develop a menu-driven front end that is responsive to the analytical needs of the restoration community. The variety of potential queries makes it highly unlikely that all needs can be met via a menu system. Consequently, a database dictionary is under development. This dictionary will be updated as the database matures. It is provided so that users can review the data sets available and request analyses specific to their needs.

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|---|---|
| To STAGI SEBUNER | From ART WEINER |
| Co. RPWG | Co. ADNR |
| Dept. | Phone # 762-2295 |
| Fax # 271-2467 | Fax # 762-2290 |

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**RESTORATION TECHNICAL SUPPORT PROJECT NUMBER 2**

Project Title: Assessment of Beach Segment Survey Data

Lead Agency: DNR

Cooperating Agencies: DEC, ADF&G, USFS, NPS, EPA

## INTRODUCTION

There is a large volume of beach-survey information obtained through response activities (e.g., the fall and spring surveys) and NRDA studies (e.g., CH 1). All of these data are being integrated into a standard NRDA data base. This information is being reviewed and summarized with respect to restoration planning needs and will complement and support Restoration Feasibility Study Number 5 (RF 5). Together, this information will help identify potential sites at which (a) hands-on restoration projects may be carried out, and (b) equivalent resources may be acquired. Additionally, it should prove valuable in providing further information for analytical purposes in the development of the restoration planning matrix.

## OBJECTIVES

A. Obtain and translate to maps, pertinent beach survey information that is important for feasibility studies and restoration projects.

B. Analyze possible trends in information for applicability to restoration feasibility studies.

C. Create a data base for future reference use in restoration projects.

Relationships with Other Studies:

This project relates directly to RF 5 and provides data of fundamental importance to the entire Restoration Planning Project.

## METHODS

Research and map, using standard cartographic and G.I.S. techniques, all available information from the Fall 1989, Spring 1990, and Fall 1990 walk-a-thon and shoreline assessment team surveys. Combined with RF 5, this will provide further support in the selection process for specific restoration sites and habitats. It may also prove advantageous for documenting natural recovery processes that may be occurring. Care will be taken to not duplicate existing data bases and maps. The need is to integrate new information and summarize it in a form helpful to the Restoration Planning Project. This project will essentially add a

"restoration layer" to the existing NRDA data base.

BUDGET: DNR

| | |
|---|---|
| Salaries | $ 16.0 |
| Travel | 0.0 |
| Contractual Services | 5.0 |
| Supplies | 4.0 |
| Equipment | 0.0 |
| TOTAL | 25.0 |