



Foothills Research Institute AGM - GIS Program

*June 17, 2009 – TELUS Centre for Professional
Development, Edmonton, AB*

Presented by: Debbie Mucha



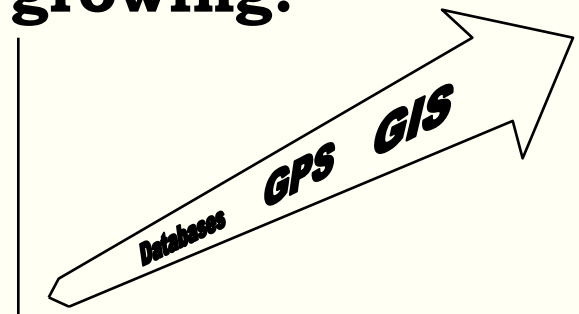
Today's Agenda

- **Introduction**
- **GIS Program Overview**
- **Conclusion**
- **Questions**



Introduction - GIS Program

- **3 GIS Program Staff (myself, Julie Duval & Katie Yalte)**
- **Grizzly Bear Program - part-time GIS contractor**
- **Aboriginal Involvement Program - GIS position**
- **The demand for GIS support is growing!**



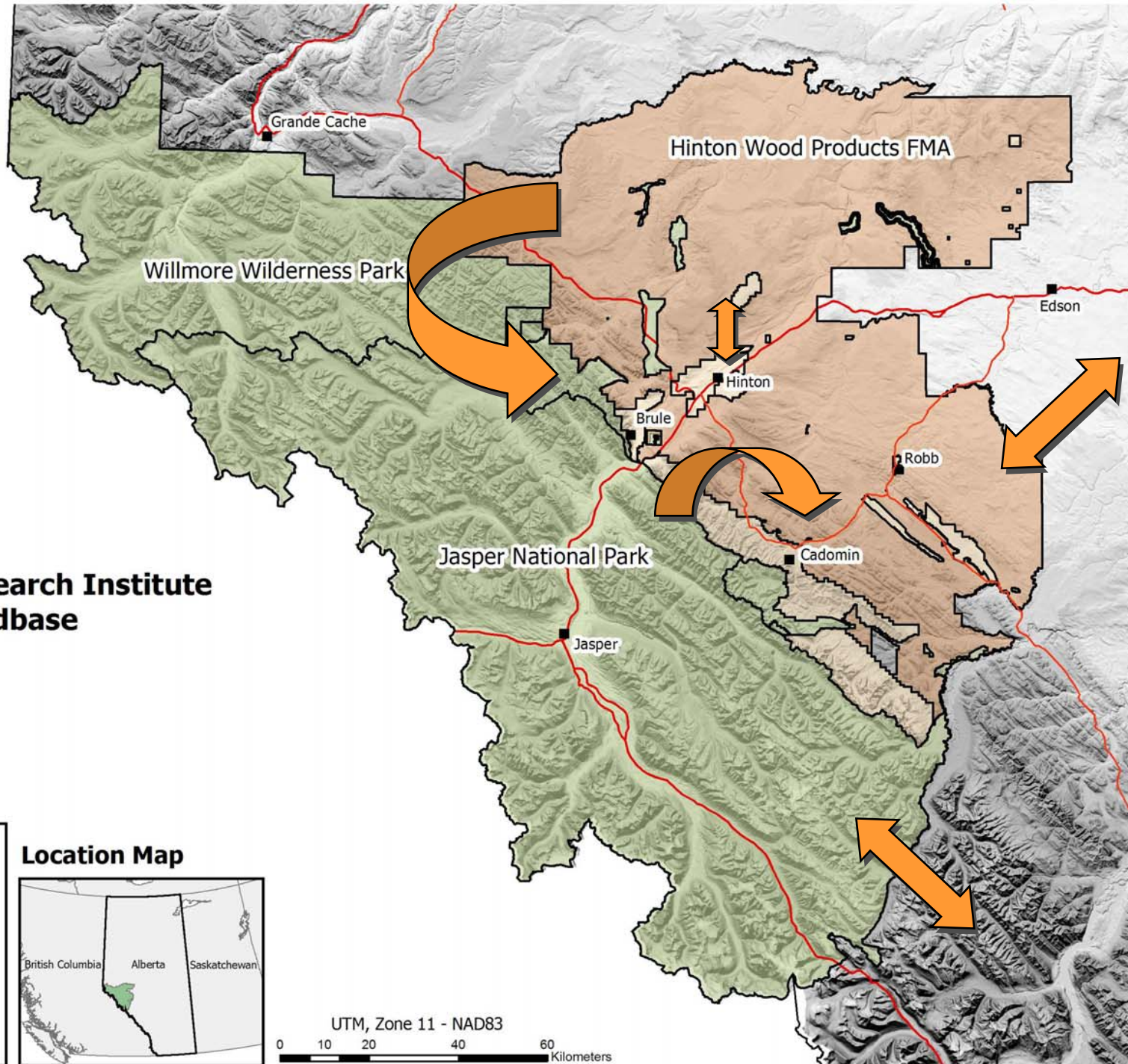
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Introduction - GIS Program

- **We are not a map shop...**
- **Maps are a component of GIS**
- **Focus on analyzing, modeling, storing, retrieving, management of data**
- **Introduced work request form and map request form**



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Foothills Research Institute Landbase

Landbase

- Community
- Highway
- Alberta Crown Units
- Hinton Wood Products FMA
- Protected Areas

Location Map



UTM, Zone 11 - NAD83
0 10 20 40 60 Kilometers

Program Goals - GIS



- 1. Provide exceptional GIS and data management support services for FRI program areas**
- 2. Research, plan, and evaluate GIS technology, software, and hardware**
- 3. Efficient data sharing, data management & knowledge transfer**



Program Support Areas:



- **Natural Disturbance**
- **Stream Crossing**
- **Foothills Landscape Management Association (FLMA)**
- **Grizzly Bear**
- **Mountain Pine Beetle Ecology**
- **Jasper National Park**
- **Adaptive Forest Management**
- **Fish and Watershed**



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GIS Accomplishments



- **Delineated watershed units for the FSCP. Currently extracting watershed attributes to help define priority watersheds**
- **Creation of a history database for the Adaptive Forest Management Program. This database captures information about archive historical documents, artifacts, sites (trees, facilities or other), photos and audio/video**
- **Built an upgraded version of the current Foothills Landscape Management Forum online mapping site in ArcServer software**
- **Restructuring of network tape autoloader system backups for improved and more efficient data backups**



GIS Accomplishments

- **Amalgamated 4 Grizzly Bear Program Microsite Databases with data from 2001 to 2008 into one master database. This will help make the retrieval of information more efficient**
- **Worked on Grizzly Bear Program database re-design to improve potential data collaboration with partners/researchers and to implement user-level access**
- **Roads work: merging of Foothills Landscape Management Forum roads and ASRD roads (Integrated Access Management Roads). Replication of roads layer in collaboration with ASRD. This will result in less data duplication and improved data integrity**



GIS Accomplishments

- **Completed spatial metadata inventory through the NPS metadata extractor to harvest metadata into an Access database. Resulted in a ‘queriable’ database for staff to search available datasets**
- **Successful completion of the Foothills Research Institute Regional Online Sustainable Land Management Atlas User Needs Assessment (UNA) project (in collaboration with partners and GeoConnections)**
- **Successful proposal submission to GeoConnections to undertake the creation of the Foothills Research Institute Regional Online Landscape Decision Support System**



GIS Spatial Metadata Inventory



- **Monitor progress on metadata completion for the FRI**
- **Will help improve inter-program data sharing and collaboration**
- **Will help track who is and is not creating metadata...**



GeoConnections

- ★ **Completed 4-month user needs assessment (UNA) project for an online mapping system**
- ★ **Partners:**
 - **GeoConnections**
 - **Jasper National Park**
 - **The Town of Hinton**
 - **Hinton Wood Products**
 - **Alberta Sustainable Resource Development**



GeoConnections

★ **A national partnership initiative, led by Natural Resources Canada (NRCAN) to develop the Canadian Geospatial Data Infrastructure (CGDI) and make Canada's geospatial data, tools, services and applications available through the Internet.**

Website: <http://www.geoconnections.org/Welcome.do>



GeoConnections

- ★ **Regional challenges such as mountain pine beetle do not stop at boundaries but the information does**
- ★ **Duplicate and redundant effort between regional land partners (data, applications etc.)**
- ★ **Foster interagency data sharing**
- ★ **Promote data quality and best practices**
- ★ **Focus on data security and sensitivities**
- ★ **Save costs due to collaboration in regional landuse planning**



Project Objectives

Create a Canadian Geospatial Data Infrastructure (CGDI) compliant Regional Online Landscape Decision Support System. The objectives are the following:

- ★ **Promote the “beyond boundary” exchange of data and information between project partners and organizations within the Foothills Research Institute (FRI) region**
- ★ **Implement the standardized access and disturbance information products**



Project Objectives

- ★ **Provide a unique regional system that will help promote the collaboration of regional partners such as government, industry, and municipalities in landscape level resource development plans**
- ★ **Provide a system that will help assess cumulative effects on values such as caribou, grizzly bears, fish, wetlands and water**
- ★ **Serve as a pilot project system based on collaborative approach that could be applied to other areas in Alberta or in other provinces**



Project Objectives

- ★ **Help raise the profile of ILM and build cross-sectoral relationships e.g., Government and industry**
- ★ **Participate in the Canadian Integrated Land Management (ILM network) – *New!***
- ★ **Help raise the profile of ILM and build cross-sectoral relationships e.g., Government and industry**



Project Platform

- ★ **Maintain ESRI Arcmap software as our GIS software base**
- ★ **Utilize open source as our system “platform”**
- ★ **Adaptable framework**
- ★ **Meet FRI and partner business needs over time**
- ★ **Strong world-wide community of developers**
- ★ **Maintenance \$\$\$ towards building capacity and development time**



Project Team

Project Steering Committee

- ★ **Tom Archibald**, General Manager, Foothills Research Institute
- ★ **Rick Bonar**, Chief Biologist and Planning Coordinator, Hinton Wood Products, A division of West Fraser Mills Ltd.
- ★ **Sean Kinney**, Communications and Extension Program Lead, Foothills Research Institute
- ★ **Debbie Mucha**, Project Lead and GIS Coordinator, Foothills Research Institute
- ★ **Jamal Nasrabadi**, Technical Services Manager, The Town of Hinton
- ★ **Aniko Parnell**, Integrated Land Management Program Director, Lands Division, Alberta Sustainable Resource Development
- ★ **Brent Schleppe**, Area Manager, Foothills Forest Area, Alberta Sustainable Resource Development
- ★ **John Wilmhurst**, Ecosystem Science Coordinator, Jasper National Park



Project Team

Project Technical Committee

- ★ **Carol Doering**, Acting Ecosystem Data Specialist, Jasper National Park
- ★ **Mike Kohler**, Geomatics Technician, The Town of Hinton
- ★ **Debbie Mucha**, Project Lead and GIS Coordinator, Foothills Research Institute (formerly Foothills Model Forest)
- ★ **Christian Weik**, GIS Unit Lead, Foothills Forest Area, Alberta Sustainable Resource Development
- ★ **Byron Vriend**, GIS Analyst, Hinton Wood Products, A division of West Fraser Mills Ltd.



Project Team

Project Contractor:

The Forestry Corp, Edmonton, Alberta.

- ★ Brian Maier, Kerry Nice, and Carina Palanca

GeoConnections Project Advisor:

- ★ Tony Turner, Environment and Sustainable Development

IMAGINE:

- ★ Ruth Waldick, Network Coordinator



Project Team

IMAGINE (Integrated Management and Geospatial Information Network for the Environment)

- ★ Spawn the growth of a network of ILM practitioners across Canada to improve the state of readiness of Canadian land use planners and decision-makers to undertake integrated land use management.
- ★ Website: <http://nwrc.openconcept.ca>
- ★ 4 Pilot Projects including our project which is the newest member



Project Schedule

Project timeline: April 1, 2009 to March 21, 2010

	April '09	May '09	June '09	July '09	August '09	September '09	October '09	November '09	December '09	Januaary '10	February '10	March '10
Initiation/Planning Phase	■											
Design Phase		■	■	■								
Development Phase				■	■	■	■	■				
Deployment Phase								■	■	■		
Project Conclusion Phase											■	■



Next Steps...

- ★ Finalization of contribution agreement with GeoConnections
- ★ Data sharing agreements with partners will be critical to the future of a geospatial decision support system
- ★ Exciting potential for helping make better regional landuse planning decisions through improved information sharing!
- ★ Link to the Landuse Framework?



Questions?

A Partnership that Produces Results!



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