# BUSINESS PLAN FOR GIS REGIONAL RESOURCE CENTER DEVELOPMENT AND OPERATION

## North Idaho RRC


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Regional Resource Centers (RRCs) are organizational components of The Idaho Map (TIM), Idaho's statewide GIS program. RRCs have the primary mission of supporting and coordinating GIS activities and users in specific geographic regions of the state, in coordination with the Idaho Geospatial Council (IGC) and the Idaho Geospatial Office (IGO).

## PREFACE

Geographic Information Systems (GIS) development in North Idaho has steadily progressed over the past decade. Several local users groups have been organized in the northern 10 county regions of Idaho, most notably the Kootenai GIS Consortium in Kootenai County and the North Central GIS Users Group in Nez Perce. In the late 1990's Washington Water Power (now Avista Utilities) created cost share partnerships with many of the counties, cities and local utilities in the region, promoting the concept of a shared orthophoto basemap for computer aided design (CAD) and GIS mapping purposes, and consequently the sharing of other data based on the shared ortho-imagery. These successful partnerships continue to this day.

This past year (2011) we observed our 11th Annual North Idaho GIS Users Meeting, which included participants from the 10 northern county region and from around the state. At this meeting the participants reviewed and provided input into the preliminary draft of this document, and appointed representatives to serve as an interim Steering Committee for advancing the formation of this Regional Resource Center. The participating organizations and GIS professionals have been active in state level GIS discussions, working groups and regional conferences. A central theme for their input has been the need for statewide participation, representation and data development within a more meaningful regional context. The Regional Resource Center (RRC) concepts presented in this business plan represent our user's group's proposal for satisfying these needs.

In September 2009, several regional groups were identified in response to a call for proposals by the Geospatial Information Office. These proposals identified geographic regions, overviews of GIS resources, and GIS practitioners within their respective regions that were associated with each proposed RRC. In December of that same year, a proposal was submitted by members of the east Idaho GIS community to the United States Geological Survey (USGS)/National Spatial Data Infrastructure (NSDI) in response to a Cooperative Agreement Program (CAP) grant opportunity, and this proposal was selected for funding. With the assistance of Croswell-Schulte IT Consultants and GIS Quality Design and Consulting, a general template for Idaho RRC implementation was developed, along with a formal business plan for the East Idaho RRC. This document was prepared from that template, and as originally intended, is an "enabling" document for initially establishing the RRC with implementation phases identified for subsequent development. The document outlines a scope of operations, products and services that will need subsequent development, review and consensus.

The North Idaho RRC host organization is the University of Idaho, will be housed within the UI CDA facilities in Coeur d Alene, and managed through UI Extension The basic vision for the function of the RRC is to serve as 1) a service center for the collection of local data, for the purpose of developing consolidated regional data layers for meeting local and regional needs, 2) to provide consolidated regional data for integration into The Idaho Map (TIM, the statewide map envisioned in the Idaho Spatial Data Infrastructure Strategic and Business Plans) , and 3) to promote a culture of collaboration and support for the continued development of shared integrated geospatial information and services in the region.

The subject local data collected by the RRC will include specific datasets for which local agencies are considered to be the authoritative source for that data, such as road and address information, will be standardized and consolidated into authoritative regional data sets and integrated with TIM. Authoritative data provided by other appropriate sources will be integrated with the regional authoritative data for the benefit of regional users. Much of the local data envisioned to be a part of these regional data layers may include rapidly changing, enhanced or detailed data not

contemplated to be part of statewide framework data layers integrated with TIM. This data, integrated with other regional authoritative data, will provide the enhanced regional data sets needed for supporting analysis and planning, economic development, and daily agency operations.

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# 1. BUSINESS PLAN BACKGROUND AND PURPOSE

## 1.1 RRC Background and Business Plan Purpose

GIS Regional Resource Centers (RRCs) are organizational components of The Idaho Map (TIM), Idaho's statewide GIS program. RRCs have the primary mission of supporting and coordinating GIS activities and users in specific geographic regions of the state, in coordination with the Idaho Geospatial Council (IGC) and Idaho Geospatial Office (IGO). The template for this business plan was prepared through a project managed by the ISU GIS Training and Research Center (GIS TReC), funded by a Category 4 NSDI CAP Grant. With consulting assistance from Croswell-Schulte IT Consultants, template development was carried out by a project team that included personnel from the ISU GIS TReC, Eastern Idaho Regional GIS (EIRGIS) and Southeast Idaho GIS Users' Group (SEIGUG) and included input from GIS stakeholders from the entire state.

The planned purpose and roles of RRCs were originally explained in the 2008 *Strategic Plan for Development and Deployment of Idaho's Spatial Data infrastructure* (p. 29):

> *"...[RRCs] act as points of coalescence for GIS user organizations in different areas of the state and help to connect local activities with the statewide SDI program. They will be supported by existing institutions or groups (e.g., universities, existing regional GIS user groups) that have GIS resources sufficient to provide some support to users. They would provide a number of services and support functions, including: a) answering technical questions for users, b) providing some general "consulting" support and advisory services for organizations in the process of GIS development, c) training sessions, d) site for meetings and special SDI events, and e) aggregate and serve regional Framework data These centers can be established and put in operation over a period of time as they are needed and as resources permit. It is expected that these centers will include staff and technical system resources. It is also expected that they will provide "virtual services" through the Web (i.e., Web-based information, links, contacts, blogs, etc.) that address the needs of users in specific regions of the state. The coordination and support now provided by regional GIS user groups will be a foundation for Resource Center development."*

The above statement defines a range of possible roles for the RRCs throughout the state. This business plan responds to the particular needs of the Northern Idaho RRC as originally defined in the RRC proposal and identifies the scope of activities and services the RRC may undertake, dependent on management direction, funding, staffing, changes in technology, and the availability of cooperative and collaborative opportunities. The plan takes into account the following research, information gathering, and deliverable review activities conducted by this project, beginning in November of 2009:

- November 2009 - Presentation by Gail Ewart (Idaho Geospatial Information Officer) at 9th Annual North Idaho GIS Users Meeting, regarding the Idaho Strategic Plan and the role of RRCs.

- Proposal by University of Idaho (UI) to host the North Idaho RRC, presented at the 10th Annual North Idaho GIS Users Meeting, November 18, 2010; approval by participants to proceed with business planning process.
- January 2011 - Nez Perce and Clearwater representatives met with the Clearwater Economic Development Agency (CEDA, COG) and UI representatives, consensus was to proceed with host organization analysis for setting up a North-Central Idaho RRC.
- January 2011 - Northern group met with UI Director of Corporate and Foundation Relations for UI, Virginia Pellegrini. Consensus that the UI NFS Data Management initiatives and the NKN (Northwest Knowledge Network) are a perfect fit with hosting and leveraging an RRC as a regional spatial data and services outreach center (Extension), and as a partnered perpetual spatial data source and implementation "laboratory" for regional research efforts.
- April 2011 - Meeting with 10 Northern County representatives and UI to discuss how the User Group vision of the RRC would work within the opportunities and constraints of a UI (as the RRC host organization), and what the funding requirements/opportunities/constraints may be for both startup and sustained operations.
- June 2011 - Meeting at UI CDA, to discuss collaboration opportunities between the Rathdrum Aquifer Protection District, DEQ, USGS, city of CDA and the proposed U of I CDA , Community Water Resource Center and its possible integration with the North Idaho Regional Resource Center.
- June 2011 - Meeting with UI President Nellis and UI CDA Director Charles Buck for formalizing official UI direction to proceed with developing the business plan document, and budget preparation, for submitting the plan to IGC for approval.
- November 2011 - 11th Annual North Idaho GIS Users Meeting, attendees (and non-attending participant users) signed an organizational document forming the North Idaho GIS Users Group, and appointing a Steering Committee that will guide the group through the process for setting up the North Idaho RRC.
- Numerous informational meetings and email communication between User Group members during this time to review and confirm information exchanged in meetings and other communications.

### 1.2 Mission and Objectives for RRCs

The Northern Idaho RRC shares the following mission common to all Idaho RRCs:

> *Act as a vital component of The Idaho Map and enhance geospatial capabilities in the region.*

There is a strong consensus that RRCs should play both a “bottom-up” and “top down” role. This includes improvements in GIS operations and coordination among GIS user organizations in the region and conveying statewide standards, policies, and opportunities to RRC participants.

**RRCs are <u>not</u> intended to duplicate or replace programs and services provided by other organizations. Rather, the goal is to provide support and to collaborate with other organizations that make up the TIM program and stakeholder organizations (public, private, non-profit, and academic) to deliver services to and increase involvement of GIS users in their region.**

The specific objectives for the Northern Idaho RRC include:

- To respond to the direction provided by regional GIS User's over the past decade, to provide an organizational focal point for the GIS community of the 10 Northern County region of Idaho, and to promote a culture of collaboration and support for the continued development of shared integrated geospatial information and services in the region.
- To provide a regional service center for the collection of local data, for the purpose of developing consolidated regional data layers for meeting local and regional needs. Much of the local data envisioned to be a part of these regional data layers may include rapidly changing, enhanced or detailed data not contemplated to be part of statewide framework data layers integrated with TIM. A primary stakeholder for updated regional data is the Emergency Services community, which will need these data and services to support Next Generation E911.
- To realize the full potential of close collaboration between local Users and agencies, the University of Idaho (individual colleges and research capabilities, and County Extension), the state Data Clearinghouse (INSIDE Idaho, FGDC NSDI Node) and its integration within the Northwest Knowledge Network, the North Idaho Water Center, and other local offices of State and Federal agencies, to meet the specific information and decision making needs of the region. Collaborating with these organizations will enhance grant funding opportunities, and will help our authoritative data to be utilized throughout our region at all levels of decision making while also making outside authoritative data more available to our decision makers.
- Establish a physical presence with necessary facilities (hardware, software, office space) to support RRC services (training, meetings, GIS services).
- Create tools and a management environment that encourage and support joint GIS projects and partnerships, including multiple public, private, and non-profit organizations in the region and potentially outside the region (e.g., joint database development, GIS hosting services). For meeting local and regional needs for analysis and daily operations, it may be necessary to establish specialized services exceeding the normal requirements for simple file sharing and web map services.
- Support the development of and/or access to GIS technology for low population/low resourced local government jurisdictions, special service districts, and other organizations in the region.
- Promote and enable mentoring, communication, and collaboration among organizations and individuals in the region.
- Provide an improved environment for communication, mutual support, and sharing of GIS news, applications, and best practices for GIS development and operation.

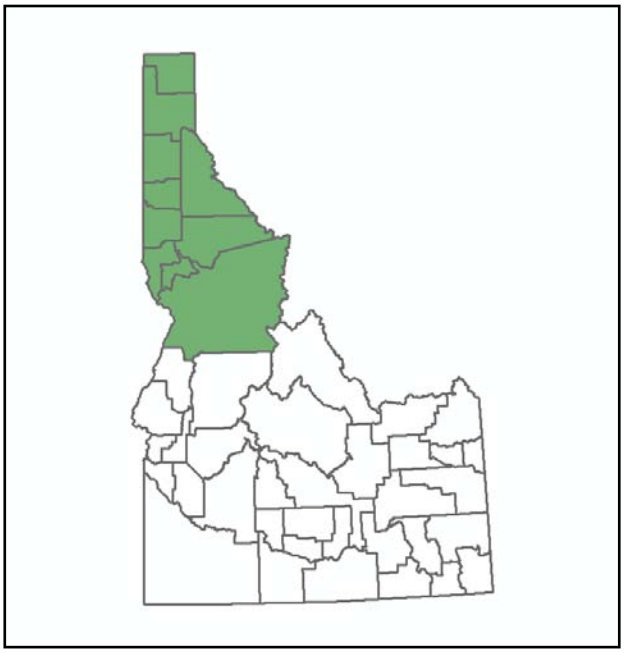
- Support efficient government-private partnerships and regional economic development initiatives.
- In coordination with the IGC, and other RRCs, play an advocacy role to increase awareness and support for GIS by senior officials and decision makers.
- Encourage and support the understanding of TIM Framework datasets and the adoption of associated standards and procedures for Framework stewardship.
- Encourage participation in and conveying of regional interests to the Idaho Geospatial Council (IGC-EC), Standing Committees, and Working Groups formed by the IGC Executive Committee (IGC-EC).

### 1.3 Geographic Scope and RRC Status in the Northern Idaho Region

The Northern Idaho RRC includes the following counties also displayed in Figure 1:

- Boundary
- Bonner
- Kootenai
- Benewah
- Shoshone
- Clearwater
- Latah
- Nez Perce
- Lewis
- Idaho

**Figure 1: Geographic Area of the Northern Idaho Region**



The primary mission of the Northern Idaho RRC is to serve users in the defined region but these boundaries do not restrict RRC support for and coordination with GIS stakeholder organizations outside the region. There is strong consensus that the different RRCs in the state should work closely together on the development and provisioning of services and programs that they sponsor. Where appropriate RRC participants in one region should be able to take part in programs (e.g., a training session) sponsored by another RRC. Effective use of resources and a response to the needs of GIS users will require collaboration in planning and service delivery among all RRCs and the IGO.

## 2. RRC SERVICES, USERS, AND BUSINESS JUSTIFICATION

### 2.1 RRC Services

This section describes a range of services that are planned for implementation by the Northern Idaho RRC. Table 2 identifies these services and presents the following information:

- Description of the service
- Resource Requirements: general description of staff and other tangible resources required to establish and provide the service

As discussed in Section 5, RRC services and programs will be ramped up gradually. Decisions on when to implement a specific program will be based on user needs and availability of resources. For maximum efficiency and best use of resources, it is very important that different RRCs coordinate their implementation and delivery of services in a way that results in a sharing of resources. A number of services depend on the development of Web-based applications (e.g., professional contact directory) this, like some other RRC services, should be developed and supported in one location using available server and network resources (managed by one RRC or by the IGO). Web-based services could be deployed with common access by the user regardless of the RRC. Access to information or services specific to one or more RRCs could be enabled by simple menu picks. Each RRC would update information to a central server, thereby eliminating the need to acquire and/or support redundant systems. For the North Idaho RRC, in cases where separate server(s) may be needed, the University of Idaho as the host organization, may provide server services for RRC functions when deemed appropriate, and with adequate failover, backup and other features, so as not to require redundant expenditure for additional separate infrastructure. Some proprietary and/or subscription type services (if developed) may require special infrastructure outside the scope of available University or State services, and may require special arrangements including the use of leased cloud services, or other services or infrastructure, which may require special financing. Services appropriate for the Northern Idaho RRC are identified in Table 2.

Many of the services and programs defined in Tables 1 and 2 may currently be provided or planned by existing organizations (IGO, existing public sector organizations, university programs, and private sector companies). Including these for RRCs does not imply duplication or replacement of services and programs that are efficiently provided by these outside organizations. Rather, the RRCs will augment such programs and services of external organizations and collaborate directly with them to promote and support service delivery to individuals and organizations in their region. As a focal point for organizing information needs for the region, the RRC may perform many times as a directory service for identifying available existing services and programs.

## Table 1: Potential RRC Services

| Potential Program or Service | Description | Resource Requirements |
|---|---|---|
| A. Directory of GIS Contacts and Professional Networking Support | Compilation and ongoing update to a web-accessible directory of Idaho (and perhaps out-of-state) GIS professionals. These contacts will agree to have their contact and basic experience and skill sets posted and agree to be available to Idaho GIS users that need advice and basic assistance in GIS development and deployment. This supports the concept of mentoring and mutual support among GIS user organizations | Minimal time or system resources |
| B. GIS News of Regional Importance | This would be deployed as web service which could be accessed to obtain news of interest to parties in the region. This would best be implemented at a statewide level (by the IGC or a specific RRC) since many news items important to the region will also have a statewide significance. It could be formatted as an e-newsletter or a monthly listing of new items with hyperlinks to sources providing additional information. News items would include such topics as: a) training opportunities, b) important industry announcements, c) personnel changes, d) grant opportunities, e) new projects, and f) IGO/IGC actions. While this would be statewide service hosted from one location, each RRC would contribute items. | |
| C. GIS Professional Labor Pool Management | This service takes the "GIS Contact Directory" a step further by organizing and managing a pool of GIS specialists, primarily among government agencies, who may be able to provide consulting or development services to other government organizations that lack the in-house staff. The RRC could help coordinate requests for and assignment of services. Fees charged for services (if any) would be negotiated between the parties. | Depends on need and availability |
| D. GIS Project/Best Available Practices Catalog | Compilation and ongoing update to a web-accessible "library" of successful GIS projects, and demonstrated "lessons learned", and best practices. This web-based library would provide practical examples and project approaches GIS technical development and program management) that could be reviewed and used by other organizations. Supports the concept, "don't reinvent the wheel". This web service should be deployed on a statewide basis (single hosted site) by the IGC or a specific RRC) but participants from all RRCs would post contact information and keep this web service up to date. | Minimal time or system resources |
| E. Support Advocacy and Building Awareness of GIS Benefits | In coordination with the IGC, RRCs will participate in activities to promote awareness of GIS with a focus on building support among senior officials and decision-makers. RRC participants will provide testimonials illustrating GIS benefits, participate in presentations at meetings, and provide support to the IGC in budget requests. RRCs will coordinate contact with senior management and elected officials in their region to garner support for GIS adoption and enhancement by RRC participating organizations | Moderate time requirements at selected times when advocacy is required |

## Table 1: Potential RRC Services (con't)

| Potential Program or Service | Description | Resource Requirements |
|---|---|---|
| F. Regional Framework Steward | A variety of coordination and support activities to support and facilitate Framework data stewardship—playing an intermediate role between Source Stewards (e.g., County and City GIS programs) and Framework Stewards assembling and updating statewide Framework data sets. This role does NOT imply primary data compilation and updating—it is a coordination and support role to assemble data from Source Stewards and submittal to state Framework Steward. This RRC role is appropriate for Framework Themes and Elements for which the primary Source Stewards are organizations in the RRC region (e.g., local governments). The RRC would accept data from Source Stewards, perform QA, edgematching between jurisdictions, reformatting, packaging and submittal to the Framework Steward. An important role would be to support adoption and use of approved data standards by Source Stewards and assurance that submitted data complies with standards. This RRC function could provide economy of scale benefits by regional centralization of some data stewardship activities and would provide a simpler organizational structure for submittal of updated Framework data to the state level Framework Steward. Since Framework stewardship activities are specific to individual data themes or elements, it is possible that this Regional Steward role is put in place only for selected themes or elements. NOTE: This potential RRC service could involve quality control and quality assurance work to ensure that data submittals adhere to content and format requirements for the Framework Theme or Element. The assigned Framework Steward would perform standard QA checks as part of the established horizontal and vertical integration processes. The option is open for the RRC to work with private contractors that may assume roles for any data stewardship activities. | Need dedicated staff with GIS data skills, computer hardware, and GIS software |
| G. GIS Data/Metadata Compilation and Update | Technical services involving the compilation of GIS data sets. This may involve field data collection, scanning/digitizing from hardcopy sources, integration/formatting of existing automated sources for the development and/or update of Framework or non-Framework GIS datasets. It is expected that a considerable amount of GIS data compilation will be carried out by organizations in the region (or through contractors that they hire) but there may be some opportunities to use RRC resources for certain GIS database development projects (possible in partnerships with private data conversion firms). It is expected that local government jurisdictions in the region with active GIS programs will compile and update Framework data and play a Source Steward role for maintenance of statewide Framework datasets (possibly with RRC coordination as a Regional Framework Source Steward). But lower resourced local governments or special service districts will require RRC support (perhaps with services provided by private contractors) to these lower population jurisdictions. In addition, there may be special projects or non-Framework data, needed by RRC users for which the RRC can play a role. | Need dedicated staff with GIS data skills, computer hardware, and GIS software |
| H. Support/ Encourage Adoption of TIM Standards and Policies | Designated RRC representatives track and support the development and approval of GIS standards and policies (approval by IGC and ITRMC). Includes raising awareness and understanding of standards and policies among GIS users in the region and supporting their practical adoption and use. Requires participation in standards review and meetings. RRCs will play a role in identifying and enlisting participants (from the region) in standards and policy development activities and in presenting ideas for IGC consideration. Also, the RRC may evaluate, prepare, and adopt GIS data standards (non-Framework) or standard practices and policies that apply specifically to participants in the RRC region. This is complemented by Program N calling for active involvement in IGC standards development by organizations in the region. | Moderate staffing requirements needed to participate in standards development and their adoption by RRC participating organizations |
| I. Organize/Host GIS Meetings and Events | Support in planning and organizing GIS meetings and events directed mainly at people and organizations inside the RRC region. These may be project meetings, training sessions, workshops, etc. This includes scheduling, identifying and lining up facilities, promotion, registration services, establishing electronic access environment, etc. This may include events sponsored by the RRC or events sponsored by another organization (University group, vendor) for which the RRC provides support services. | Varies depending on the number of events |
| J. Prepare Project Specifications and Support GIS Services Procurement | Work with regional partners (mainly local governments) to assist in preparation of technical specifications and procurement documents for GIS products and services from the private sector. Also support local governments in evaluation of proposals and selection of contractors and vendors. This may include procurement of GIS database services, software procurement, application development services, Web hosting services, etc. The RRC may use contracted services in support of this service. | Requires access to library of template specifications and RRC person in “consultant role” |

## Table 1: Potential RRC Services (con't)

| Potential Program or Service | Description | Resource Requirements |
|---|---|---|
| L. Joint Project Negotiation and Management Support | Provide facilitation for joint projects involving RRC participating organizations in the region. This may include support in negotiations with GIS service providers and contract preparation for GIS services (mainly database development) that involve multiple jurisdictions/organizations in the region. Follow this with project management support (contract management, review/approval of deliverables, status reporting, etc.) on behalf of the project participants. | Moderate—need RRC person with technical knowledge and project management skills |
| M. Coordinate, Promote, Partner, and/or Provide GIS Training and Education | Involves assessment and monitoring of training and education needs by the GIS community inside the region and identification of training and education opportunities for which there might be interest (instructor led training sessions and workshops or web-based training sources like the ESRI Virtual Campus). In addition, the RRC could plan, organize, and conduct training sessions. This potential service is not meant to replace training programs and opportunities provided by existing organizations. The RRC training and organization role would involve support in promotion, coordination, and facilitation in support of these other organizations. Training and education would only be sponsored or provided by RRCs to fill in needed gaps when training is not available from other convenient sources. | Moderate-requires trainers, training materials and facilities for training sessions |
| N. Provide Regional Representation on IGC and Communication with IGO | Ensure that representatives from the region participate on the Idaho Geospatial Council (IGC), on the IGC Executive Committee as appropriate, and maintain regular communications with the IGO to keep abreast of developments impacting TIM, and play an advocacy role for TIM initiatives impacting the region. According to By-Laws IGC participation is open and Executive Committee members are elected. There are reserved Executive Committee seats for GIS TreC and the "Geospatial Clearinghouse" (INSIDE Idaho). The By-Laws call for remaining seats to be filled by designated stakeholder organization categories (state agencies, federal agencies, local government, tribal government, utility, private sector). RRC representatives should attend IGC meetings and propose candidates for Executive Committee seats. | Moderate |
| O. Grant Research Application Preparation, and Administration | Assign RRC personnel and assume ongoing role to identify potential grant opportunities and assess appropriateness of upcoming grants to support TIM and GIS programs in the regional (and for the state as a whole). Participate in the preparation of grant applications (with the IGO, government agencies, and other RRCs as appropriate) and play an oversight and grant administration function. | Requires dedicated staff resources for grant research and preparation |
| P. Hosting GIS Data and Services* | The provision of hosting services for organizations in the region—particularly small jurisdictions which are not maintaining GIS infrastructure or data. Hosting would include data (and perhaps data update services), required software, and applications for web-based access to "subscribers" in the region. One option, in addition to the RRC providing hosted services is to act as a "broker" to help plan hosted services and engage private service providers to support user organizations in the region. Planning for hosted data or services should consider the possibility of using "cloud computing" which would use web-based systems and software maintained by another organization (e.g., private company with data center and software services), thereby reducing or eliminating the need to maintain hardware and software. This potential RRC service does not imply a replacement of hosting services already provided by another public or private organization. Hosting services would only be pursued in cases where a needed service is not conveniently and cost-effectively provided by another organization. In such cases, potential opportunities for the RRC to collaborate with other organizations (including other RRCs) or private sector companies should be considered. | In cases where additional hosting services are required, Would require server, SW, high-speed network and system admin support. Use of Cloud-based services reduces in-house needs but would require service fees. |

## Table 1: Potential RRC Services (con't)

| Potential Program or Service | Description | Resource Requirements |
|---|---|---|
| Q. Designing/ Developing Web Services and Facilitation of Technology Transfer | Involves a service to design and deploy GIS-based web services for any organization in the region (and potentially for users outside the region). This work may result in applications installed on the user's system or providing them in a hosted environment. RRC personnel may participate in web service design and deployment with or without involvement of private firms although it should noted that effective private partnerships with GIS software and service firms may be quite effective. In addition, the RRC would provide a technology transfer function—providing information about successful applications and GIS applications and web services already implemented by some organizations in the region and supporting their adoption and deployment in other jurisdictions. Design and development of web services are not considered to be a core service of the RRC but could take place under special circumstances. The RRC could help to set-up and manage application development projects with private sector contractors (particularly in cases where the project results would be used by multiple organizations in the RRC region). | Moderate. Requires personnel with GIS technical skills |

*Hosting data or services could make use of computer hardware, software, and network infrastructure owned and maintained by the RRC or managed by a cooperating organization. Identifying this as a potential RRC service is not intended to duplicate such services provided by other organizations but implies coordination and collaboration. There is also an opportunity to provide such services using hardware and software provided by separate data center (under a lease or subscription agreement) or user of emerging "cloud" services in which the RRC, for a fee, taps into server and software services by a cloud provider. Under these environments where the hardware and software is not directly managed by the RRC, the RRCs role would be one of management and oversight.

## Table 2: Services Selected for Implementation for the Northern Idaho RRC

| Potential Program or Service | Priority | Implementation/Operation Issues |
|---|---|---|
| A. Directory of GIS Contacts and Professional Networking Support | 5 | Work with the IGC and personnel in other regions to carry out a design and creation of a web service. Need to identify a physical server and site for support of this web service (e.g. State Department of Administration, UI CDA, Hosted Site) |
| B. GIS News of Regional Importance | 4 | |
| C. GIS Professional Labor Pool Management | 2 | Low initial importance, initially anticipated as clearinghouse function for GIS Contractors for contact and reference information for shareholders looking for contractors and services for hire. Operations may require legal review for labor fairness related issues. |
| D. GIS Project/Best Practices Catalog | 3 | Need shareholder input from around the State, will develop over time |
| E. Support Advocacy and Building Awareness of GIS Benefits | 5 | Leverage the formation of the RRC as a kick-off event for introducing proposed services and GIS benefits to full range of potential shareholders, develop program for follow-up communication on RRC successes to reinforce awareness of GIS benefits. |
| F. Regional Framework Steward | 4-5 | Maintain involvement in the Framework Stewardship planning process being carried out by the IGC. Support involvement of Source Stewards in the region and identify cases in which efficiencies can be provided by the RRC (performing data updates for multiple jurisdictions). Coordinate with and leverage NKN/UI Library Metadata Specialist for meeting NFS enhanced metadata standards. |
| G. GIS Data/Metadata Compilation and Update | 2 | |
| I. Support/ Encourage Adoption of TIM Standards and Policies | 5 | Ensure the RRC members have formal role on technical working groups and committees established by the IGC. Form RRC companion working groups for facilitating implementation of standards regional, and for analyzing and developing extended/enhanced regional standards for meeting specific regional needs. |
| J. Organize/Host GIS Meetings and Events | 4-5 | Provide information to RRC members about the availability of facilities to hold meetings and events. Establish a fixed meeting schedule (e.g., each quarter) to report on RRC status and get input from members and interested parties. |
| K. Prepare Project Specifications and Support GIS Services Procurement | 3-4 | Early after RRC activation, identify specific projects with funding for which the RRC may play a planning and coordination role. |
| L. Joint Project Negotiation and Management Support | 3-4 | |
| M. Coordinate, Promote, and Provide GIS Training and Education | | The University of Idaho will be the primary provider of GIS training. Involve RRC members identifying training needs and establishing a training program for the next year. Work with other educational institutions, local RRC members, GIS vendors, professional associations, and other parties in the providing the training at regional events (e.g., Intermountain GIS conference, NW GIS Users Meeting, North Idaho GIS Users Meeting) |
| -Support training provided by other organizations: | 4 | |
| -RRC plans and provides training: | 2 | |

| | | |
|---|---|---|
| N. Provide Regional Representation on IGC and Communication with IGO | 5 | |
| O. Grant Research Application Preparation, and Administration | 4 | Examine possible support from grant researchers in UI and in the State Department of Commerce for grant research and writing. RRC manager should sign up for automatic notifications of federal grant opportunities from www.grants.gov. |
| P. Hosting GIS Data and Services | 3-4 | |
| Q. Designing/ Developing GIS Applications and Web Services and Facilitate Technology Transfer | 3 | |

*Subjective indication of importance and appropriateness for the Northern Idaho RRC. A score of "5" means very high importance and a score of "1" indicates low importance and that this service or program should not be strongly considered for RRC operations

## 2.2 RRC Participation Categories

Services provided by the RRC need to be defined in the context of people and organizations that are providing RRC services and support and those using those services. Any organization or individual should be allowed to participate in and use of RRC programs and services. This includes any public, private, or non-profit organizations inside and outside of the RRC region. There will be one formal category of RRC participation referred to as "*RRC Member*". This includes people and organizations, inside the RRC region (including all GIS stakeholders including local government jurisdictions, tribal governments, state and federal agencies with a presence in the region, utility organizations, regional agencies and special service districts, private companies, universities, and the general public). These members, at a minimum, would be identified on a contact list maintained by the RRC, would receive basic services (e.g., access to web-based services like a contact directory, GIS news), and which may chose to use other RRC services. Membership will be voluntary but all public, private, and non-profit organizations in the region, with an interest in GIS, will be encouraged to register as members and to actively participate in RRC activities.

Non-member individuals and organizations can use RRC services and participate in RRC programs according to the terms established by the RRC. This may include:

- People or organizations inside the region which are not currently registered RRC members but still have an interest in using RRC services and programs.
- People or organizations outside the RRC region which use RRC services and programs.
- Public or private organizations that provide monetary or non-monetary tangible support to the RRC, normally through a formal agreement.
- Service providers, including private vendors, consultants, or contractors or non-profit organizations which provide products and services to the RRC (through a contract or purchase agreement).

### 2.3 RRC Benefits and Business Justification

Participants in the RRC planning process have identified a large range of tangible and intangible benefits that the RRC can help deliver. In large part, these benefits reflect those already identified in the 2009 *Statewide SDI Business Plan* (Section 3, (http://gis.idaho.gov/portal/IGO/stratplan.htm).

It is anticipated that the RRC can provide critical support for regional base-mapping for Next Generation E911 and emergency services. In addition, center activity will contribute to regional transportation and economic development analysis and planning. RRC roles are anticipated to include emergency services planning and response, economic development, transportation and utility asset management, and real property appraisal.

Tangible Benefits

- Regional collation and coordination of current authoritative framework data for the benefit of shareholders and the public.
- Reduction in government agency staff time for processing data updates for Framework Stewardship
- Reduction in cost and staff time from outside agencies in developing/deploying GIS applications (through sharing of apps and expertise)
- Cost savings through economy of scale in joint GIS database or application development projects
- Improved position for submitting and getting grant awards for activities of interest to all RRC participants
- Improved and cost-effective services for GIS data/application hosting for low-population jurisdictions without active GIS programs
- Provides better position from which to apply for and receive grant awards that target local communities and regional conditions

Intangible Benefits

- More direct access to senior officials in the region—increasing awareness and support for GIS
- Effective way for regional participants to voice their needs and participate in IGO and IGC programs—better assurance that regional needs will be taken into account
- RRC role in GIS data and service hosting promises to increase access to GIS technology by small jurisdictions (low population counties and cities)
- Quicker GIS program development and deployment through access to best practices and professional networking enabled by the RRC

- Support and oversight on geographic data standards improves opportunities for data sharing and database integration
- Support for adoption of standards resulting in an improved environment for sharing data among RRC participants
- Provides a basis for cross jurisdictional economic development programs

## 3. RESOURCE AND OPERATIONAL NEEDS FOR RRC OPERATION

### 3.1 Overview of Resources

Resources for RRC operation include all funding, staff, and tangible commodities necessary for RRC operation:

a) Office location and space: including furniture, office supplies, and other amenities.

b) Computer systems and equipment: Servers, desktop or laptop computers, peripheral devices, networks, software, copy machine, projection units, etc. This category also includes hardware and software maintenance and support service contracts.

c) Personnel: Management and administrative support personnel and technical/professional staff.

d) Funding: Monetary contributions and support for RRC development and operation.

Information gathering conducted for this business plan preparation indicates that there is a general consensus that each RRC needs a physical location and facilities from which RRC operations are managed and services are provided. However, there is an acknowledgement that limitations on funding, at least initially, will limit the scope of RRC operations and the facilities and staff that can be supported. For this reason three key principles will guide the establishment of RRCs and offering of RRC services:

- RRC development should follow a careful, incremental approach. Put in place high-priority and lower cost services first and gradually add additional resources and services. A general phasing for the Northern Idaho RRC development is explained in Section 5.
- Establish the RRC as a program managed by an existing organization rather than creating a new organization. Section 4 explains organizational options and the recommended approach for the Northern Idaho RRC.
- Avoid an over-reliance on permanent, salaried RRC management or technical personnel but use available services provided by a "host organization" of the RRC, volunteer time, and non-traditional staffing options. Section 3.3 explains some recommended options.

### 3.2 Office Space, Computer Hardware, and Office Equipment Requirements

Space and facility requirements will change over time as RRCs evolve and expand their service provision. It is assumed that RRCs will use facilities of a host organization—with necessary arrangements for cost reimbursement consistent with the policies of the host organization and terms established for RRC hosting. At a minimum, the North Idaho RRC will require the following:

**Servers/Services**: Access to an instance of Economic and Social Research Institute ArcGIS server and ArcSDE, a file server, and a web/application server. Both development and

production environments are required. Services published under the instance of ESRI ArcGIS server will be publically accessible.

**Network Access**: Network link for external web-based transactions and local area network access (wired or WiFi) at the RRC site.

**Workstation Software**: Software including a) Document processing software (e.g. Microsoft Office Acrobat), b) Web site design and management software, c) Computer program and application development software, d) Antivirus software, e) Additional GIS or image processing software as needed for project work, f) Additional non-GIS analysis, modeling, visualization, or other application software needed to support RRC projects.

**Peripheral Computer Devices**: At a minimum, a page size (letter, legal size) monochrome laser printer or multi-function device (print, scan, fax, copy) should be available. Specific RRC services will benefit from access to a large format (E-size) color ink jet plotter and/or a large format scanner.

**Meeting Room Facilities**: A meeting room with table, chairs, whiteboard and ideally equipped with desktop computer, projection device, network links for use in group meetings and training sessions. Availability of desktop computers for training would be beneficial.

**Office Space**: Limited space (cubicles or enclosed offices with desks of table) for RRC employees or temporary project workers.

**Office Equipment and Supplies**: A digital networked copy/printing device will be available and there will be a source of basic office supplies.

As already mentioned, the degree to which the RRC can make use of facility, computer, and equipment resources of an existing organization, the more efficient it will be. It is expected that, as services expand with a growing demand, increased funding will be available for expansion of physical resources. Additionally, it should be noted that authenticated instances of ESRI ArcGIS server, which are not publically accessible, may be required as the RRC matures. That will require further discussion as issues with software licensing may need to be addressed.

It should also be noted that the computer hardware and software resources explained above would not necessarily need to be locally available to each RRC. High-speed web access would allow multiple RRCs to share resources (server hardware and software) maintained at a remote site in the state (e.g., an RRC initially uses server resources put in place at another RRC). This server sharing would also support the coordinated development and support for basic RRC services (RRC Home Page, contact directories, project catalog, etc.). The concept of remote server access brings up the concept of Cloud-based services—a server or multiple servers managed by a cloud-based service provider which, for a fee, provides compute, storage, and software services via the web. In this environment, users are fully separated from server and software administration tasks which the provider handles.

## 3.3 Management and Staffing Requirements

### 3.3.1 RRC Management

The RRC will have a manager with the responsibility to oversee RRC set-up and development, staff recruitment, work delegation and monitoring, handling of legal and financial matters, exploring and initiating new projects, and preparation of status reports. This manager is also the main interface with the IGO and IGC. In addition, this person or another management level person needs to play a role in RRC marketing and promotion—to raise awareness about the RRC, sign-up additional participants and associates, investigate and help secure new funding sources. Initially, it is expected that this management role will require about a .25 full time equivalent (FTE) but is expected to grow over time—with a full-time manager eventually required.

### 3.3.2 Administrative Support

This function includes standard office administrative work including receptionist duties handling and routing communications, setting up logistics and facilities for meetings, training sessions and other events, clerical tasks, inventorying and ordering supplies, and providing other support to management personnel and staff.

### 3.3.3 Technical Personnel

This staffing category includes any personnel who provide technical or operational support for RRC activities and projects. The main required skills include: a) Server/network administration and monitoring, b) web site design and maintenance, c) GIS database design and development, d) GIS software and application development and use, e) technical training and communications, f) technical project management. The specific levels of staffing to fulfill these roles will begin modestly but grow overtime.

### 3.3.4 Options for RRC Management and Staff

With the expectation that initial and possibly ongoing funding for RRC operations will be limited, filling RRC staff roles should not rely on full-time dedicated positions. Operational and cost efficiency calls for maximum use of the following staffing approaches:

- Use of resources from the "host organization": To the extent possible, existing personnel of host organization should fill RRC management, administrative support, and technical staff—addressing requirements for additional funding to cover RRC activities using available sources.
- Volunteer time: RRC operations, as part of The Idaho Map (TIM) program will always need and benefit from the donation of time from GIS professionals in member organizations (any public, private, or non-profit organization). This is occurring now through the regional user group and participation of GIS professionals on TIM Committees and Working Groups.
- Student Interns: Employment of qualified undergraduate or graduate students from any college or university, on a short-term basis (for a brief project) or in a longer-term co-op or internship program. Costs for student labor could range from no-cost to modest

hourly pay rates. Such programs work best when there is a clear agreement with the college or university and when the experience and skills of candidates may be reviewed in the selection process.

- Donated Services from the Private Sector: In some cases, GIS and IT service vendors and consultants may be interested in providing donated services or support for an RRC project.
- Paid Contract/Project-based Personnel: When an RRC sponsored or managed project is supported with appropriate funding (e.g., grant award), it is efficient to employ paid services from a grant-funded non-permanent RRC employee or a private contractor (e.g., GIS consultant).

## 4. RECOMMENDED ORGANIZATIONAL/OPERATIONAL MODEL AND IMPLEMENTATION PHASES

### 4.1 Organization Type

A general consensus on the following key organizational requirements was established:

- Establishment of the RRC organization should be as administratively and legally streamlined as possible
- The RRC organization should have a legal status with the ability to handle monetary transactions and to enter into formal contracts and agreements
- The RRC organization should always maintain its identity as part of The Idaho Map (TIM) program and its operational connection with the IGO and IGC.
- The RRC organization should be positioned in a way that supports collaboration with existing organizations and programs impacting GIS stakeholders in the region

The North Idaho RRC host organization is the University of Idaho; the RRC will be housed within the UI CDA facilities in Coeur d'Alene, and managed through UI Extension.

This is an innovative structure for the RRC that will utilize expertise and infrastructure of the University of Idaho to create a neutral, authoritative GIS data framework. The center will function with autonomy and according to the business plan that is made available to all stakeholders. Synergy will be realized with the Community Water Resource Center, also housed at UI CDA. The RRC is also actively partnering with users groups and other relevant entities, including private companies, to fully address needs and requirements for GIS data in the region.

The University of Idaho in Coeur d'Alene, partnering with U of I Extension, will provide management and operations support. A steering committee composed of GIS users and key stakeholders will provide advisory function and guide RRC operations.

### 4.2 RRC Organizational Structure

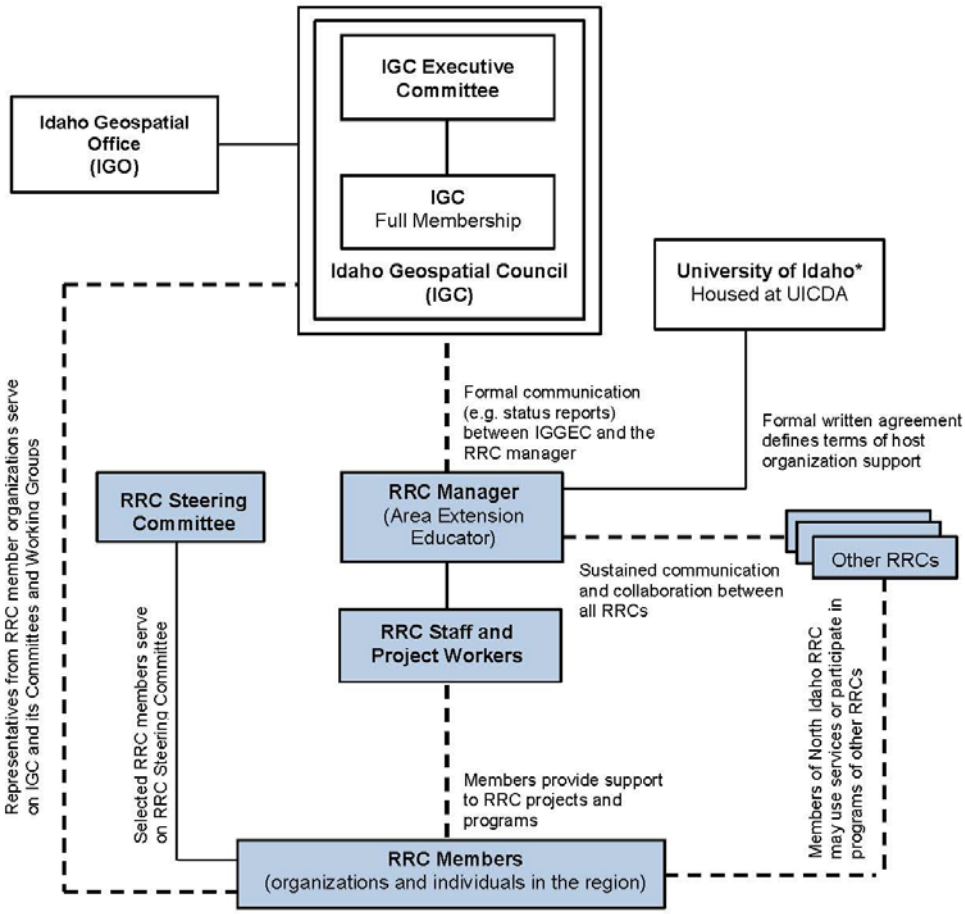
A management structure for the RRC is illustrated in Figure 1. The recommended structure allows for a level of autonomy that gives the RRC freedom to recruit members, pursue funding sources, and carry out project work but it maintains the RRC identify as part of the broader statewide TIM program. Figure 1 also illustrates the oversight role of the IGC and its Executive Committee and the relationship of the host organization and the RRC.

An RRC manager will be assigned and this position, at least initially, will be a part-time function filled by an individual whose existing position in the host organization is compatible with the RRC mission and objectives. This organizational structure includes an "RRC Steering Committee" made up of a fixed number of people (6 to 12 recommended) from RRC member organizations. This group represents the RRC membership and broader community of users. Members will be selected from different types of organizations in the region (different levels of government,

regional agencies, private firms, and non-profit organizations). The Steering Committee participates in all initial planning and RRC set-up. After the RRC is established and a Manager is assigned, the Steering Committee acts in an advisory role working closely with the Manager in ongoing RRC operational planning, establishing programs and services, and monitoring RRC operations. This group also helps ensure participation in IGC initiatives from member organizations in the region and helps recruit volunteers for RRC projects. The Steering Committee may form committees or working groups as necessary to engage RRC members and supporting organizations in RRC development and operation. Examples of working groups may include a local government group, RRC promotion and recruitment, a business practices group to address economic development issues, etc.

Figure 2 depicts the relationship among multiple RRCs. This underscores the important need for coordination between the RRCs and a requirement for collaboration and sharing of resources to avoid unnecessary duplication is development and operation of programs and services. This structure supports coordination among different RRCs and does not place restrictions on people or organizations from different RRC regions from using services or participating in programs of another RRC.

**Figure 2: Management and Oversight Environment**




* University of Idaho's role as a host organization provides benefit of all UI facilities in Moscow and Coeur d'Alene (NKN).

It is recommended that RRC formation include the preparation of "By-Laws" or an "Operational Charter". This document will be approved by the IGC Executive Committee and should be fundamentally applicable to all RRCs. It is not essential that this document be prepared in Phase 1 since a ratified business plan will serve as an initial guiding document. During Phase 2, a formal Operational Charter will be prepared using content from the business plan and additional terms that describe RRC organizational structure, roles, and operations. The document should include the following topics:

- Definition of the organizational structure and RRC management,
- The range of services which the RRC may provide,
- Limits of authority in financial, contractual, and legal matters
- RRC relationship with host organization
- Types and terms of RRC participation (members, associates, users)
- RRC Steering Committee function and composition
- Relationship with and oversight from the IGO and IGC

### 4.3 Relationships and Coordination with Other Organizations

The RRC should serve all relevant public, private, and non-profit organizations. As described in 2.2 registered members (individuals or organizations) will receive basic RRC services but any organization in the region may request RRC services and participate in programs that it sponsors. There are a number of important relationships between the RRC and other organizations that have particular importance:

- RRC host organization: A formal agreement with or a statement of support by the host organization (University of Idaho) will be prepared. The RRC works within the organizational structure and administrative procedures of the university and carries out necessary management actions impacting personnel, contractual, financial, and operational responsibilities. The RRC manager is envisioned to be a university employee with an assigned role of directing RRC activities.
- Idaho Geospatial Office (IGO): The IGO provides support to the RRC and ensures that information about the TIM program is provided to the RRC. The IGO, within limits imposed, provides tangible support (monetary and in-kind) for RRC development and organization. The IGO also helps coordinate RRC development and operations that involve multiple RRCs.
- Idaho Geospatial Council (IGC) and Executive Committee: The IGC Executive Committee (IGC-EC) formally endorses the RRC Business Plan and supports its formation. RRC members volunteer time for serving on the IGC and specific Working Groups or Committees established by the IGC (or its Executive Committee). As provided for in the IGC By-Laws, RRC representatives serve on the IGC Executive Committee (IGC-EC).
- RRC associate organization: The RRC will work with organizations (government, private, non-profit) that provide support or have involvement in an RRC program or service. This relationship will usually be documented in an agreement or contract. For the Northern

Idaho RRC, examples may include: a) RRC partners in a grant funded project, b) continued partnership with Avista's orthoimagery data, and c) GIS contractors involved in RRC projects.

- Other RRCs: Communication and collaboration among RRCs is a guiding principle for N. Idaho RRC development and ongoing operations. All RRCs are obligated to provide appropriate support and coordination of services with the goal of efficiency and avoidance of duplicating resources. The IGO should play a role in facilitating this coordination but communication should occur regularly between managers and steering committees of the different RRCs. Also, every effort will be made to avoid restrictions on the use of RRC services or programs by an organization or individual outside the RRC's region.
- Private GIS Service Contractors: The RRC plays an important role in providing information about the availability of services by private contractors to the RRC Members. In selected cases, the RRC plays a coordination role in specifying project requirements, selection of private contractors, and ongoing project management overseeing the work of the selected contractor. This role is most useful in cases in which the contractor is providing services for multiple organizations in the RRC region.
- Federal and State Agencies: Federal and state agencies with regional or district offices in the RRC region will be encouraged to become formal RRC members. These organizations use and take part in any RRC program or service. In addition, these agencies could become RRC Associates based on formal agreements with the RRC or they may be partners in joint projects in which the RRC is involved.

### 4.4 Operational Practices and Service Delivery

Establishment of the RRC must be accompanied by a set of management and administrative practices that support RRC operations, communications, and delivery of services. The "core management and administrative practices" are described in Table 3.

## Table 3: Core RRC Administrative and Management Practices

| Core Practice | Implementation/Operation Issues for the Northern Idaho RRC |
|---|---|
| A. Staff Recruitment and Oversight | Includes all work involved with identifying and hiring RRC staff for any management, technical, or administrative role regardless of the personnel classification (e.g., student intern, part-time, volunteer, etc.) This is the primary role of the RRC Manager. The role includes all administrative work in establishing a position, filling an existing position, or defining roles for personnel positions that are already part of the host organization. Oversight involves staff orientation, assignment of work, ongoing review of work and guidance, and evaluations. |
| B. Receiving Visitors and Callers | Routine but important receptionist and user response activities that support a spirit of quality "customer responsiveness" in the way the RRC accepts, responds to, and tracks calls, visitors, or email inquiries. Any RRC personnel may have a role here but ideally, there should be one or more individuals who have a primary duty of initial response to visitors or callers. Specific procedures should be documented that define an efficient workflow. |
| C. Responding to Requests for Products or Services | Related to Core Practice B (Receiving Visitors and Callers) is a well-defined process for follow-up with requests for the use of or participation in RRC programs and services. The RRC Manager or a technical staff person should be assigned for timely response to an inquiry and in appropriate steps to scope out and provide the requested product or service. The specific response will depend on the type of request and resource impacts of the RRC. For requests that go beyond routine activities (signing up a new organization as an RRC Member or providing access to a web services), a "work ticket" should be created, the potential "project" should be scoped (define basic approach, result, and resources required) with a response to the requestor and possible initiation as a new project. |
| D. Promotion and Member Recruitment | Promotion of RRC programs and services is an on-going activity which is a key role of the assigned RRC Manager (although specific activities may be assigned to other personnel). This includes distribution of information about the RRC (primarily to organizations and individuals inside the RRC region) through multiple channels (web site, presentations at meetings, direct calls or email messages, distribution of promotional literature, etc). See Section 6.4 for more information about RRC marketing and promotion. |
| E. Project Planning and Management | This Core Practice applies to cases in which the RRC is called on to provide resources and expertise for a specific project (e.g., acting as a project manager for contracted database development services). For these cases, there should be a defined workflow and templates that support best practices for planning a project (defining tasks, schedule, and resources) and for ongoing management (project tracking, deliverable review, reporting). |
| F. Work and Financial Tracking | A routine function for which the RRC manager is primarily responsible. This addresses established procedures, in the host organization, for employee time reporting (hours by project or activity area), employee expenses, and all routine accounting and bookkeeping work. |
| G. Scheduling Use of Facilities and Event Organization | Facilities of the host organization or an outside organization will be available to the RRC for holding meetings and other events. Such facilities may be provided at no cost by the host or an outside organization or fees may be required. Whatever the circumstances, designated RRC staff will have the responsibility for identifying appropriate facilities, scheduling their use, making sure that required set-up is being handled (room configuration, equipment), arranging for amenities (e.g., refreshments), attendee registration, etc. |
| H. Status Monitoring and Reporting | A basic responsibility of the RRC Manager will be to track overall activity and progress during RRC development and during operational Phases. This implies a formal reporting process based on requirements established by the host organization and the IGC-EC. |

## 5. IMPLEMENTATION STEPS, TIMING, AND COST PROJECTIONS

### 5.1 RRC Development Phases

Phase 1: RRC Preparation/Organization (6 months from IGC-EC Plan Endorsement)

Phase 1 work includes identifying and establishing the organizational and physical home for RRC operations and associated agreements, appointment of the "Steering Committee", designation of initial management and staff, investigating and securing initial funding. Promotion and news about the RRC is distributed to potential participants in the region and work begins to register regional members.

Phase 2: RRC Start-up and Initial Operations (12 to 18 months following end of Phase 1)

Initial facilities are set-up and work proceeds to develop and deploy initial high-priority services and programs—all of those assigned a priority of "5" (see Table 2) and selected priority "4" items. Promotion work and registering regional members continues. Identifying and enlisting associates is carried out. Additional funding sources and project opportunities are explored and secured. The RRC plays an active role in TIM initiatives. Procedures and templates for adherence to Core Management Practices (see Table 4) are put in place.

Phase 3: RRC Enhanced Service Deployment (12 months following end of Phase 2)

Additional services and programs are developed and deployed. This includes all of those assigned a Priority of "4" and "5" (see Table 2) and selected lower priority items. Work continues on recruiting additional members and associates and in exploring additional funding sources and project opportunities. Staff and facilities devoted to the RRC are expanded as funding allows.

Phase 4: Mature RRC Operations (Future after Phase 3)

Phase 4 defines a state in which all higher priority (priority scores of 3, 4, and 5) programs and services are in place and new services or projects are initiated as user demand dictates. The management structure and management processes are established and improved or augmented as necessary. Sources of funding and in-kind support are in place. Work to identify and secure new resources is ongoing. General promotion and member recruitment continues at a high level.

### 5.2 RRC Implementation Steps

Implementation steps associated with the four recommended phases are identified and described in Table 4. These implementation tasks are organized under the following categories:

- Organizational Set-up
- Funding and Resource Allocation
- Design and Establishment of Phase 2 RRC Programs and Services
- Design and Establishment of Phase 3 RRC Programs and Services
- Design and Establishment of Future (Phase 4) RRC Programs and Services
- Promotion, Recruitment, and External Relations

- Ongoing RRC Management

Table 4 also identifies the Phase(s) associated with implementation tasks. Specific start and end dates will be included once the plan is endorsed by the IGC-EC and funding for initial operations is secured. As required, detailed work plans with deliverables and timelines will be prepared to support implementation of RRC services and programs described in this plan.

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| **1. Organizational Set-up** | | | |
| 1.1 IGC Executive Committee Endorses RRC Business Plan | A final draft of the RRC Business Plan should be submitted to the IGC Executive Committee for review and prompt endorsement. The IGC-EC may suggest revisions to the plan and appropriate changes will be made in a Final version of the plan. A Final Plan will then be prepared followed by formal approval by the Executive Committee. | 1 | • Must be timed with a schedule meeting of the IGC-EC |
| 1.2 Form RRC Steering Committee | Soon after formal business plan adoption, the RRC Steering Committee should be established and its members assigned. Specific duties of the Steering Committee will be defined (see ***) and a maximum number of members and their terms of service will be established. | 1 | Steering Committee will initially participate in drafting of charter or by-laws and all other RRC start-up activities. |
| 1.4 Prepare and Ratify Agreement with Host Organization | Based on the groundwork from Task 1.2, a formal agreement will be prepared and ratified by appropriate parties with overall authority. The agreement will include all terms governing the agreement. | 1 | • Follows formal commitment in Task 1.3<br>• The host agency takes a lead role to define terms for assuming the host role |
| 1.5 Identify Services and Programs for Phase 2 Implementation | Services and programs for initial deployment will be identified. This Business Plan (see Section 2.1) explains the current consensus on RRC programs and services, and their priority. In this task, these programs and services will be confirmed and priorities will be adjusted as appropriate. | 1 | • Phase 2 services and programs will be selected ones with a priority of 5 or 4 |
| 1.6 Prepare Template By-Laws or Charter | With leadership by the IGC Executive Committee and template document will be prepared. After adequate review and revision, this template will be approved as the basis for By-Laws or Charter for the Northern Idaho RRC. It is not essential that a Charter or By-Laws be prepared in Phase 1 since a ratified business plan will serve as a guiding document for Phase 2 operations. During Phase 2, a formal Charter or By-laws should be prepared using content from the business plan and additional terms that describe RRC organizational structure, roles, and operations. | 1, 2 | |
| 1.7 Prepare and Ratify By-Laws or Charter | The substance of the terms included in the approved template will remain but revisions and references to organizations or circumstances in the Northern Idaho region will be made. This will be endorsed by the IGC-Executive Committee. | 1, 2 | • Follows preparation of template in Task 1.6<br>• Requires clear definition of signatory parties |
| | | | |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 1.9 Assign RRC Manager | As early as possible after business plan approval, an individual should be assigned as RRC manager. As described in Section 3.3, this will be a part-time role, assigned to an individual whose current position is compatible with the RRC mission and identified services and programs. | 1 | • The RRC manager role is assigned to an existing employee of the host organization |
| 1.10 Assign initial RRC Technical and Support Staff | For the Northern Idaho RRC, the following technical and support staff (not full-time roles) are recommended for initial operations in Phase 2: a) inventory of regional GIS data b) web-based development for design and development of web services, c) expert in GIS database design and development, d) administrative support to assist in user communications, promotion and member recruitment. | 1, 2 | Staff are assigned after an RRC Manager has been assigned |
| 1.11 Prepare detailed budget and resources needs for Phase 2 | Based on planned programs and services for Phase 2 and information about the availability of funds and non-monetary resources, a budget will be prepared to cover RRC development and operational costs for Phase 2. The format and timing for budget preparation and approval will follow applicable budgeting rules of the host organization. | 1 | • Budget requests must follow format and required timing of host organization |
| 1.12 Prepare detailed budget and resources needs for subsequent phases | As in Task 1.11, budgets for future phases will be prepared, on an annual basis, | 2, 3, 4 | • Budget requests must follow format and required timing of host organization |
| 1.13 Create templates, tools, and standard operating procedures (SOP) for core management practices | RRC core management practices are described in Table 4. Templates and tools will be prepared as Microsoft Word documents or Excel spreadsheets. SOPs are concisely written and serve to clarify actions to be taken by RRC personnel for routine operational tasks. The majority of these templates, tools, and SOPs should be prepared in Phase 1 and modified as necessary in subsequent phases. New ones will be created, as needed in Phases 2, 3, and 4. | 1, 2 | • Templates and tools (forms, report formats) may already exist in host organization |
| **2. Funding and Resource Allocation** | | | |
| 2.1 Identify and Secure Initial Funding and Resources for Phase 2 | This task includes the identification and formal allocation of funding and non-monetary resources for initial RRC operations in Phase 2. Note: The companion document, "Notes on Investigations about Potential Host Organizations and Outside Support" (see attached) gives potential options for sources of support and funding. This document should be used as a basis for exploring and securing funding and non-monetary support. | 1 | |
| 2.2 Put in Place Structure and Process for Membership Fee | It is anticipated that that membership or use fees may be instituted as part of the funding program for the RRC. Fees may be based on a variety of measures, related to the cost of providing management, staffing, overhead, services, etc. for the operation of the RRC. While certain services (example - public data, vs. restricted access or subscription data), may be free of charge, fees may be attached to provision of specific services (example, subscription and use costs set by the data contributor). The RRC Steering Committee and the Users and Stakeholders will develop this portion of the program. | 1, 2 | • Impacts recruitment activities (Task 6.4 and 6.5) |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 2.3 Establish Administrative Structure for Managing Funding | All internal accounting, monitoring, and reporting procedures and tools need to be created and put in place to support the efficient management of funds--adhering to the policies of the host organization and any external funding sources. This includes preparation of template reports, spreadsheets, and other specific financial management processes. See Section 4.4. | 1, 2 | |
| 2.4 Support Approval of State Budget Request for GIS | Provide any needed information or tangible support for the approval of funding for the state's TIM program and an allocation for RRC development. This may include providing "testimonials" on GIS benefits in the region, endorsements from senior officials in the region, or other forms of support. | 1 | |
| 2.5 Solicit Sponsorships and In-kind donations | A sponsorship program will be put in place for donations of monetary or non-monetary contributions from organizations inside or outside the region. A sponsorship program would be principally aimed and private companies and non-governmental organizations. Sponsorship program development would include: a) identification of potential donors, b) promotional information describing the program and sponsorship levels, c) a management and accounting process that allows for the acceptance of donations, d) active solicitation of sponsors. | All | |
| 2.6 Establish Grant Research and Writing Function | Put in place a process and assigned personnel for the research, identification, and preparation of grant applications which may support RRC activities. Grants programs may be administered by Federal or State agencies, or non-governmental organizations. In some cases, the RRC may play a lead role in grant application (often assembling a proposed team for resulting work) or it may be a party to a grant project lead by another organization. Establishing an effective grant research and application program requires coordination with individuals already involved in this work. | 1, 2 | • Should be coordinated with existing resources devoted to grant research and application<br>• Basis for on-going work for grant applications and awards as described in Task 3.9 |
| 2.7 Ongoing Work in Identifying and Securing Future Funding and Resources | Research and securing of funding and non-monetary resources to support the RRC will be an on-going activity and a principal role of the RRC manager. | 2, 3, 4 | |
| 2.8 Establish volunteer program and solicit volunteer staff | In addition to paid staff resources, RRC programs and services will always require volunteered time from RRC users (see 3.3.4). In order to make the best use of volunteer time, a structure should be established for soliciting volunteers and assigning them to specific tasks that match their skills and time availability. Setting up the program includes creating a "Call for Volunteers" web page with information about RRC projects and activities that need volunteer support, the type of work and skill requirements, and an easy way for potential volunteers to sign-up and begin contributing. | 1, 2 | |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 2.9 Establish Student Intern Program | The RRC Manager will position the RRC to take advantage of available student intern or co-op programs and, as necessary, establish new relationships with colleges and universities with GIS programs. | 1, 2 | |
| **3. Design and Establishment of Phase 2 RRC Programs and Services**<br>A description of the programs and services is provided in Table 1 and Table 2. This set of tasks specifically refers to design, development, set-up, and deployment of RRC programs and services. Establishment of each RRC service or program will be handled as individual projects each of which follows a logical development process with the following steps: 1) define requirements, 2) prepare conceptual design, 3) assign project team, 4) detailed design, 5) develop, test, review prototype(s), 6) Revise based on prototype testing, 7) Prepare documentation, 8)Deploy in operational setting. The time and resources required to reach operational status will depend on the complexity of the service or program. It is expected that the lower complexity services (e.g., web-based contact directory) can be defined and put in place relatively quickly and use minimal resources. As noted below, some programs and services developed for deployment in Phase 2 will be augmented and enhanced in subsequent Phases. | | | |
| 3.1 Directory of GIS Contacts and Professional Networking Support (A) | This service should be developed on a statewide basis with as a fundamental part of the TIM Program. The IGO should take a lead role in organizing development and work should be assigned to a new Technical Working Group with active participation by the Northern Idaho RRC and other RRCs. A server for deployment of this application should be designated. The service should include a flexible way for organizations and individuals to edit and enter new contact information. In subsequent Phases, contact data is continually updated and enhancements to the web-based application are made as needed. | 1, 2 | • This service is addressed by Implementation Initiatives E4 and E7 in the *Idaho SDI Business Plan* (2/2009) |
| 3.2 GIS News of Regional Importance (B) | This service should be developed on a statewide basis with as a fundamental part of the TIM Program. This service is partially in place through the current "Geotech" listserv but there are other web service approaches for enabling access and distribution of applicable new items. A work team should be assembled to examine needs for GIS news and to design an improved approach for enhancement. The RRC or the IGC may take the lead role in design and development. A server for deployment of this application should be designated. The service should include a flexible way for organizations and individuals to post new items. In subsequent Phases, news data is continually updated and enhancements to the web-based application are made as needed. | 1, 2 | • Application should be developed once and maintained on a single server with access by all RRCs<br>• Requires regular updates by RRC participants and other members of the Idaho GIS community |
| 3.3 GIS Project/Best Practices Catalog (D) | This service should be developed on a statewide basis with as a fundamental part of the TIM Program. The IGO should take a lead role in organizing development and work should be assigned to a new Technical Working Group with active participation by the Northern Idaho RRC and other RRCs. A server for deployment of this application should be designated. The service should include a flexible way for entry and update of new best practices or project examples. In subsequent Phases, news data is continually updated and enhancements to the web-based application are made as needed. | 1, 2 | • Application should be developed once and maintained on a single server with access by all RRCs<br>• Requires regular updates by RRC participants and other members of the Idaho GIS community |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| | | | |
|---|---|---|---|
| 3.4 Support Advocacy and Building Awareness of GIS Benefits (E) | This is an ongoing role of the RRC and its members in coordination with outreach activities of the IGC. It begins in Phase 2 and continues in subsequent phases. The requirements definition and design steps for this program includes identifying audiences and the design of materials for promotion of GIS benefits. Implementation means the creation of promotional materials, presentations, and identifying venues for building GIS awareness. Additional advocacy activities by the RRC will be deployed in Phase 3. | 1, 2 | • This is addressed by Implementation Initiative F1 in the *Idaho SDI Business Plan* (2/2009) |
| 3.5 Put in place Regional Framework Steward Role (F) | The specific functions and responsibilities of the Regional Steward Role will be documented on implemented individually for each Framework Theme or Element. It will be implemented only for those Themes and Elements in which RRC members are key Source Stewards | 1, 2 | • Requires the approval of data standards (by the IGC-EC and the preparation of a Stewardship Plan<br>• Based on tight coordination with Source Stewards, Framework Coordinator, and Framework Steward<br>• This is addressed by Implementation Initiatives D4 and D6 in the *Idaho SDI Business Plan* (2/2009) |
| 3.6 Support/ Encourage Adoption of TIM Standards and Policies (I) | The RRC supports with the work of the IGC in preparation and communication about adopted standards. RRC members familiar with TIM standards will provide mentoring and support to other RRC members. This is an ongoing activity that begins in Phase 2 but continues in subsequent Phases (as new standards and policies are adopted). | 1, 2 | • Requires coordination with IGC on standards development and approval<br>• This is addressed by Implementation Initiative S2 in the *Idaho SDI Business Plan* (2/2009) |
| 3.7 Organize/Host GIS Meetings and Events (J) | Specific meetings and events will be identified during Phase 2 and subsequent phases. Initial preparation steps for this service in Phase 1 and 2 involve the identification of potential meeting facilities, equipment/system availability, and information for required reservation of facilities for an upcoming event. In addition, a process for making and responding to requests for use of meeting facilities must be documented. | 2 | • Dependent on availability of space and facilities of the host organization or other organizations<br>• Supports Service M (Training and Education) |
| 3.8 Coordinate and Promote GIS Training and Education (M) | This involves effective communication with training providers and identification of training opportunities available to RRC users. Information about training is distributed to RRC users (See Service B). This service is initially deployed in Phase 2 but continues in subsequent phases. | 2 | • Requires coordination and communication with training providers<br>• This service is addressed by Implementation Initiatives E6, E7, and E8 in the *Idaho SDI Business Plan* (2/2009)<br>• Communication about and support for training opportunities involves Service J (Organize Meetings and Events) |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 3.9 Grant Research Application Preparation, and Administration (O) | As described in 2.6, the RRC will put in place a process and function for grant research and grant applications—with the understanding that grants will be an important funding source. The RRC will identify potential grants and either takes the lead role in grant application or work with RRC members in grant application. This work will culminate in grant awards and putting in place a grant project management structure. | 2 | • Uses procedures established in Task 2.6 |
| **4. Design and Establishment of Phase 3 RRC Programs and Services**<br>A description of the programs and services is provided in Table 1 and Table 2. This set of tasks specifically refers to design, development, set-up, and deployment of RRC programs and services. Establishment of each RRC service or program will be handled as individual projects each of which follows a logical development process with the following steps: 1) define requirements, 2) prepare conceptual design, 3) assign project team, 4) detailed design, 5) develop, test, review prototype(s), 6) Revise based on prototype testing, 7) Prepare documentation, 8)Deploy in operational setting. The time and resources required to reach operational status will depend on the complexity of the service or program. It is expected that the lower complexity services (e.g., web-based contact directory) can be defined and put in place relative quickly and use minimal resources. As noted below, some programs and services developed for deployment in Phase 3 will be augmented and enhanced in Phase 4. | | | |
| 4.1 Support Advocacy and Building Awareness of GIS Benefits (E) | This activity begins in Phase 2 and is expanded and enhanced, as necessary in Phase 3. | 2, 3 | • Builds on work from Task 3.4 carried out in Phase 2 |
| 4.2 Put in place Regional Framework Steward Role (F) | This activity begins in Phase 2 and continues in subsequent phases. In Phase 3, Framework Steward activities may be initiated for additional Framework Themes or Elements which were not implemented in Phase 2. | 2, 3 | • Builds on stewardship roles established in Phase 2 (see 3.5)<br>• Requires the approval of data standards (by the IGC-EC and the preparation of a Stewardship Plan<br>• Based on tight coordination with Source Stewards, Framework Coordinator, and Framework Steward<br>• This is addressed by Implementation Initiatives D4 and D6 in the *Idaho SDI Business Plan* (2/2009) |
| 4.3 GIS Data/Metadata Compilation and Update (G) | RRC involvement in actual data collection and compilation will occur on a selective basis when the RRC role is the most effective approach for GIS database development. This may be the case for special projects, compilation of non-Framework data, or support in database development for smaller jurisdictions without the resources in place to carry out the work. The options remain for the RRC to use its staff for database work or to enter into project partnerships with private sector companies. | 3 | • Makes use of standards adopted in Task 3.6 |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 4.4 Organize/Host GIS Meetings and Events (J) | Ongoing work that continues from Phase 2. | 3 | • Continuation of work started in Phase 2 (see 3.7)<br>• Dependent on availability of space and facilities of the host organization or other organizations<br>• Supports Service M (Training and Education) |
| 4.5 Prepare Project Specifications and Support GIS Services Procurement (K) | This work (which may start in Phase 2) will culminate in the preparation of template materials that may be used, with modification, for an actual procurement by an RRC member or by the RRC itself representing one or more RRC members. The objective is to create multiple template documents for different types of projects (e.g., field data collection, map conversion, orthoimagery, application development services) to speed up the procurement process. Ideally, these template documents will use a notation scheme that guides users to make required inserts and modifications for producing a technical specification and/or procurement document (e.g., RFP). In most cases this service will be provided for a fee (from RRC members or users that are undertaking a new project). | 2,3 | • This is addressed by Implementation Initiative L5 in the *Idaho SDI Business Plan* (2/2009)<br>• Procurement templates must take into account procurement rules of specific RRC member organizations |
| 4.6 Joint Project Negotiation and Management Support (L) | Preparation for this service would include the development of project planning and management procedures and templates and identification of personnel who could support this process on behalf of the RRC. This service will be initially offered in Phase 3 and will continue in Phase 4. In most cases this service will be provided for a fee (from RRC members or users that are undertaking a new project). | 2, 3 | • Service would be provided at the request of an RRC member of group of members<br>• This is addressed by Implementation Initiatives O2 and O3 in the *Idaho SDI Business Plan* (2/2009) |
| 4.7 Provide GIS Training and Education (M) | Training or educational sessions are planned, development, and provided by the RRC only in cases where user demand is high and where there is no other, easily accessible source for the training. Ongoing work in coordination and support for training opportunities continues in this Phase (see 3.8). | 3 | • Requires coordination and communication with training providers<br>• This service is addressed by Implementation Initiatives E6, E7, and E8 in the *Idaho SDI Business Plan* (2/2009)<br>• Communication about and support for training opportunities involves Service J (Organize Meetings and Events) |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 4.8 Hosting GIS Data and Services (P) | As described in Section 2, the RRC may, on a selective basis, host data or applications needed by RRC members if the service is not readily available from another source. In addition, the RRC may serve as a "broker" to identify and enlist a hosting service from another party (private firm, university, government agency). Preparation for this service includes the development of terms for a hosting agreement and identification of the server, software, and network resources and the programming work to implement the host applications. This service may be provided in Phase 3 and would continue in Phase 4. | 3 | • Should not create competitive conflicts with private sector |
| 4.9 GIS Web Services/Facilitate Technology Transfer (Q) | This Phase 3 service involves facilitation and mutual support among RRC members to identify existing, successful applications and web services deployed by an RRC member (or and organization outside the Region) and to provide support in implementing the application in another organization which can benefit from it. This does not include a "ground-up" application design and development effort, just coordination and facilitation. This "technology transfer" role is in place in Phase 3 and continues in Phase 4. | 3 | |
| **5. Design and Establishment of Future (Phase 4) RRC Programs and Services**<br>A description of the programs and services is provided in Table 1 and Table 2. This set of tasks specifically refers to design, development, set-up, and deployment of RRC programs and services. Establishment of each RRC service or program will be handled as individual projects each of which follows a logical development process with the following steps: 1) define requirements, 2) prepare conceptual design, 3) assign project team, 4) detailed design, 5) develop, test, review prototype(s), 6) Revise based on prototype testing, 7) Prepare documentation, 8)Deploy in operational setting. The time and resources required to reach operational status will depend on the complexity of the service or program. It is expected that the lower complexity services (e.g., web-based contact directory) can be defined and put in place relative quickly and use minimal resources. A description of the programs and services is provided in Table 1 and Table 2. Some of these programs and services were initially developed and deployed in previous phases but are continued in Phase 4 with appropriate expansion or enhancement. NOTE: Some of these programs and services were initially developed and deployed in previous phases but are continued in Phase 4 with appropriate expansion or enhancement. | | | |
| 5.1 GIS Professional Labor Pool Management (C) | This is a low priority service that may or may not be implemented. The requirements definition and design stage would include an identification of the level of need, legal/policy impacts, and design of accounting mechanisms to support it. This would be followed by a web-based service through which organizations could offer staff and request staff services from another organization. | 3, 4 | • Should be integrated with the Contact Directory (Service A)<br>• Government procurement or accounting procedures may present obstacles<br>• Potential competitive conflicts with the private sector need to be avoided. |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 5.2 Put in place Regional Framework Steward Role (F) | S This activity begins in Phase 2 and continues in subsequent phases. In Phase 4, Framework Steward activities may be initiated for additional Framework Themes or Elements which were not implemented in Phase 2 or 3. | 3, 4 | • Builds on stewardship activities put in place in Phases 2 and 3 (see Tasks 3.5 and 4.2)<br>• Requires the approval of data standards (by the IGC-EC and the preparation of a Stewardship Plan<br>• Based on tight coordination with Source Stewards, Framework Coordinator, and Framework Steward<br>• This is addressed by Implementation Initiatives D4 and D6 in the *Idaho SDI Business Plan* (2/2009) |
| 5.3 GIS Data/Metadata Compilation and Update (G) | This service is initially put in place in Phase 3 but continues in Phase 4. Decisions for RRC involvement in data or metadata collection and compilation are made on a case-by-case basis and will be undertaken for special projects, non-Framework data, and support to smaller jurisdictions. | 3, 4 | • Follows database development work in Phase 3 (see Task 4.3)Makes use of standards adopted in Task 3.6 |
| 5.4 Prepare Project Specifications and Support GIS Services Procurement (K) | This work (which may start in Phase 2) will culminate in the preparation of template materials that may be used, with modification, for an actual procurement by an RRC member or by the RRC itself representing one or more RRC members. The objective is to create multiple template documents for different types of projects (e.g., field data collection, map conversion, orthoimagery, application development services) to speed up the procurement process. Ideally, these template documents will use a notation scheme that guides users to make required inserts and modifications for producing a technical specification and/or procurement document (e.g., RFP). In most cases this service will be provided for a fee (from RRC members or users that are undertaking a new project). | 3, 4 | |
| 5.5 Provide GIS Training and Education (M) | Training or educational sessions are planned, development, and provided by the RRC only in cases where user demand is high and where there is no other, easily accessible source for the training. | 3, 4 | |
| 5.6 Hosting GIS Data and Services (P) | See 4.8. As appropriate, the RRC implements or works with another party (private firm, public agency) to set-up new hosted services (not implemented in Phase 3). | 3, 4 | • Should not create competitive conflicts with private sector<br>• Assumes the availability of system resources and personnel to deploy and manage the hosting |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 5.7 GIS Web Services: RRC Carries out Design and Development (Q) | As opposed to the facilitation and technology transfer role implemented in Phase 3, this Phase 4 service involves actual application design, development, and deployment by RRC personnel or by contractors hired by the RRC. | 3, 4 | • Should not create competitive conflicts with private sector<br>• Assumes the availability of RRC personnel with necessary design and development skills |
| **6. Promotion, Recruitment, and External Relations** | | | |
| 6.1 Design and Set-up Initial RRC Web Page | An initial RRC Home page will be established on a designated server. In Phase 1, this will just provide basic functionality (background information, promotional material, member sign-up). In later Phases, this web page will be the portal to on-line services provided by the RRC. It would be most effective for multiple RRCs to jointly development the web page and ideally deploy web pages for multiple RRCs on a common server. | 1, 2 | • Requires server and software for development<br>• Will benefit from joint development by multiple RRCs |
| 6.2 Prepare Promotional Materials | Includes the development of an RRC brochure that explains the RRC concept, the launching of the Northern Idaho RRC, intended services and benefits, and contact information. The main audience is potential RRC members, associates, and users outside of the region. Recommended design would be a two-sided letter size sheet or tri-fold in 3 or 4 colors. It should be designed so it can be distributed in hard copy and digital form. | 1, 2 | • Should be designed so it can be used, with modification, by multiple RRCs<br>• This is addressed by Implementation Initiative E1 in the *Idaho SDI Business Plan* (2/2009) |
| 6.3 Carry Out Active Promotion | Active begins in Phase 1 and continues through subsequent phases. It is a general activity that overlaps with specific recruitment, fundraising, and general promotion of RRC programs and services. RRC staff and members will identify opportunities for promotion including distribution of promotional materials, presentations at GIS-related events, management briefings, and participation in professional associations. | All | • Should be carried out in coordination with other RRCs and the IGC |
| 6.4 Recruit Initial Members | An active recruitment campaign for RRC Members should be launched in Phase 1 and continued in subsequent phases. This recruitment campaign has a major focus on local governments (County, City). A simple registration form will be developed and deployed (ideally web-based and accessible from the RRC web page). A standard member fee needs to be decided prior to active recruitment. The RRC may decide to waive the fee for an initial period of time. For the campaign recruitment goals should stated and membership should be promoted through all available channels—including direct calls to key contact people in potential user organizations. | 1, 2 | |
| 6.5 Ongoing Recruitment of Members and Associates | Continuation of the recruitment campaign initiated in Phase 1 for all subsequent phases. This includes regular members and RRC Associates (see 2.2). Associates are organizations with which the RRC has a formal agreement for services or mutual support. | 2, 3, 4 | |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 6.6 Identify RRC members for Participation in IGC Committees and Working Groups | Members representing different types of organizations (public, non-profit, private) in the RRC region will join the IGC. The RRC will encourage IGC participation and service in the IGC Executive Committee. In addition, the RRC Manager and Steering Committee will help recruit volunteers to actively participate on Working Groups and Committees formed by the IGC-EC. This activity begins in Phase 2 and continues in subsequent phases. | 2, 3, 4 | • Follows IGC By-Laws<br>• Implementation of RRC program N (Table 1) |
| 6.7 Conduct User Satisfaction/Needs Survey | On a periodic basis (no more frequently than annually), after Phase 2, the RRC Manager should conduct a survey of RRC users to gain input about their experiences in use of RRC services, level of satisfaction with the services, and suggestions for improvement and enhancement. This should be a well-designed web-based survey with "back end tools" to process and present the results—which should be used to operational planning and improvement of services. To ensure an adequate response, the survey should be well advertised with enough lead time for individuals to respond | 3, 4 | • Supports periodic program review and audit in Task 7.8 |
| 6.8 Process Calls, Requests, and Receive Visitors | This is a core management described in Table 4. With a standard operating procedure (SOP) documented (see Task 1.13) the process should be set-up with duties assigned for handling calls, requests, and visitors. | 2, 3, 4 | • Follows procedures defined in Task 1.13 |
| 6.9 Respond to Requests for RRC Services | The RRC should adopt an efficient customer service approach that focuses on prompt response to requests—whether they are simple questions or more detailed discussion about services or a new project start-up. The SOP developed in Task 1.13 will define an appropriate and workflow. Requests and responses will be documented and used in periodic status reporting. | 2, 3, 4 | • Follows procedures defined in Task 1.13 |
| **7. Ongoing Management** | This includes routine RRC operational management activities that will begin in Phase 2 and continue in subsequent phases. Many of the activities here address "core administrative and management practices" described in Table 3. | | |
| 7.1 On-going Staff/Personnel Management | This activity encompasses all routine staff management work carried out by the RRC Manager or by staff who are assigned project management roles. This includes new employee orientation, work delegation and oversight, employee evaluation, periodic staff meetings, and disciplinary actions as appropriate | 2, 3, 4 | • Follows requirements of host organization and SOP developed in Task 1.13 |
| 7.2 Monitor RRC Time and Finances | The RRC Manager will be responsible for tabulating, preparing, and reviewing necessary forms required by the host organization and by any external organizations providing funding or in-kind support (e.g., grant administration requirements). This includes employee time and expense reporting, preparation of purchase requests, review and approval of invoices, and other financial tracking and reporting requirements. | 2, 3, 4 | • Follows requirements of host organization and SOP developed in Task 1.13<br>• Includes monitoring of budgets created in Tasks 1.11 and 1.12 |

## Table 4: Implementation Tasks and Timing for the Northern Idaho RRC (con't)

| Task Number and Name | Explanation | Phase | Dependencies/Linkages |
|---|---|---|---|
| 7.3 Monitor RRC Activities and Service Delivery | This includes all routine monitoring of RRC activities and services. It includes the capture of basic metrics (e.g., members recruited, number of requests for service, project reports, special events managed, fundraising results, etc.). | 2, 3, 4 | • Uses information from satisfaction survey (Task 6.7) |
| 7.4 Prepare Detailed Management Reports | Periodic reports aimed at management personnel from the host organization, the IGC, and management in other organizations providing significant funding and support should be prepared on a regular basis (e.g., monthly or quarterly depending on the requirements of the recipient parties). This reporting will use template documents prepared during RRC set-up. | 2, 3, 4 | • Uses templates created in Task 1.13 |
| 7.5 Prepare Quarterly Status Report | Using a reporting template, quarterly reports, aimed at management personnel, are brief summaries of accomplishments during the reporting period, major problems or obstacles, and key activities and planned events for the upcoming quarter. These reports are distributed in digital form and used, as required, for management briefings (e.g., presentations to IGC Executive Committee). | 2, 3, 4 | • Report template created in Task 1.13 |
| 7.6 Schedule and Handle Logistics for RRC Events | RRC staff or volunteers will handle scheduling and arrangement of facilities for meetings and events sponsored or supported by the RRC. This is one of the core administrative functions described in Table 4. | 2, 3, 4 | • Supports a variety of RRC programs and services (see Table 1). |
| 7.7 Set-up Management Structure for New Projects | The RRC will be positioned to assume a role in the planning and management of GIS projects on behalf of RRC members (see description of Services F, G, K, L, P, and Q). Initiating work under these service categories will require setting up a project management structure consisting of a work plan, schedule, budget, definition of deliverables, project manager and team, project communications and monitoring, and reporting. | 2, 3, 4 | • Project planning and management principles from the Project Management Institute (PMI) should be followed |
| 7.8 Periodic Review and Audit of RRC Operations | Effective RRC management calls for period reviews or “program audits” carried out to provide a comprehensive picture of program status, quality of service, accomplishments, and problems or obstacles encountered. Carrying out a review on an annual basis provides information useful in planning for future operations and improving services to users. | 2, 3, 4 | • Uses detailed management reports (Task 7.4), quarterly reports (Task 7.5), and information from user satisfaction surveys (Task 6.7) |

### 5.3 Implementation Responsibilities

Table 5 identifies specific offices or groups that have responsibility for structures stewardship activities. Three role/responsibility categories are identified:

- Lead Role (L): Overall responsibility for accomplishing or carrying out the activity including detailed work planning, assembling and overseeing work teams, work monitoring and quality checks, etc.
- Participant/Support (P): Any involvement in carrying out the activity, providing technical or management assistance, or system resources to support the work.
- Oversight/Approval (O): Designated role in oversight and formal approval for Stewardship activities.

## Table 5: Responsibilities for RRC Development and Operation

| | Responsibilities (L=Lead Role, P=Participant/Support, O=Oversight/Approval) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **RRC Development Task** | Idaho Geospatial Council and Executive Committee | IGO-GIO | IGC Committees /Working Groups | Regional User Group Leaders | Host Organization Management | RRC Manager | RRC Staff and Volunteers | RRC Members and Users | RRC Service Providers and Associates | RRC Steering Committee | Organizations Providing Funding or In-kind Support |
| **1. ORGANIZATIONAL SET-UP** | | | | | | | | | | | |
| 1.1 IGC Executive Committee Endorses RRC Business Plan | L | | | P | | | | | | | |
| 1.2 Form RRC Steering Committee | | | | P | | L | | P | | | |
| 1.3 Identify and Get Commitment from Host Organization(s) | | | | | O | L | | | | P | |
| 1.4 Prepare and Ratify Agreement with Host Organization | | | | | O | L | | | | | |
| 1.5 Identify Services and Programs for Phase 2 Implementation | | | | | | L | | P | | P | |
| 1.6 Prepare Template By-Laws or Charter | O | | | | | P | | P | | L | |
| 1.7 Prepare and Ratify By-Laws or Charter for RRC | O | | | | | P | | | | L | |
| | | | | | | | | | | | |
| 1.9 Assign RRC Manager | | | | | L | | | | | | |
| 1.10 Assign initial RRC Technical and Support Staff | | | | | O | L | | P | | P | |
| 1.11 Prepare detailed budget and resources needs for Phase 2 | | | | | O | L | | | | P | |
| 1.12 Prepare detailed budget and resources needs for subsequent phases | | | | | | L | | | | | |
| 1.13 Create templates, tools, and standard operating procedures (SOP) for core management practices | | | | | P | L | L | | | | |
| **2. FUNDING AND RESOURCE ALLOCATION** | | | | | | | | | | | |
| 2.1 Identify and Secure Initial Funding and Resources for Phase 2 | | | | | P | P | | | | L | P |
| 2.2 Put in Place Structure and Process for Membership Fee | | | | | | P | | P | | L | |
| 2.3 Establish Administrative Structure for Managing Funding | | | | | O | L | P | | | | |
| 2.4 Support Approval of State Budget Request for GIS | P | | | | | P | | P | | P | |
| 2.5 Solicit Sponsorships and In-kind donations | | | | | | L | L | | P | P | P |
| 2.6 Establish Grant Research and Writing Function | | | | | | L | | P | | | |
| 2.7 Ongoing Work in Identifying and Securing Future Funding and Resources | P | | | | | L | | | | L | P |
| 2.8 Establish volunteer program and solicit volunteer staff | | | | | | L | P | | | P | |
| 2.9 Establish Student Intern Program | | | | | P | L | | | | P | |

## Table 5: Responsibilities for RRC Development and Operation (cont)

| RRC Development Task | Responsibilities (L=Lead Role, P=Participant/Support, O=Oversight/Approval) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Idaho Geospatial Council and Executive Committee | IGO-GIO | IGC Committees /Working Groups | Regional User Group Leaders | Host Organization Management | RRC Manager | RRC Staff and Volunteers | RRC Members and Users | RRC Service Providers and Associates | RRC Steering Committee | Organizations Providing Funding or In-kind Support |
| **3. DESIGN AND ESTABLISHMENT OF PHASE 2 PROGRAMS AND SERVICES** | | | | | | | | | | | |
| 3.1 Directory of GIS Contacts and Professional Networking Support (A) | | | L | | | L | P | P | | O | |
| 3.2 GIS News of Regional Importance (B) | | | L | | | L | P | P | | O | |
| 3.3 GIS Project/Best Practices Catalog (D) | | | L | | | L | P | P | | O | |
| 3.4 Support Advocacy and Building Awareness of GIS Benefits (E) | | | | | | P | P | P | | L | |
| 3.5 Put in place Regional Framework Steward Role (F) | | | P | | | L | P | P | | P | |
| 3.6 Support/ Encourage Adoption of TIM Standards and Policies (I) | O | | P | | | L | P | P | | O | |
| 3.7 Organize/Host GIS Meetings and Events (J) | | | | | O | L | P | P | | O | |
| 3.8 Coordinate and Promote GIS Training and Education (M) | | | | | O | L | P | P | | P | |
| 3.9 Grant Research Application Preparation, and Administration (O) | | | | | P | L | P | | | O | |
| **4. DESIGN AND ESTABLISHMENT OF PHASE 3 PROGRAMS AND SERVICES** | | | | | | | | | | | |
| 4.1 Support Advocacy and Building Awareness of GIS Benefits (E) | | | | | | P | P | P | | L | |
| 4.2 Put in place Regional Framework Steward Role (F) | | | P | | | L | P | P | | P | |
| 4.3 GIS Data/Metadata Compilation and Update (G) | | | P | | | P | P | P | | O | |
| 4.4 Organize/Host GIS Meetings and Events (J) | | | | | O | L | P | P | | O | |
| 4.5 Prepare Project Specifications and Support GIS Services Procurement (K) | O | | P | | | L | P | P | P | O | |
| 4.6 Joint Project Negotiation and Management Support (L) | O | | P | | | L | P | P | P | O | |
| 4.7 Provide GIS Training and Education (M) | | | | | O | L | P | P | | P | |
| 4.8 Hosting GIS Data and Services (P) | | | | | P | L | P | | | | P |
| 4.9 Web Services, Facilitate Technology Transfer (Q) | | | | | P | L | P | | P | | |

## Table 5: Responsibilities for RRC Development and Operation (cont)

| RRC Development Task | Responsibilities (L=Lead Role, P=Participant/Support, O=Oversight/Approval) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Idaho Geospatial Council and Executive Committee | IGO-GIO | IGC Committees /Working Groups | Regional User Group Leaders | Host Organization Management | RRC Manager | RRC Staff and Volunteers | RRC Members and Users | RRC Service Providers and Associates | RRC Steering Committee | Organizations Providing Funding or In-kind Support |
| **5. DESIGN AND ESTABLISHMENT OF PHASE 4 PROGRAMS AND SERVICES** | | | | | | | | | | | |
| 5.1 GIS Professional Labor Pool Management (C) | Implementation not likely in foreseeable future | | | | | | | | | | |
| 5.2 Put in place Regional Framework Steward Role (F) | | | P | | | L | P | P | | P | |
| 5.3 GIS Data/Metadata Compilation and Update (G) | | | P | | | P | P | P | | O | |
| 5.4 Prepare Project Specifications and Support GIS Services Procurement (K) | O | | P | | | L | P | P | P | O | |
| 5.5 Provide GIS Training and Education (M) | | | | | O | L | P | P | | P | |
| 5.6 Hosting GIS Data and Services (P) | | | | | P | L | P | | P | | P |
| 5.7 GIS Web Services: RRC Carries out Design and Development (Q) | | | | | P | L | P | | P | | |
| **6. PROMOTION, RECRUITMENT, EXTERNAL RELATIONS** | | | | | | | | | | | |
| 6.1 Design and Set-up Initial RRC Web Page | | | | | | P | L | P | | | |
| 6.2 Prepare Promotional Materials | | | P | | | L | P | P | | P | P |
| 6.3 Carry Out Active Promotion | | | | | | L | L | P | | P | P |
| 6.4 Recruit Initial Members | O | | | L | | P | | | | L | |
| 6.5 Ongoing Recruitment of Members and Associates | O | | | L | | P | | | | L | |
| 6.6 Identify RRC members for Participation in IGC Committees and Working Groups | | | | | | P | | P | | L | |
| 6.7 Conduct User Satisfaction/Needs Survey | | | | | | P | | P | | L | |
| 6.8 Process Calls, Requests, and Receive Visitors | | | | | | P | L | | | | |
| 6.9 Respond to Requests for RRC Services | | | | | | L | P | | | | |

## Table 5: Responsibilities for RRC Development and Operation (cont)

| | **Responsibilities** (L=Lead Role, P=Participant/Support, O=Oversight/Approval) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **RRC Development Task** | Idaho Geospatial Council and Executive Committee | IGO-GIO | IGC Committees /Working Groups | Regional User Group Leaders | Host Organization Management | RRC Manager | RRC Staff and Volunteers | RRC Members and Users | RRC Service Providers and Associates | RRC Steering Committee | Organizations Providing Funding or In-kind Support |
| **7. ONGOING RRC MANAGEMENT** | | | | | | | | | | | |
| 7.1 On-going Staff/Personnel Management | | | | | O | L | P | | | | |
| 7.2 Monitor RRC Time and Finances | | | | | O | L | P | | | | |
| 7.3 Monitor RRC Activities and Service Delivery | | | | | O | L | P | | | | |
| 7.4 Prepare Detailed Management Reports | O | | | | O | L | P | | | | |
| 7.5 Prepare Quarterly Status Report | O | | | | O | L | P | | | P | |
| 7.6 Schedule and Handle Logistics for RRC Events | | | | | | P | L | P | P | O | |
| 7.7 Set-up Management Structure for New Projects | | | | | | L | P | | | | |
| 7.8 Periodic Review and Audit of RRC Operations | O | | | | | P | | | | L | |

## 6. FINANCING STRATEGIES AND RRC PROMOTION

### 6.1 Potential Funding Sources and In-kind Contributions

Table 6 identifies potential sources for funding or non-monetary in-kind contributions (staff time, special services, equipment, and software) to support RRC start-up and ongoing operations. An important part of RRC implementation is to fully investigate potential sources and get commitments for RRC start-up.

**Table 6: Possible Sources for Funding and In-Kind Contributions**

| Funding/ Contribution or Source | Description |
|---|---|
| Standard fees from RRC members | Standard membership fee from RRC member individuals and organizations. This would be an annual fee would be required for membership (and therefore for receiving basic RRC services).<br><br>*Note: Standard fees must be low enough that members will be able to justify this monetary contribution. There must be a perception that a benefit is derived from RRC membership and participation. There is a possibility of adjusting the level of fees by jurisdiction or organization size.* |
| In-kind support from parent/host organization | Non-monetary contributions from an outside source including donated staff time, office space, facilities, computer systems, equipment, etc. already in place by the organization hosting the RRC.<br><br>*Note: It is recognized that parent or host organization (UI) will have limitations on the level of in-kind contributions that can be provided. It is expected that such in-kind contributions will be more important in early RRC phases and there is a goal to find revenue to reimburse UI for use of facilities and staff contributions* |
| Existing student intern and co-op programs (with existing funds) | Use capacity (student labor) that may be available from existing, funded, College/University student co-op and intern programs. The RRC can offer a valuable environment and experience for students with necessary skills that labor on a part-time or full-time basis for an internship period.<br><br>*Note: This source is dependent on finding unused funds, allocated for student interns that could be used by an RRC at no or low cost.* |
| Volunteer time from participating organizations | It is expected that RRC member and associate organizations will be able to justify allocation of time from their staffs to contribute time and expertise on RRC programs and projects that have a benefit for all member organizations. To fully leverage this in-kind source, the RRC must sustain and active recruitment process and provide information on projects and tasks which need support. Volunteer recruitment for RRC projects must be coordinated with participation in committees and working groups formed by the IGC Executive Committee. Contributions of time will always be on a volunteer basis. |
| | |

## Table 6: Possible Sources for Funding and In-Kind Contributions (con't)

| Funding/ Contribution or Source | Description |
|---|---|
| Grants | Grant funding covers a full range of funding available through grant programs sponsored by state and federal agencies, non-profit/non-governmental organizations or foundation, and private sources. The Idaho GIS community has been successful in receiving and making effective use of federal funding (specifically the FGDC Cap grant program) for GIS related work. There will be continued grant funding opportunities in 2011 from the CAP program and other sources (DHS, IECC) that specifically target GIS development. But there are a large range of other grant programs, which may not specifically cite GIS but which have a major geographic component, and which, potentially, could support RRC projects and services. RRCs could play a role in grant application and administration or the RRC could be a partner in a grant application project with another lead organization (RRC member organization).<br><br>*Note: See accompanying document about potential grant sources, "Notes on Investigations about Potential Host Organizations and Outside Support"* (see attached Appendix A) |
| Sponsorship fee from private companies or non-profit organizations | Private companies or non-profit organizations, with an interest in the Idaho GIS community, may be interested in paying sponsorship fees. To leverage this potential source, the RRC would need to establish a formal sponsorship program and solicit contributions. |
| In-kind donations by public or private organizations | This includes non-monetary contributions from an outside source which could include donated staff time, computer systems, equipment, software, data license, training, etc.) In-kind donations may or may not have a requirement for the RRC to meet certain terms for accepting the donation. In-kind donations may be solicited by the RRC and offers are evaluated and accepted on a case-by-case basis. The RRC will not accept any in-kind donations that have terms that conflict with the RRC objectives, charter, or any existing agreements that establish terms for RRC operations. |
| Special fees for enhanced web GIS hosting and services | The RRC may provide enhanced services (more than basic RC services) for a fee by those member organizations or users that choose to use such services.<br><br>*Note: There is no strict definition of "enhanced services" but it implies things like data or web services hosting. This may be most attractive to smaller local government jurisdictions that do not have active GIS programs* |
| Management fee for joint project management | One of the potential RRC services is support in organizing and managing joint projects (e.g., GIS database development project for multiple cities, counties, utility companies, etc.). In this case, project partners would be funding the effort (likely carried out by a private company). A fee, allocated from the project budget, would be allocated to the RRC for its role in any of the following: a) preparation of specifications and RFP, b) managing selection/procurement of services, c) contract negotiation, d) project monitoring and contract management, e) financial management, f) quality assurance. The justification is that economy of scale cost savings for joint projects would be delivered with sound project planning and management |
| Revenue from special projects | This includes any revenue generated from special GIS projects carried out by the RRC. Funding would be provided by any public or private sector organization (in-state or out-of-state). This may be a case in which the RRC leads and carries out the project or just contributes labor, data, or other support to a project managed by another organization<br><br>Note: To establish a basis for this revenue source, it would be best to establish a fee schedule, basic terms for providing services, and do promotion to investigate opportunities. |
| Fees for data compilation and/or regional framework stewardship support | Fees would apply for GIS data related work provided by the RRC. This could include data collection or compilation for member organizations (mainly low population local government jurisdictions). In addition, fees from Source Stewards could apply for work carried out by the RRC for assembling, formatting, and submittal of Source Steward Framework data updates—reducing labor required by the original Source Steward.<br><br>Note: During the 2010 RRC planning project, a potential RRC role as a "Regional Steward" has been noted as a high priority by project participants. Is it reasonable for the RRC to charge fees for this work or is it considered a "basic service" which the RRC should support through other funding sources. |

## Table 6: Possible Sources for Funding and In-Kind Contributions (con't)

| Funding/ Contribution or Source | Description |
|---|---|
| Sale of special GIS products | There is an opportunity for an RRC, or one of its members, to design and create custom products for sale. A "custom product" is considered to be any digital or hardcopy product generated in a "value-added" activity using GIS data and software. This may include custom maps, geographic data extracted and delivered in a non-standard format, etc.<br><br>*Note: This is a possibility but must take into account legal limitations on governmental sale of data products and services as well as potential conflicts of competition with private companies.* |
| Agreement with commercial web-based geospatial services | The potential exists, in the future if not at the present time, to negotiate agreements with companies providing web-based spatial data and services (Microsoft Bing Maps, Google Earth, and potentially many more that operate on a national or regional basis). There are not currently many precedents for this type of arrangement but as these commercial firms enhance the scope, resolution, and timeliness of data they provide, opportunities may increase. An agreement with commercial service providers would best be organized at the state level (IGC) but RRCs could participate in providing data and sharing in revenue received. |
| Recorder fees for special GIS fund | The Idaho SDI Business Plan (2009) identified an action to explore the possibility of establishing a new fee for document recordation (County Recorder) and a special fund from these fees to support GIS development. Several other states have put this type of funding mechanism in place. If this financing strategy was pursued and approved by the State legislature, the IGC would have a major role in defining terms for use of the funds but it would be acknowledged that are a large portion of the funds would be allocated back to local governments for GIS development and operations. RRCs could play a role in ensuring appropriate disbursement of the funds and supporting local jurisdictions in effective use of the funds. |

## 6.2 RRC Budgeting and Financing Strategy

The budgeting and financing strategy for the RRC is based on a 5 year start-up funding program, followed by a long range maintenance and project-based funding strategy.

The 5 year start-up program includes funding for a portion of the RRC Manager position, full funding for a full time GIS Analyst/Programmer position, and contribution funding for Metadata Specialist and Database Administrator positions working in the UI Library and Northwest Knowledge Network respectively. It is assumed that a combination of limited "donated time" by the North Idaho RRC host organization (UI), student internships, and shareholder volunteers, will provide staff resources needed for much of the Phase 1.

The financing strategy for the 5 year start-up phase relies on corporate and foundation grant programs, and may include a mix of grant programs, to meet full funding requirements. The schedule to complete certain tasks may need to be adjusted based on available funding, although it will be a priority to fill the GIS Analyst position consistently over the start-up phase in order to establish the key data collation and coordination components for assembling regional framework data sets

The long range funding strategy is anticipated to require a base operating budget of approximately $100,000 per year, which will include funding for student internships for data maintenance & development and service enhancements, with additional grants and project based funding used for developing new applications and services.

Financing the base operating budget will require a combination of options which could include a combination of sources such as basic membership fees, E911 programs, sponsorship funding from private and non-profit sources, and subscription fees for enhanced or specialized services to local governments and agencies.

**Table 7: 5-Year Start-Up Schedule and Costs Outline**

| | | | |
|---|---|---|---|
| **YEAR 1** | **TASKS** | **EXPENSES** | |
| | Form RRC Steering Committee | RRC Manager (salary & fringe) | $35,000 |
| | Complete required organizational documents | Professional Development | $5,000 |
| | Promote RRC and register initial set of Users/Shareholders | Travel | $5,000 |
| | Establish administrative procedures for financial and reporting functions | Educational Materials | $1,000 |
| | Appoint RRC Manager and support staff | Software | $1,000 |
| | Set up office | GIS Analyst Hiring Expenses | $3,000 |
| | Hire GIS/Analyst Programmer | GIS Hardware | $5,000 |
| | Bylaws/Charter | | |
| | **PRODUCTS/SERVICES** | INSIDE | $5,000 |
| | Host Organization Agreement | UI CDA | $10,000 |
| | Regional Data Inventory | DBA/System Admin | $24,000 |
| | Initial membership list, Website | Metadata Specialist | |
| | | **TOTAL** | **$94,000** |

**Table 7: 5- Year Start-Up Schedule and Costs Outline** (continued)

| | | |
|---|---|---|
| **YEAR 2** | **TASKS**<br>(Continue administrative/management functions; build membership, facilitate communication/meetings/ partnerships, develop and maintain website)<br>Create tools and procedures for data consolidation and publishing to INSIDE<br>Identify possible structures for State support/membership subscription/support fees/funding contribution for long-range funding opportunities<br>Evaluate and/or develop Data Contribution Agreements<br>Establish programs for sponsorships, volunteers, internships, grant research/writing<br>Develop outreach programs for education/training/support | **EXPENSES**<br>RRC Manager (salary & fringe) $35,000<br>Professional Development $5,000<br>Travel $5,000<br>Educational Materials $1,000<br>Software $1,000<br>GIS Analyst (salary & fringe) $60,000<br>GIS Hardware<br>INSIDE $5,000<br>UI CDA $10,000<br>DBA/System Admin $12,000<br>Metadata Specialist $35,000 |
| | **PRODUCTS/SERVICES**<br>**RRC** – Quality assurance/quality control standards, Volunteer program, Internship program, Kick off Annual Meeting and North/South sub-regional meetings<br>**GIS Analyst** – Initial web map application showing existing regional TIM data; Begin data inventory program; Establish initial pilot project (Roads/Structures) and publishing to INSIDE. Leverage high resource agencies for data collection and processing support. | **TOTAL w/o DBA/Metadata $122,000**<br>**TOTAL with DBA/Metadata $169,000** |

| | | |
|---|---|---|
| **YEAR 3** | **TASKS**<br>(Continue administrative/management functions; build membership, facilitate communication/meetings/ partnerships, develop and maintain website)<br>Establish regional stewardship role; standards development and integration (TIM & enhanced regional)<br>Coordinate and promote GIS training and education, web services, facilitate technology transfer, begin implementation of long range funding program | **EXPENSES**<br>RRC Manager (salary & fringe) $35,000<br>Professional Development $5,000<br>Travel $5,000<br>Educational Materials $1,000<br>Software $1,000<br>GIS Analyst (salary & fringe) $60,000<br>GIS Hardware<br>INSIDE $5,000<br>UI CDA $10,000<br>DBA/System Admin $12,000<br>Metadata Specialist $35,000 |
| | **PRODUCTS/SERVICES**<br>**RRC** – GIS Project/Best Practices Catalog; Directory of GIS Contacts & Professional Support; Education Curriculum<br>**GIS Analyst** – Data collection, monitoring, QAQC and ETL (extract/ transform/load) processes in place for high resource agencies, with said data incorporated into Web Map App; Pilot projects for additional Regional/TIM data layers; Data inventory/reporting web application; Pilot projects for "Killer Web-Map App" and Institutional web map services (to be consumed by user/members as online/near-line mission critical data sources) | **TOTAL w/o DBA/Metadata $122,000**<br>**TOTAL with DBA/Metadata $169,000** |

## Table 7: 5- Year Start-Up Schedule and Costs Outline (continued)

| | TASKS | EXPENSES | |
|---|---|---|---|
| YEAR 4 | (Continue administrative/management functions, build membership, facilitate communication/meetings/ partnerships, develop and maintain website) | RRC Manager (salary & fringe) | $35,000 |
| | | Professional Development | $5,000 |
| | | Travel | $5,000 |
| | Develop programs/projects specifically for providing support to low resource areas (leverage high resource areas, internships, "interval" project-based data collection programs, grants, etc.); Develop documentation for Joint Project Negotiation and Management Support | Educational Materials | $1,000 |
| | | Software | $1,000 |
| | | GIS Analyst (salary & fringe) | $60,000 |
| | | GIS Hardware | |
| | | INSIDE | $5,000 |
| | **PRODUCTS/SERVICES** | UI CDA | $10,000 |
| | **RRC** - Project Specifications and GIS Support Services Procurement; Outreach education program specifically for supporting low resource areas. | DBA/System Admin | $12,000 |
| | | Metadata Specialist | $35,000 |
| | | **TOTAL w/o DBA/Metadata** | **$122,000** |
| | ***GIS Analyst*** **-** On-going data collection, monitoring, QAQC, ETL and reporting for all agencies; Pilot projects for additional Regional/TIM data layers, Pilot project for data collection in low resource areas, Develop automated processes for data collection; further development of "Killer Web-Map App" and Institutional Web Map Services. | **TOTAL with DBA/Metadata** | **$169,000** |

| | TASKS | EXPENSES | |
|---|---|---|---|
| YEAR 5 | (Continue administrative/management functions, build membership, facilitate communication/meetings/ partnerships, develop and maintain website) | RRC Manager (salary & fringe) | $35,000 |
| | | Professional Development | $5,000 |
| | | Travel | $5,000 |
| | Establish long range plans for funding, staffing, grants acquisition, project implementation, data maintenance and consolidation, etc. | Educational Materials | $1,000 |
| | | Software | $1,000 |
| | | GIS Analyst (salary & fringe) | $60,000 |
| | **PRODUCTS/SERVICES** | GIS Hardware | |
| | **RRC** - Long range maintenance funding plan in place and operational; Long range Staffing support plan in place (continuation of GIS Analyst position and/or optional staffing solution for non-automated tasks); Project and Grant programs in place for leveraging opportunities as available; | INSIDE | $5,000 |
| | | UI CDA | $10,000 |
| | | DBA/System Admin | $12,000 |
| | | Metadata Specialist | $35,000 |
| | | **TOTAL w/o DBA/Metadata** | **$122,000** |
| | | **TOTAL with DBA/Metadata** | **$169,000** |
| | ***GIS Analyst*** **-** On-going data collection, monitoring, QAQC and reporting largely automated, with plan for performing manual tasks and system updates; All Regional/TIM data layers (structure and available data) in place with operational procedures and tools for consolidating local data and publishing to INSIDE; "Killer Web-Map App" operational for institutional use by User/members; Regional Web Map services integrated User/Members institutional applications (services consumed for daily uses); Documentation of systems, procedures and job tasks completed. | | |

### 6.3 RRC Promotion and Marketing

RRC promotion and marketing is a core administration and management practice identified in Table 4 and Task Series 6 ("Promotion, Recruitment, and External Relations") in the Table 5. Promotion, outreach, and expanding awareness are also important items in the State's TIM (aka "ISDI") *Business Plan* (see Implementation Initiatives under the "Education, Outreach, and Communications" category in Table 6 and Section 5.4). For this reason, RRC promotion should be coordinated with TIM activities and events organized by the IGC and other RRCs. The objectives of a planned, organized RRC promotion campaign are: a) to increase awareness of the RRC and availability of services, b) to increase membership and level of participation by individuals and organizations, and c) to support fundraising activities. This is particularly important in Phase 1 but is a continuing activity in all phases.

Marketing and promotional activities should use a variety of communication media and channels and should be developed with a clear idea of the message to be delivered and the recipient groups to which the message is being directed (the specific public, private, academic, and non-profit organizations that are potential RRC participants). RRC implementation activities in Task Series 6 (see Table 4) are supported by a number of promotional and outreach approaches and media types including:

- Presentations and briefings at events (GIS conferences, agency meetings, meetings and events sponsored by professional and trade organizations).
- Web page content that explains RRC goals and services and which solicits participation and feedback (including on-line member registration).
- Preparation of "advertising" materials (flyers, brochures) which can be distributed in digital or electronic form.
- Email broadcasts (via the Geotech Listserv or other group message distribution) which provide news and solicits participation.
- Distribution of publications prepared by RRC members.
- Press/Media Releases highlighting RRC projects and accomplishments.