



# CASE STUDY

## Prefabricated Geomembrane Lining System (Stormwater Management)

**LOCATION:** Southern Alberta

**PROJECT TYPE:** Supply & Installation

**PRODUCT USED:** 30 mil Prefabricated LLDPE Geomembrane Panels ,  
Nonwoven Geotextile, and Underground  
Stormwater Arch Chambers



### ▼ CHALLENGE:

Growing stormwater runoff challenges in Southern Alberta led to a large-scale stormwater infrastructure initiative aimed at enhancing the region's stormwater management capabilities.

### ▼ SOLUTION:

Based on an analysis of soil composition and water flow, an underground arch chamber system lined with a 24oz. nonwoven geotextile cushion topped with 30mil LLDPE prefabricated geomembrane panels was found to be the best solution.

Titan was selected for this project based on our proven expertise in installing underground stormwater arch chambers and lining systems, couple with our ability to custom fabricate geomembrane panels.





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### ACHIEVEMENT:

To complete this project, Titan field crews first deployed 69,965 ft<sup>2</sup> (6,500m<sup>2</sup>) of nonwoven geotextile and prefabricated LLDPE geomembrane panels (fabricated in-house) to create an impermeable barrier. This robust shield serves to prevent soil and groundwater contamination from potential pollutants. Following this, a total of 1,031 arch chambers were strategically placed in predetermined locations to maximize efficiency in capturing and managing stormwater runoff.

Our team faced unpredictable weather conditions during project execution, which were overcome with modern technology and local collaboration to ensure smooth completion with minimal disruptions.

As a result of this initiative tremendous improvement in the region's stormwater management capacities is being seen. Furthermore the use of stormwater chambers and geomembrane innovation has significantly reduced soil contamination concerns, helping to protect local ecosystems and water resources. Beyond resolving urgent difficulties, this project has laid the groundwork for a comprehensive stormwater management strategy for Southern Alberta while highlighting the effectiveness of a long-term, sustainable solution.

