# CDI FY17 Request for Proposals
## Metadata Management System and ISO Editor Integration

**Submission Title:** Metadata Management System and ISO Editor Integration

**Lead PI:** Dennis Walworth

**Mission Area:** Not Applicable

**Region:** Alaska

**Organization:** Alaska Science Center

**OrcId:** NA

**Phone:** 9077867001

**Email:** dwalworth@usgs.gov

**City:** Anchorage

**State:** AK

Co-PIs and Collaborators:

**Science Support Framework Element 1:** Data Management

**Science Support Framework Element 2:** Applications

**Science Support Framework Element 3:**

**In-Kind Match:** $50,000.00

**List of anticipated deliverables from the project:** SQL Server database (translatable to other types), data models, data dictionary, ISO Editor application code and documentation. Demonstration of core concepts.

**Lead Cost Center:** GX17WB00COM

**Notes, Comments:** The Alaska Science Center (ASC) data management team has worked closely with the ISO tool development efforts and capitalizing on this experience has done extensive data analysis to develop a content management database for ISO compliant metadata called the Metadata Management System (MDMS). Besides managing metadata content, it seamlessly integrates data management plan (DMP) content, data management lifecycle tracking, enterprise data dictionaries/data standards content, publications listings and public communication outreach content. This integrated approach allows for a multi-use approach toward content and leveraging of discrete data entry in an efficient manner and support multiple applications.

**Project Description:** Currently, two data management infrastructure and tool development projects are underway with significant potential for the USGS and its collaborators: development of a standalone ISO metadata editor (mdEditor) through an LCC sponsored project and the development of a metadata and data management plan content management database by the Alaska Science Center. This proposal is the first phase for an approach in working toward a next evolution of integrative data management infrastructure and tools by developing a re-engineered version of the ISO metadata editor integrated with the MDMS database along with completion of a funded project data management plan application.

**Total Budget:** $50,000.00

**USGS CDI Proposal Statement of Interest**

## Project: Metadata Management System and ISO Metadata Editor Integration

PI: Dennis Walworth, Alaska Science Center

Currently, two significant data management infrastructure and tool development projects are underway with significant potential for the USGS and its collaborators: development of a standalone ISO metadata editor through an LCC sponsored project and the development of a metadata and data management plan content management database by the Alaska Science Center. This proposal is the first phase for an approach in working toward a next evolution of integrative data management infrastructure and tools by demonstrating the integration of an end user ISO metadata editor, a funded project data management plan (DMP) application with an integrated content management system database for data management called Metadata Management System (MDMS).

The ISO editor (mdEditor) is a project sponsored by the LCCs and managed by Arctic LCC in partnership with the FORT, the ASC, Nunatech and developed by Stan Smith and Josh Bradley to complete the development of an end user metadata editor for the ISO standard. Completion is expected in FY 2017. In addition, the FORT will incorporate the mdEditor, mdTranslator and other tools into the ScienceBase suite of tools. This will bring ISO metadata authoring tools to USGS and its collaborators.

The Alaska Science Center (ASC) data management team has worked closely with these ISO development efforts and capitalizing on this experience has done extensive data analysis and modeling to develop a content management database for ISO compliant metadata (MDMS). Besides managing metadata content, it seamlessly integrates data management plan (DMP) content, data management lifecycle tracking, enterprise data dictionaries/data standards content, publications listings and public communication outreach content. This integrated approach will allow for a multi-use approach toward content and leveraging of discrete data entry in an efficient manner. Further, it is infrastructure in which a multitude of applications can be developed to provide content or provide a presentation of products.

The proposal will capitalize on the ASC prototype database, the development of a funded project DMP tool and the developing ISO editor. A re-engineered version of the ISO editor will be developed and integrated with the MDMS database by a contracted developer and the ASC. The prototype funded project DMP tool will be developed by the ASC. The end user workflow will utilize the apps for entry of content and output DMP docs and ISO metadata XML as exports from the database. Since driven from the database, this approach allows for dynamic products are real time outputs from managed content.

ASC will support this effort with continued database development, server application programing and continued efforts on the DMP and other end user applications.

This proposal will demonstrate proof of concept. A next phase for subsequent years would be to leveraging this project for wider utilization within USGS, such as integration with ScienceBase, looking toward a next evolution of infrastructure for data management in a comprehensive and integrative manner for efficient utility by researchers, providing products to the public and maximizing bureau investments in tools and infrastructure.

**Estimated Budget**

| Budget Category | Federal Funding "Requested" | Matching Funds "Proposed" |
|---|---|---|
| **1. Personnel (Salaries including benefits):** | | |
| Federal Personnel Total: | | $50,000 |
| Contract/Collaborator Personnel Total | $50,000 | |
| **Total Salaries:** | $50,000 | $50,000 |
| **2. Travel Expenses:** | | |
| Travel Total (Per Diem, Airfare, Mileage/Shuttle x # of Trips: | | $2,500 |
| Other Expenses (e.g. Registration Fees): | | |
| **Total Travel Expenses:** | | $2,500 |
| **3. Other Direct Costs: (itemize)** | | |
| Equipment (including software, hardware, purchases/rentals): | | |
| Publication Costs: | | |
| Office Supplies, Training, Other Expenses (specify): | | |
| **Total Other Direct Costs:** | | 0 |
| **Total Direct Costs:** | | $102,500 |
| **Indirect Costs (%):** | | 0 |
| **GRAND TOTAL:** | | $102,500 |