

NORTHWEST DATA SHARING NETWORK A PUBLIC/PRIVATE DATA MANAGEMENT PARTNERSHIP

Project Overview, Work Plan and Action Plan

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**Ministry of Sustainable Resource Management
Skeena Region**

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Project Overview

Overview

The Northwest Data Sharing Network project is a Skeena Regional initiative. The objective of the Northwest Data Sharing Network Project is to increase data management and analysis collaboration between the Skeena Region Ministry of Sustainable Resource Management (MSRM) and other Northwestern B.C. internal and external agencies, including Ministry of Forests (MoF), First Nations and forest companies. By putting in place a data management partnership future costs can be avoided and a collaborative culture can be initiated amongst Northwest data users to facilitate better informed agency decision making. Functionally the Data Sharing Network has a governance policy for the participants and has data security, storage, distribution and viewing components. The project will demonstrate a public/private data management partnership.

Although MSRM does not have a complete data management policy, generally accepted data management principles include items such as clear data custodianship, ownership, metadata, data access, data standards, and data lifecycle control (IGGI, 2000). Data management at MSRM has traditionally emphasized data access and to a lesser degree, data standards. This initiative provides an opportunity to begin practicing more thorough data management across government agencies and the private sector.

The primary drivers of this project are the Morice Land and Resource Management Plan (LRMP) the Morice/Lakes Integrated Forest Practises Agreement (IFPA) and the provincial goal for MSRM to have simple and fast access to integrated, science based land and resource geographic information. Also addressed are provincial data management goals such as consolidated data management, making information discoverable, promoting common standards, promoting sound data management principles among data users and to assist with the transfer of some inventory and analysis responsibility from the public sector to the private sector. Regional goals include the extension of provincial goals to an operational level, meeting regional service plan priorities such as the Morice LRMP and external client services, organizing regional players, streamlining local business processes and developing trust through client relationships. Other agency data management objectives are met by this project by reducing redundancy by getting data from definitive sole sources avoiding use of downstream, alienated data. Additional benefits include minimizing duplication of data management effort, promotion of shared application development, efficient and equitable data flow between participants and future cost avoidance.

There have been three recent data exchange collaborations in the Northwest. First, the Morice Data Hub which was a shared information source between Morice Forest District, Houston Forest Products and Canfor. The hub is no longer operational due to lack of contractor consistency. Secondly, the Bulkley Forest District maintained a shared secure FTP site that was accessible by specific clients including forest licensees and the resource consulting community. The users of this service found it very useful, but it has since been shut down due to lack of corporate support. The third collaboration was the Northwest Data Centre (Morgan and Glover 2001). The data centre was a collaboration between the

Prince Rupert Forest Region, Ministry of Environment, Lands and Parks, Lakes, Morice, Bulkley, Kispiox, Kalum and North Coast Forest Districts. It provided data management services and analysis support for MELP Skeena Region and the Prince Rupert Forest Region. The Northwest Data Centre/MELP Skeena GIS was used as a model of integration for the amalgamation of MELP and MoF data management and analysis services into MSRM. Its success was based on establishing a collaborative service oriented approach to data storage and analysis services, management support, open communication and pooled resources. The Northwest Data Sharing Network builds on this past success in data exchange collaboration. Other success factors include industry and 1st nation support, existing local relationships, tempered expectations, a focus on manageable short term goals, and a firm commitment to follow data management principles concerning data handling, sourcing and the custodian/user relationship.

Forest companies involved with the Morice/Lakes IFPA have confirmed their participation in a data management partnership through an IFPA/MSRM partnership agreement. West Fraser Mills, University of Northern B.C., MoF, First Nations and the resource consulting community are involved in the project but haven't been formally included in a partnership agreement. As part of the governance all participants will be formally confirmed.

Background

Resource management decisions are based on a foundation of well-sourced, dependable data, data synthesis and analysis. Poor data management practices directly impact cost effective, repeatable, defensible and well informed decision making. Data creation and synthesis is currently distributed across a variety of government agencies, industry, First Nations, Non Government Organizations (NGOs) and consultants. Analysis, based on this data, is done on a project by project basis, the results are generally poorly organized and are challenging to replicate and monitor. Frequently data sets are re-created at the same cost as the original. Many copies of data describing the same information can exist among data users resulting in costs associated with determining the “right” data. Data frequently undergoes local modification completely disconnected from the data custodian, leading to uncoordinated, indefensible, multiple versions of the same data. Differences in analysis can commonly be attributed to data differences, determining analysis inconsistencies introduces further project costs. This uncoordinated array of distributed data repositories and subsequent analysis leads to data redundancy, data source confusion, duplication of effort, high data management costs and ultimately decision making that is not based on authoritative information.

MSRM has the mandate to improve data management, access and discovery for both internal and external data clients. The Business Information Services Division (BISD) of MSRM is charged with creating a central source of integrated information. MSRM's Integrated Data Warehouse (IDW) project is developing a 3-5 year implementation plan to meet this provincial objective. Locally, the Northwest Data Sharing Network will be able to assist in the coordination of corporate and local efforts pertinent to sound data management and analysis.

Government is becoming increasingly reliant on external agencies to provide inventories, resource information, analysis and monitoring. Corporate and local partnerships are seen as enabling the business communities to organize themselves for both their own business process efficiencies and to enable smooth access and update to corporate initiatives, such as MSRM's IDW.

In response to these issues the Northwest Data Sharing Network (NWDSN) Project is being developed. This project will help organize the local resource community around data management and distribution by establishing a collaborative environment through the implementation of a governance structure. The local resource management community is made up of Skeena Region MSRM, MoF District offices, First Nations, and forest companies located in Northwestern BC. The initial focus will be the Morice LRMP and the Lakes/Morice IFPA data management and analysis. The Northwest Data Sharing Network will also work with the MSRM Information Management Branch to ensure the delivery of consolidated data management between private and public data users, and to ensure that NWDSN governance incorporates strong data management principles around data sourcing, custodianship, and standards.

In the first phase data will be pushed down to a corporate MSRM server allowing the NWDSN to facilitate data sharing through a secure FTP site. Security will be ensured and all participants will have data sharing agreements in place. All data in the network will have meta information attached concerning data description, custodianship and limitations so that it can be “discovered”, and to support meaningful relationship between the data users and the data owners. By using MSRM map servers, information will be viewable by the participants. Future phases will investigate peer to peer data services using emerging standards such as the Geographic Markup Language (GML).

Current Data Management in the Northwest

Skeena Region MSRM maintains a regionally based data warehouse that contains local and corporate data, often locally modified, of resource inventories, land ownership, and land use information. Forest licensee, resource consultants and First Nations offices also have similar collections of data.

Morice-Lakes IFPA/Morice LRMP

The purpose of this project will immediately benefit the Morice LRMP and Morice/Lakes IFPA by implementing a Northwestern public/private joint data sharing venture that can assist with data submission to the corporate MSRM data warehouse and provide data discovery for the LRMP and the IFPA. Confusion over data sources and currency between the IFPA and LRMP can be eliminated. Efficiencies can be gained by having a single known source for Northwestern land information which benefits the LRMP and IFPA and reduces licensee internal data management costs. The data network can be made secure so that only approved data is shared. Strong data management practices can be incorporated into the data workflow, leading to an LRMP/IFPA data management legacy that will reduce future project costs for participants and facilitate improved land information based business processes for licensees and government.

Context

Linkages to MSRM Service Plan

This project addresses items in both the provincial and regional MSRM service plans.

Provincially, Objectives for Goal 3 include:

- Objective 1: Accurate, relevant, cost-effective and timely land and resource data and information
- Objective 2: Simple, fast access to resource, registry and land title information
- Objective 3: Alternative service-delivery methods, including public/private partnerships

In the Skeena Region MSRM service plan a number of specific items are addressed. Most notably; data and information delivery to external agencies and the private sector, and data and information partnerships.

Service Plan Strategies Addressed

1. Morice LRMP:
 - Provide data management services.
2. Provide Data and Analysis Support to Plans:
 - Morice LRMP data and analysis support.
3. Develop a Regional Strategy to Provide Comprehensive Data and Analysis Support to Agencies:
 - This project will assist with the development of a Regional strategy.
4. Provide Basic Data Services to government agencies and External Clients:
 - In the short term data and analysis support will be provided for the Morice LRMP participants and the Morice/Lakes IFPA group of forest companies. In the long term client services will be extended to other data management players in Northwestern B.C.
 - A web based tool for viewing and accessing information about approved warehoused data will be developed for the data sharing participants.
 - A web based viewing tool for LRMP stakeholders to access core approved LRMP coverages.
5. Develop Data and Information Partnerships with External Agencies and the Private Sector:
 - A partnership exists with MSRM and the Morice and Lakes IFPA licensees.
 - A sub agreement will be formed, under an existing corporate MSRM and forest company agreement, with the local data sharing participants including Pacific Inlands Resources and the Wet'suwet'en.
 - The sub agreement will follow the MSRM Partnership Branch's Partnership Framework, and MSRM data custodianship guidelines.

Relationship to Other Projects

Morice LRMP

As part of the Morice LRMP a process partnership has been developed. Part of the Morice LRMP partnership is to develop a collaborative LRMP and Morice&Lakes IFPA data sharing strategy, which includes multi-stakeholder operational environment for data access and analysis.

The Morice LRMP provides a manageable first step in implementing a public/private data management collaboration in the Northwest. In keeping with the demands of LRMPs, LRMP data is often poorly documented, subject to ad-hoc modifications and prone to uncontrolled version difficulties. As such, the Morice LRMP could benefit significantly from the increased data management rigour associated with this project. By focusing on the LRMP and the IFPA in the short term relationships and trust between partners can be fostered and more ambitious business processes can be addressed in the longer term.

Integrated Data Warehouse - Victoria

The Registry and Resource Information Division (RRID) and the Business Information Services Division (BISD) share a joint mission to “facilitate land and resource use decision-making by providing easy access to relevant, timely and accurate registries, resource and geographic information, data and knowledge to decision-makers and clients”. Specifically BISD is focusing on two areas:

1. creating a central source of integrated information that can be accessed by users both within and outside government, and
2. providing analytical and information services in support of economic development, planning, treaty negotiations, and sector strategies.

Currently there is a MSRM distributed warehouse which includes data synchronization with MSRM Regional data marts, including Skeena Region. Over the next three to five years there is a Provincial initiative, the Integrated Data Warehouse project, to develop and implement an integrated data warehouse that will be accessible by public and private users. This initiative will integrate existing government data warehouses into one seamless entity.

The Northwest Data Sharing project and the Integrated Data Warehouse project are founded on common goals (Table 1).

Table 1. Common Goals
Consolidate data management – reduce redundancy, create efficiencies
Well described, discoverable information
Common data models, standards, etc.
Education – sound data management practices, need for shared warehousing, data services, etc.
Data supports uniform, repeatable, defensible, analysis and decisions
Off loading of update, analysis, planning to private sector

Responsibility for the delivery of these common goals rests with MSRM’s Business Information Services Division. Extension of these goals to local communities is greatly enhanced through the NWDSN project.

Table 2 highlights the scale, scope and time frames of NWDSN and the IDW. Responsibilities of the NWDSN are to the local business communities in meeting short term needs such as Sustainable Forest Management (SFM) planning and LRMP. Through the delivery of these local objectives an opportunity exists to begin the process of integrating local non-government clients with the provincial infrastructure.

Table 2. Scale, Scope and Time Frames	
Northwest Data Sharing Network	Integrated Data Warehouse
Local level	Provincial level
Business Relationships	Corporate Relationships
Organize and share information	Sourcing/ Access/Retrieval of information
Timber Supply Area/LRMP/IFPA	Province
Shared local vision	Provincial vision
Trust at Community Level	Trust at Provincial Level
Delivery of business processes	Delivery of standards and infrastructure
Local contact	Provincial contact
Data user perspective (encouraging user responsibilities to custodians)	Data custodian perspective (encouraging custodian responsibilities to users)

MSRM Provincially and Regionally will need to work together to ensure the effective delivery of consolidated data management between private and public data users, including incorporation of sound data management principles into NWDSN governance and practices. The manager of data services at BISD is a member of this project team ensuring a tight collaboration between the provincial IDW and the regional NWDSN data management initiatives.

Southern Interior Forest Licensee Data Exchange Pilot

A pilot project is investigating the integration of industry forest management systems, such as GENUS, and linking it to the MSRM Data Warehouse. With industry taking on a larger data capture role in the future this project will help establish the business standards for that process.

Vanderhoof IFPA

The forest licensees in the Vanderhoof Forest District have hired a management company, Avison Management, to guide the development of a peer to peer data exchange network. Currently they are implementing a meta data management system in cooperation with the Forest Research and Extension Partnership (FORREX - previously the Southern Interior Forest Extension & Research Partnership). FORREX has implemented the Natural Resource Information Network (NRIN), an online network of natural resource information.

Selkirk Geospatial Research Centre

A geospatial research facility is being set up in Castlegar. Its focus is on application, training and regional data analysis and management project collaboration. Kootenay Region is in

discussions with Selkirk College on partnering to utilize the research centre and to facilitate access to corporate MSRM information. There are commonalities between their initiative and the Northwest Data Sharing Network. Collaboration between the two projects is under way to share information and minimize duplication of effort.

Project Team

As a private/public partnership team members come from government, including Skeena Region MSRM, BIRD MSRM, Ministry of Forests as well as industry, first nations and the University of Northern BC.

Government

From the government the proposed project team will include MSRM BIRD staff and Skeena Region staff from the Resource Inventory and Information section. Core team members include Elaine Dawson, Don Morgan and William Elliott.

BIRD

Elaine Dawson Co-ordination with the integrated data warehouse project and corporate project advisor. Responsible for MSRM data management standards.

Skeena Region

Don Morgan Project team leader. – 40% time.

The following team members time commitments are not additive to their existing MSRM duties.

Ken Bush Data management expertise, Morice Forest District data experience – 10% time.

Tiemin Sheng MSRM web application expertise – 10% time.

Liz Saunders Inventory and data management expertise – 10% time.

Independent Data Manager

William Elliott Morice LRMP Data Management/Analysis Coordinator. Assisting with DSN pre-implementation Data Sharing Network data management.

Ministry of Forests

Jane Lloyd-Smith MoF operations.

Debbie Janning-Stewart Timber Sales Program

Industry

Industry contacts include:

- Jim McCormack - Houston Canfor,
- Barry Watson - Houston Canfor,
- Paul Schwarz – PIR Smithers,
- Tom Olafson – West Fraser Mills,
- Karen Perkins – Babine Forest Products,
- Jaret van der Giessen – Houston Forest Products,
- Andy Fraser – L&M, and

- Stuart Sinclair – I&M.

They will provide co-ordination of industry participation.

First Nations

In the first phase of the project we will work with the Office of the Wet'suwet'en. Their level of involvement will be based partially on their level of participation in the Morice LRMP. There is a history of co-operation between the province and the Office of the Wet'suwet'en. Andy George of the Wet'suwet'en Treaty Office is the contact and will identify the data that the Office of the Wet'suwet'en wish to access and data they wish to share.

Universities

From the University of Northern BC Roger Wheate, Geography/GIS co-ordinator and graduate student and GIS lab instructor Scott Emmons are the contacts. UNBC is doing a peer to peer research project that is investigating interoperability between communities and the university.

General Overview

Project Area

The initial project area will be the Morice LRMP boundary. The data required for the Morice LRMP provides an easily achievable short-term target for setting up a data share. Subsequent area inclusion will be the Lakes portion of the Morice/Lakes IFPA then the Bulkley TSA. The balance of the Skeena Region may be added later as partners come forward and express interest.

General Approach

The Northwest Data Sharing Network is a three year project.

Year 1 – December 2001 – July 2002

Year 1 tasks include:

- Project work plan, action plan and budget.
- A review what is happening in other jurisdictions.
- Establish contacts and linkages with MSRMs Data Warehouse.
- Identify the issues and costs associated with the technical and organizational implementation.

The technical review consists of evaluating potential partners' current infrastructure and business processes including:

- identify current data custodians and stewards,
- identify legacy issues and constraints,
- identify business needs and requirements,
- identify legacy metadata issues / requirements, and
- cost.

A conceptual database model that supports both the IFPA and LRMP objectives including:

- a proposed conceptual Logical Data Model (User driven, MOF, MRSM, Licensee, McGregor etc.),
- options for data translation and physical data georelational models, and
- cost.

A system design architecture is to be proposed that includes:

- network Communication,
- GIS Product Architecture,

- system Design – hardware \ Operating System,
- applications and cost.

The organizational review consists of the following:

- A review of information and data societies in other jurisdictions,
- identify options around setting up a society or a limited partnership,
- identifying what activities need to be implemented to form a data society including:
 - clarifying vision and values,
 - governance policies,
 - product and services,
 - market overview,
 - revenue plan,
 - service production,
 - regulatory issues,
 - management and staffing, and
 - risk.
- information on data sharing and licensing agreement and bylaws.

Year 2 - August 2002 – March 2003

The year 2 tasks include:

- A year 2 work plan, action plan and budget.
- Update to MSRM Integrated Steering Committee.
- A review will be done of the information collected in year 1.
- A short term implementation plan will be drafted.
- A funding agreement between the Northwest Data Sharing Network and the industry participants will be drafted and approved.
- Data Management policies will be put into place, incorporating custodianship, data access and distribution, data standards, metadata standards, and data lifecycle control. That these will be aligned with, or developed with, MSRM data management standards.
- An agreed upon governance structure is put in place.
- Implementation of MSRMs “Partnership Management Framework”.
- The implementation plan will be circulated for approval to MSRM BISD, MSRM Skeena Region, First Nations and industry partners.

- Once all approvals are in place the plan will be implemented.
- The implementation is evaluated and modified accordingly.
- A preliminary cost/benefit analysis of implementing a data management partnership compared with the status quo. Costs associated with projects such as Timber Supply Review and LRMPs and their associated infrastructure and staff effort will be evaluated.
- The long-term implementation plan is developed. This plan will be based on the results of the short-term implementation evaluation and identified partner business needs and the leveraging of the MSRM integrated data warehouse.

Year 3 – April 2003 – March 2004

Year 3 tasks include:

- A year 3 work plan, action plan and budget.
- A funding agreement between the Northwest Data Sharing Network and the industry participants will be drafted and approved for year 3.
- A long term funding strategy for the Northwest Data Sharing Network will be put in place.
- The implementation plan will be circulated for approval to MSRM BIRD, MSRM Skeena Region, First Nations and industry partners.
- Once all approvals are in place the long term plan will be implemented.
- The implementation is evaluated and modified accordingly.
- A final report is written for the project.

Public and Stakeholder Involvement

Involvement of the other participants in the partnership will be done through regular meetings to discuss and set priorities.

Communication to the consulting community, other government agencies, utilities, municipalities, the general public and to other jurisdictions considering implementation of partnerships will be done using the following tools:

- A data partnership web page,
- Brochure with general information about the initiative,
- Conference presentations, including the Northern GIS conference, and
- Presentations in other parts of the province, including Prince George, Mackenzie, Williams Lake, Nelson and Victoria.

As the data partnership develops other stakeholders will be invited to participate.

Time Frame

Year 1 of this project will be completed July 31st, 2002. Year 2 will be completed by April 30th, 2003. Year 3 will be implemented by April 30th, 2004.

The short-term implementation will follow the Morice LRMP time lines as follows*:

- NWDSN to supply interim result data by October 2002,
- all inventories identified in the process map handbook to be loaded by October 2002,

- all Morice LRMP data to be loaded by December 1, 2002, - ED qualification required on this bullet
 - NWDSN available for Base Case model outputs January 2003,
 - NWDSN available for SFM plan version 1, Landscape Unit plans June 2003, and
 - NWDSN to supply LRMP socio economic analysis data by September 2003.
- * IFPA and LRMP time lines under review by IFPA and LRMP project teams.

Products

The following specific products will be produced by this project:

- Data and Information partnership,
- A non profit data consortium,
- Web page with a listing of information in the shared data network,
- A data and information access mechanism, and
- Morice LRMP analysis and operational environment.

Resourcing

Resources for this project come from Skeena Region MSRM, BIRD MSRM, Industry and First Nations.

- MSRM is contributing total of 0.7 Full Time Equivalents of MSRM staff time, as indicated in the project team section.. MSRM Skeena Region is also contributing one hundred percent of William Elliot's contractual costs until the end of his contract term on December 31, 2003. Alternative sources of funding are being sought to continue his contract beyond December 31. The project will also use some Skeena Region MSRM infrastructure including office overhead, office space, printers, plotters and computer equipment, desk top computers and a SUN Unix workstation. Skeena Region MSRM will contribute start up contract money for technical and governance scoping and contract staff costs.
- MSRM BIRD will contribute staff time and some initial infrastructure overhead costs. Implementation costs associated with hosting the NWDSN including data hosting, software licensing, hardware maintenance and support will be identified by BIRD and covered by the NWDSN.
- First Nations will contribute staff time and expertise.
- Industry will contribute office overhead and staff time. Initial development funding for setting up the governance and data sharing hardware or software identified through the approved implementation plan will be provided by the licensees individually or through the IFPA.
- How to cover post implementation costs associated with maintaining the NWDSN will be identified through the governance. Potentially these costs will be covered through some form of membership fee.

References

Morgan, D.G. and T. Glover. 2001. Distributing Data Ownership: The Northwestern Geospatial Data Network. GIS 2001. Vancouver, British Columbia, February 10-22.

Intra-governmental Group on Geographic Information: The Principles of Good Data Management. IGGI Secretariat. London, England, Sept 2000.

Project Work and Action Plan

Seven phases and associated milestones are proposed to manage the project. The purpose of milestones is to provide an opportunity for review and informal sign-off by the Regional Director. Our approach is summarized as follows:

- i. project initiation;
- ii. technical costs, issues, constraints and opportunities;
- iii. organizational costs, issues constraints and opportunities;
- iv. technical and organizational information analysis;
- v. governance;
- vi. short term implementation; and,
- vii. long term implementation.

The proposed timeline is as follows:

PHASE	Jan 2002	Feb	Mar-April	May-July	August-Oct	Nov-Mar 03	Apr 03 – Mar 04
1. Project Initiation							
2. technical costs, issues, constraints and opportunities							
3. organizational costs, issues constraints and opportunities							
4. technical and organizational information analysis							
5. governance							
6. short term implementation							
7. long term implementation							

Project Initiation

The key tasks in the project initiation phase include:

1. Project familiarization.

Review of existing public/private data and analysis warehousing. Identify MSRMs organizational and business drivers for implementing a public/private warehouse.

2. Partner expression of interest.

Present concepts of the data sharing partnership to potential partners. Presentation to the IFPA technical steering committee, to key MSRM staff in Victoria, including Gary Cooney, Evert Kenk, Gary Sawayama, Brian Howden, Elaine Dawson, Al Becker, Fern Schultz and Hally Hofmeyr.

3. Project recognition by the SRM Integrated Steering Committee.

After initial project discussions with Victoria staff a decision note was prepared, by their request, for the Integrated Steering Committee.

4. Prepare detailed work plan and budget.

The detailed work plan will serve as the terms of reference for this project. It defines the project scope, timelines, product, project team, potential issues and budget.

Phase 1 Milestone: A detailed work plan and budget, ISC decision note, power point presentations..(Don Morgan)

Technical Costs, Issues Constraints and Opportunities

The key tasks in phase 2 include:

1. RFP for a contractor.
2. Review of proposals and contractor selection.
3. Partner interviews.
4. Results workshop.
5. Report.

Phase 2 Milestone: A report describing technical costs, issues, constraints and opportunities of implementing a public private partnership data warehouse in northwestern BC. (Don Morgan)

Organizational Costs, Issues Constraints and Opportunities

The key tasks in phase 3 include:

1. Select invitation contract
2. Results workshop.
3. Report.

Phase 3 milestone: A report describing organizational costs, issues, constraints and opportunities of implementing a public private partnership data warehouse in northwestern BC. (Don Morgan)

Technical and Organizational Information Analysis

The key tasks in phase 4 include:

1. Review technical and organizational reports.
2. Provide a project update for the Integrated Steering Committee.
3. Project web page.
4. Web page approval.

Phase 4 Milestone: A project update to ISC and approved project web page. (Don Morgan)

Governance

The key tasks in phase 5 include:

1. Form a data sharing network partnership steering group.
2. Identify funding options.
3. Select governance model.
4. Short term governance contract.
5. Application of MSRMs Partnership Management Framework.
6. Develop data management policy and framework for the data sharing network including:
 - Commitment to determine and honour custodial statements of appropriate use of data, limitations on modification and distribution of data,
 - commitment to report errors in data to the custodians,
 - intention to work with custodians to define data requirements,
 - goal to provide data from single definitive sources and to eliminate use of second-hand data sources, and
 - goal to eliminate alienation of data from its custodians/owners.
7. Long term governance contract.
8. Implement governance.

Phase 5 Milestone: A governance model approved by all participants. (Don Morgan)

Short Term Implementation

The key tasks in phase 6 include:

1. Review reports and MSRMs corporate direction.
2. Evaluate using MSRMs data warehouse as a service provider.
3. Short term implementation report.
4. Short term implementation report review.
5. Short term implementation.

Phase 6 Milestone: A short term implementation plan. (Don Morgan)

Long Term Implementation

The key tasks in phase 7 include:

1. Review.
2. Identify funding for implementation.
3. Implementation plan.
4. Long term implementation.

Phase 7 Milestone: A detailed long term implementation plan. (Don Morgan)

Approval

I have reviewed the plan for an implementation of a public private partnership network. I feel the team, the process, the time lines, the product and the budget are appropriate and will fulfil the Ministry of Sustainable Resource Management's responsibilities to provide data management to external clients.

Kevin Kriese, Regional Director
Ministry of Sustainable Resource Management
Skeena Region

Date: