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# Alberta Crown Land Disposition Mapping (DIDs)

## Transforming Land Management with a Digital, Standardized Disposition Framework

In 2005, the **Government of Alberta** partnered with **MNC (Martin Newby Consulting Ltd.)** to modernize the province's management of **Crown land dispositions** (A lease, permit, easement, or other legal right to use federally owned land) through the development of the **Digital Integrated Dispositions (DIDs)** system. This foundational project replaced outdated mylar township maps with a geospatially accurate digital mapping framework to manage over 435,000 active land dispositions, including leases, permits, and easements.

To further enhance regulatory capabilities, MNC later introduced **DIDS+**, a powerful extension of the system that added client information, regulatory attributes, and land-use classifications. This upgrade enabled real-time tracking of industrial, agricultural,

and commercial land activities across the province, enhancing operational oversight and compliance monitoring.

The DIDs/DIDS+ system established a standardized, province-wide spatial data framework that supported a broad range of land uses such as grazing, recreation, resource extraction, and infrastructure development. By improving the accessibility, consistency, and accuracy of disposition data, the initiative empowered government agencies, industry stakeholders, and municipalities to make more informed land use decisions. The project's long-term success and adoption have also positioned Alberta to advance future initiatives such as the Digital Regulatory Assurance System (DRAS), aligning land management with environmental and economic priorities.

### CHALLENGE

Before 2005, Alberta's land disposition system was plagued by inefficiencies that hindered resource planning, compliance, and informed decision-making. Over 232,000 active land dispositions were recorded on aging mylar township maps, many of which were illegible due to overlapping annotations and inconsistent updates. This analog format lacked spatial standardization and could not support modern planning and regulatory processes.

### KEY CHALLENGES INCLUDED:

- **OUTDATED, UNMANAGEABLE MAPPING SYSTEMS:** The province relied on paper-based maps with overlapping annotations, making them difficult to interpret and manage.
- **LACK OF SPATIAL STANDARDIZATION:** Disposition surveys existed in fragmented formats, leading to poor geospatial alignment and complicating integration efforts across agencies.
- **SLOW, MANUAL UPDATE PROCESSES:** Amendments and updates were processed manually, resulting in slow changes that impaired regulatory responsiveness.
- **HIGH MAINTENANCE COSTS AND OPERATIONAL DELAYS:** Municipalities and industries faced escalating costs to interpret, update, and maintain disposition data, resulting in duplicated effort and inefficiencies.
- **REGULATORY AND COMPLIANCE CHALLENGES:** The absence of accurate, accessible, and timely mapping data increased the risk of conflicting land use and compliance violations.

These systemic issues highlighted the urgent need for a scalable, digital solution that could centralize and modernize Alberta's disposition mapping infrastructure.

MNC addressed these challenges by designing and deploying the Digital Integrated Dispositions (DIDs) system, with further enhancements delivered through DIDS+. This modernized mapping infrastructure enabled real-time tracking and management of Crown land dispositions across the province.

## KEY SOLUTION COMPONENTS INCLUDED:

### 1 DATA CREATION AND INTEGRATION:

Over 232,000 historical paper and digital disposition records were converted into Geographic Information System (GIS), compatible formats using AutoCAD (Autodesk), MicroStation (Bentley), and ArcGIS (Esri). These datasets were linked to Alberta Energy's Geographic Land Information Management and Planning System (GLIMPS) database, allowing for automated daily updates on new applications, amendments, and cancellations.

### 2 STANDARDIZED, PROVINCE-WIDE SPATIAL FRAMEWORK:

MNC established a standardized geospatial dataset with accuracy ranging from 5 to 20 meters, depending on surveyed versus unsurveyed land. Disposition types, such as grazing leases and easements, were integrated into a cohesive spatial system, enabling consistent planning and analysis.

### 3 CONFLICT IDENTIFICATION AND RESOLUTION PROCESSES:

A discrepancy flagging system was implemented, complete with standardized codes and workflows for resolving overlaps, plan conflicts, and survey discrepancies, dramatically improving data integrity and reducing potential land use conflicts.

### 4 REGULATORY ATTRIBUTE INTEGRATION (DIDS+)

The DIDS+ enhancement incorporated client information, address data, regulatory codes, and land use purpose indicators. This allowed government agencies and stakeholders to assess compliance, conduct land-use analysis, and perform targeted planning activities with greater precision.

### 5 SUSTAINABLE, USER-PAY MODEL:

MNC introduced a cost-recovery framework in which entities that caused changes to land use were responsible for the associated financial costs to maintain the DIDs product. This model ensured sustainable, ongoing updates without relying on government budget cycles.

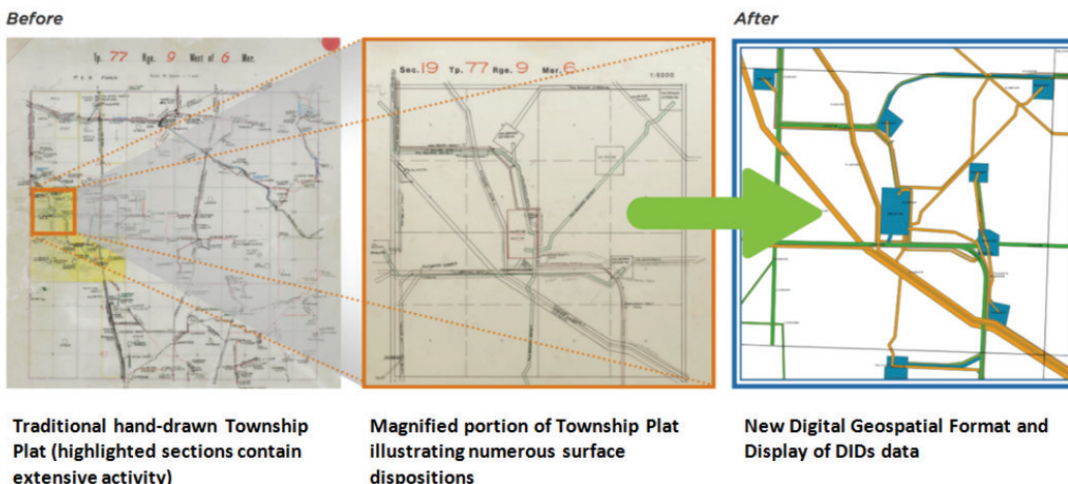


*The spatial data of dispositions informs us of the large amount of activity sanctioned by the province in an easy to integrate manner. Additionally, the DIDs product provides us with an authoritative source of provincial leases on land.*

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### Crown Land Disposition Mapping Was Complex and Cumbersome



# RESULTS

The DIDs/DIDS+ project delivered wide-ranging benefits to Alberta's Crown land administration and set a new standard for digital land mapping.

## KEY OUTCOMES INCLUDED:

**DRASTICALLY IMPROVED UPDATE TIMELINES:** 95% of changes to disposition data are now reflected within one business day, replacing months-long delays under the previous system.

**SIGNIFICANT COST SAVINGS:** Redundant mapping efforts were eliminated, saving municipalities and the province millions of dollars in operational and maintenance costs.

**RESOLUTION OF CONFLICTS:** Over 14,200 conflicts, such as overlapping leases, were identified and resolved, particularly after regulatory reforms were introduced in 2022 under the Land Use Reservation Program (LURP) initiative.

**WIDESPREAD USER ADOPTION AND INTEGRATION:** The availability of GIS/CAD (SHP, GDB, and DWG) files enabled integration with industry-standard planning and emergency response tools, ensuring widespread adoption across both public and private sectors.

**SCALABILITY AND LONGEVITY:** The system expanded from 232,000 to over 435,000 active dispositions, with MNC continuing to provide updates for over 20 years—demonstrating its long-term viability.

**SUPPORT FOR SUSTAINABLE LAND USE AND COMPLIANCE:** Enhanced access to real-time, standardized data, improved land-use planning, regulatory enforcement, and transparency—benefiting industries, government agencies, and the public.

Today, the DIDs/DIDS+ system is considered the authoritative source for Alberta's Crown land disposition mapping and is central to the province's continued innovation in land governance and environmental oversight.

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# 14,200+

CONFLICTS IDENTIFIED AND RESOLVED.

# 435,000+

ACTIVE DISPOSITIONS.

## MNC SERVICES & TECHNOLOGY USED

### SERVICE CATEGORIES:

- Data Conversion/ Migration
- GIS Strategy and Planning
- Parcel Fabric
- Needs and Requirements
- Data Model and Database Design
- Training and Support Services

### TECHNOLOGY PLATFORM & TOOLS:

- ArcGIS (Esri)
- FME (Safe Software)
- MicroStation (Bentley)
- AutoCAD (Autodesk)



**CONTACT US TODAY** to discuss your geospatial needs.

+1 (403) 294-1028 | [mnc@mnc.ca](mailto:mnc@mnc.ca) | [www.mnc.ca](http://www.mnc.ca)

### ABOUT MNC

The Cadastral and Parcel Mapping Experts



MNC is a trusted leader in cadastral and parcel management with 25+ years of experience delivering GeoAI-ready datasets, modernizing parcel fabrics, and automating GIS workflows. As an Esri Gold and Cornerstone Partner with a Parcel Management Specialty and State and Local Government Specialty, MNC provides scalable advanced GIS, ArcGIS Pro, FME automation, MicroStation, AutoCAD and cloud-ready geospatial systems that improve data quality and support government land administration modernization across Canada, the USA, and the Caribbean.





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