



## **PACIFIC STATES MARINE FISHERIES COMMISSION**

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### Request for Proposals

### AKFIN DATA WAREHOUSE PROJECT

Actual Issue Date: **January 13, 2006**

Deadline for Submissions: **January 31, 2006**

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“To promote the conservation, development and management of Pacific coast fishery resources through coordinated regional research, monitoring and utilization”

## **Introduction**

Pacific States Marine Fisheries Commission (PSMFC), The Alaska Fisheries Information Network (AKFIN) project is seeking proposals for a data warehousing project. The project will be funded through a federal grant, with an estimated cost of \$100K. Following are the project goals:

- 1.) Install and implement Oracle Application Server.
- 2.) Replicate and enhance current in-house data warehouse procedures using Oracle Warehouse Builder.
- 3.) Provide proof-of-concept using Oracle Discoverer.

## **Proposal Requirements and Scoring**

Please provide résumés for contributing personnel, three references from recent projects, and list reasons for any cancelled projects within the past two years. Provide hourly rates, and estimated hours for all three phases, and an estimate of any travel costs. All necessary hardware and software has been purchased by AKFIN. Please provide a technical summary on how you would approach phase 2. Experience with natural sciences, specifically fisheries related projects is preferred.

Proposals will be weighted as follows:

- a) Technical Approach (30%)
- b) Business Experience (40%)
- c) Estimated Cost (30%)

Written questions can be emailed to [robert\\_ryznar@psmfc.org](mailto:robert_ryznar@psmfc.org) or faxed to (907) 586-8247. Answers will be sent to all participating parties.

## **Contractor Qualifications**

This project requires the contractor have experience with Oracle database 9i or above, PL/SQL, Oracle Data Warehouse Builder, Oracle Application Server, Oracle Internet Developer Suite, and a thorough knowledge of data warehousing principles.

## **Schedule**

**January 13th, 2006** RFP distributed

**January 24<sup>th</sup>, 2006** Deadline for written questions on RFP.

**January 27<sup>th</sup>, 2006** PSMFC distribute responses to written questions.

**January 31st, 2006** Deadline for proposals

Proposals may be submitted by e-mail to: [robert\\_ryznar@psmfc.org](mailto:robert_ryznar@psmfc.org)

Proposals may be submitted by delivery

One (1) original to:

Pacific States Marine Fisheries Commission - AKFIN  
ATTN: Robert Ryznar  
612 W. Willoughby Ave.  
Suite B  
Juneau, AK 99801  
(907) 586-8248

Faxed proposals **will not** be accepted

**February 3rd, 2006** Project finalist selected

**June 30<sup>th</sup>, 2006** Project Deadline

### **Background**

AKFIN is a regional program that consolidates and supports the collection, processing, analysis, and reporting of fisheries statistics for North Pacific and Alaskan fisheries. AKFIN integrates information into a single data management system using consistent methods and standardized formats. The Network then reports this information on their website, in various publications, and to researchers using different methodologies. The resulting data helps fishery managers, scientists, and associated agencies supervise fisheries resources more effectively and efficiently.

More specifically, AKFIN reports catch data, harvest and value from commercial fisheries in Alaska using the best available data from the data source agencies. Once these data are incorporated into its system, AKFIN reports information from several critical perspectives to decide impacts of changes in fishery management. These include species, area, gear, vessel, processor, community, and fishery participants by season.

### **AKFIN Data Warehouse Background**

An AKFIN Data Warehouse Plan document was completed in the fall of 2001. Much of this document is relevant today and provides a vision for the AKFIN project. An independent study, which reviewed the AKFIN data warehouse implementation proposal, was completed in March of 2002. A follow-up to this report was completed in February 2005.

In the past year AKFIN completed an initial version of a data warehouse. The end product has useful, but limited functionality. All ETL is performed using in-house Oracle packages and procedures. Reports are in the form of data sets created by AKFIN programmers using SQL and Oracle procedures. No metadata system currently exists.

The total exported size of the database is 37 GB; fact and dimension tables account for 3 GB, with source and system data accounting for the remainder. Current warehouse contains one fact table with six years of data, and thirty five dimension and interface tables. Source data originates from multiple agencies with various versions of Oracle databases. Data quality varies between agencies and within years, with older data being less reliable.

A custom web application has been developed, which provides end-users the ability to perform ad hoc queries, view metadata, and retrieve documentation. AKFIN staff is currently in the process of implementing this product.

In the past few years AKFIN has lost key personnel during critical stages of development. This has proven to be especially difficult with a small staff. The purpose of this project is to mitigate future risk by replacing our in-house procedures with a commonly supported Oracle solution.

## **Scope of Work**

Successful completion of all three tasks will include operational and procedural documentation, and sufficient mentoring to maintain and enhance delivered products. It can be expected that a reasonable amount of AKFIN staff time will be made available for scheduled consultation.

### **Phase 1 – Install Oracle Application server.**

Install and Implement the latest version of Oracle Application Server. AKFIN has purchased Oracle Application server and Internet Developer Suite. A Dell 1850 Server running redhat Linux ES3 has been purchased and configured for this project.

### **Phase 2 – Develop data warehouse using Oracle Warehouse Builder.**

AKFIN currently has a production version of a data warehouse, which includes 1998 through 2003 Alaska commercial catch data. The purpose of this phase is to: 1) replicate our current procedures using Oracle Warehouse Builder 2) include 1992 through 1997, 2004, and 2005 data 3) develop a “product” fact/dimension component to the warehouse.

A challenge with including 1992 - 1997 data is the fact that one of the source agencies changed operational systems starting in 1998. Another major change from the same agency occurred in 2003, which AKFIN has accounted for in the current system. Less significant changes to any of the source data can be expected within any given year.

The development of a “product” fact/dimension component has not been previously attempted by our staff; therefore the analysis phase for this task will be more involved.

### **Phase 3 – Provide proof-of-concept using Oracle Discoverer.**

Present a report from the AKFIN “catch by vessel” (CBV) data mart using Oracle Discoverer. All software, databases, and security will run on the AKFIN network. Presentation should demonstrate the ability to process 10 years of data containing approximately 5 million rows and 100 columns.