



**Pipestone Creek**  
**DINOSAUR INITIATIVE**  
*Be part of the legacy*

# Pipestone Creek Dinosaur Initiative

## Background Information



River of DEATH &  
**DISCOVERY**  
DINOSAUR MUSEUM



research tourism education community involvement

## Who discovered the Pipestone Creek dinosaur bonebed?

- Al Lakusta, a Grade 8 science teacher, discovered the bonebed.
- On the Thanksgiving weekend in 1974, Lakusta and friend Ernest Svrcek were exploring the creek bed but this time they went farther upstream than where he previously had taken his Grade 8's on field trips.
- Lakusta thought they would find some plant fossils like he had in the past. Instead they found some dinosaur rib fragments in the creek bed.
- He sent those fossils to the Provincial Museum in Edmonton where they were confirmed as dinosaur bones but misidentified as belonging to a duck-billed dinosaur.
- Hundreds of bones weighing thousands of kilograms were discovered, cleaned, labeled and stored.
- After 3 years of hard work, his permit to excavate was revoked. The Government Act that had previously given him the right to excavate was amended, and he no longer qualified.
- Everything was crated and transferred to the GP Museum, where it sat untouched for years.
- In 1983, Darren Tanke, a technician from the Royal Tyrrell Museum in Drumheller became interested in learning more about the bones collected in the Grande Prairie area after examining Lakusta's field notes.
- The RTM began excavation and discovered that it was one of the most significant bonebeds in North America.
- They later confirmed the bones were from the *Pachyrhinosaurus* genus and were actually a new species of the dinosaur, one not found anywhere else in the world.
- In 2008, the new species was named *Pachyrhinosaurus lakustai*, after its discoverer and in 2009 was nominated in the international IISE's Top 10 New Species.
- All of Al Lakusta's earlier collected dinosaur bones and fossils have been donated to the RTM.



## What is a *Pachyrhinosaurus*? (Pack-ee-rhine-owe-sore-uss)

- Means “thick nosed lizard”.
- More of an instinctual animal instead of intellectual, *more brawn than brains* – sort of a ‘shoot first and ask questions later’ dinosaur.
- Ranged in size from 1 to 8m (26 feet long), its legs were as thick as a man’s waist.
- Around the size of a crew cab pickup truck, with their skull just fitting inside the cab.
- Average of 4 tons, when the animal charged it would be like standing in front of a truck driving 40km/hr – *a prehistoric battering ram*.
- Built low to the ground to help it charge and operated in herds to help fight off fierce predators.
- Large ‘frill’ bone around its neck to protect itself when charging other animals or being attacked.
- Herbivore with strong cheek teeth to help it chew tough, fibrous plants.
- Large horn on its nose as well as smaller unicorn-style horns on the bone just behind their eyes.
- They moved similar to a modern day elephant.

## Why is the museum named RIVER OF DEATH & DISCOVERY?

Over 73 million years ago this region was home to *Pachyrhinosaurus* and other dinosaurs. The animals travelled in large herds, hundreds of animals together, to help protect themselves from predators.

The climate was changing and weather was not as predictable as it once was. A large river, today known as Pipestone Creek, was flooded. The water was rushing and dangerous.

The entire herd of *Pachyrhinosaurus* entered the river, but weren’t able to reach the other side safely. They were good swimmers usually, but swimming across a river alone is much easier than in a large herd. The animals were full of panic and struggled, crushing and drowning each other. Many of the bones discovered showed certain types of fractures that scientists believed are caused from being trampled upon.

The dinosaurs may have entered the river, even though it was flooded, because they were being chased by a predator, perhaps an *Albertosaurus* (Dangerous predator of the time and cousin of the *T Rex*.) Their carcasses were carried downstream and collected in the bends of the river once the waters receded, creating the area today known as the Pipestone Creek bonebed. Their carcasses were also scavenged upon after they were exposed. Shed teeth and teeth marks from *Albertosaurus* were found in the *Pachyrhinosaurus* remains.

The water literally became a ‘river of death’ for the entire herd. The museum name of River of Death & Discovery pays tribute to the mass mortality of the animals, and the ongoing discovery of their remains.

## 3 PHASE PROJECT – PIPESTONE CREEK DINOSAUR INITIATIVE

### PHASE 1 – to access and protect the bonebed.

Will protect and shelter the bonebed excavation activities.

*Project Start: Spring 2010*

*Project Complete: March 31, 2011*

### PHASE 2 – to create a world class 40,000 ft<sup>2</sup> dinosaur museum.

Museum includes visitor services, foyer, theatre, interactive and interpretive display experiences, classrooms, student research laboratory, offices, collections area.

*Project Start: Spring 2011*

*Project Complete: December 31, 2012*

- Develop a sustainable facility using eco friendly construction and operating practices.
- Single story with fully developed basement.
- Exterior look, which is fitting of a world class dinosaur museum, to compel those who travel the route to stop and visit.
- Paved parking lot capable of holding 200 visitors and 30 staff/volunteers.
- Operate a shuttle bus from museum to bonebed.

#### **MUSEUM MAIN LEVEL**

- Public electronic donor recognition –*Wall of Honour*.
- Will include 18,000 ft<sup>2</sup> of exhibit display space –*at least 45% of facility*.
- Theatre to seat 60 with stage and integrated audio/visual equipment.
- Board room for 20 equipped with integrated teleconferencing and audio/visual equipment.
- Cafeteria, gift shop, visitor information.
- Office space, lounge, washrooms for staff and volunteers.

#### **MUSEUM LOWER LEVEL**

- Education centre that houses 2 state of the art classrooms and a student research lab.
- Collections area equipped with:
  - a loading bay
  - appropriate environmental systems
  - ceiling mounted crane system

## **What will the museum's exhibits include?**

Dynamic, state-of-the-art technologies that will appeal to students and the public alike.

The exhibits will educate visitors about:

- The contents of the dinosaur bonebed to help understand the region's natural history.
- Behaviour of the pachyrhinosaurus.
- The mass drowning, the reason the bonebed was formed.
- Evolution of the species and how they lived.
- Reconstruction of the dinosaurs.
- Other animals that lived in the region during the *Age of Dinosaurs*.

## **PHASE 3 – to create an exterior Time Walk.**

**Project Start: Spring 2011**

**Project Complete: December 31, 2012**

- Wrap around the museum and compliment the exterior design of the building.
- Includes display stations that supports the story told within the museum.
- Park bench seating along trail acknowledging major sponsors.
- Accessible - capable of being used by visitors walking, pushing strollers, in wheel chairs or with other mobility issues.
- Easily accessed from both the building and the parking lot.

## **What will the museum do for our community?**

- Significantly contribute to the educational and cultural opportunities in the Peace Region.
- Focus on the bonebed to help visitors understand the region's natural history.
- Create a must-see attraction while raising international awareness and tourism in the region.
- Offer exceptional educational programming at a variety of levels for visitors and students.
- Quality, interactive programs for K-12, general public, peer education and undergraduates.
- Link the region's natural history to the agricultural, oil and gas and forestry riches of today.
- Generate revenue for all levels of government from the museum and other related activities.
- Create a more diverse employment base locally.

## Why support the Pipestone Creek Dinosaur Initiative?

### Tourism & Community Investment

- World class facility will help position region as a tourist destination for students, scientists, researchers, visitors and dinosaur enthusiasts.
- Alberta is the only province with this level of dinosaur resources
- Contributes to the long term development of tourism as a viable sector in the region.
- This world class facility will enhance quality of life for residents.
- Create jobs locally and province wide.
  - During construction - 352 person years with 163 of these being local
  - Once operational - 112 person years with 87 of these being local
- Generate tax revenue for all levels of government, including local.
  - The project will yield \$11.3M in tax revenue of which \$7.0 will result from local activities.
- Tax revenue from construction :
  - Federal Government - \$7.4M
  - Provincial Government - \$2.9M
  - Local Governments - \$1M

### Research & Education

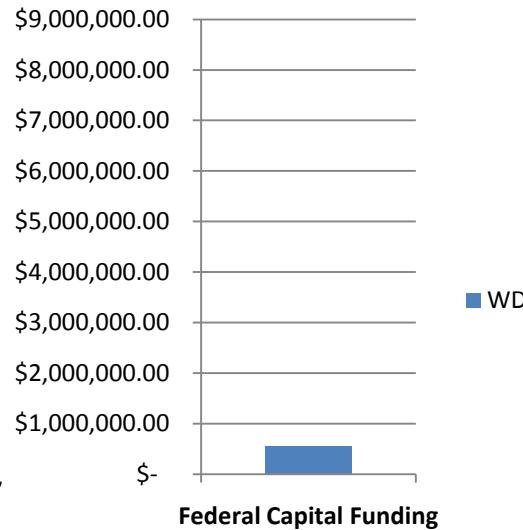
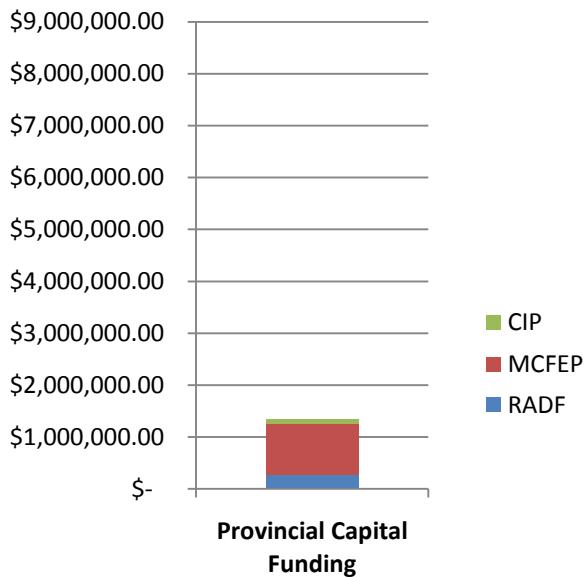
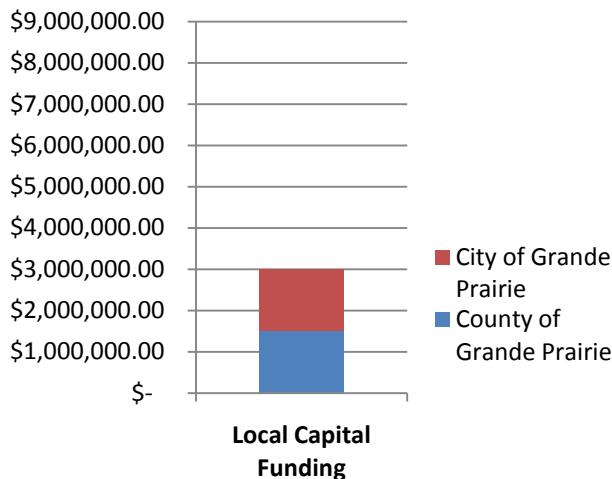
- Unique research opportunities will attract paleontology students to the Peace Region.
- Education programs and hands on experience for K-12, general public and post secondary students.
- Scientific research, education and interpretive programming will enhance paleontological exploration and Northwest Alberta's prehistoric story.

### How will it be funded?

The capital project funding strategy will seek a 1/3 contribution from each the Federal Government, Provincial Government and local area.

- Develop a long-term funding plan that includes a partnership with government
- Create a sustainability strategy:
  - *Government based partners*
  - *Efficient, green operations with minimal staff*
  - *Self sufficient education program*
  - *Create an endowment fund and ongoing donor recognition program*
  - *Good business practices to ensure profits from admissions, gift shop and cafeteria*

## Project Capital Funding Goals



**PCDI Donors from 2003 – 2010**

<b>Government of Canada</b>	<b>\$616K</b>
<i>Western Economic Diversification</i>	<i>\$540K (Designated to Phase I)</i>
<i>SMEDA</i>	<i>\$40K</i>
<i>Community Futures</i>	<i>\$36K</i>
 <b>Province of Alberta</b>	 <b>\$3.67M</b>
<i>MCFEP</i>	<i>\$1M (Designated to Phase I)</i>
<i>CIP</i>	<i>\$75K</i>
<i>AB TOURISM</i>	<i>\$120K</i>
<i>Road Construction</i>	<i>\$2.44M (Wembley area)</i>
 <b>County of Grande Prairie No. 1</b>	 <b>\$3.3M</b>
<i>Capital</i>	<i>\$1.5M (\$128K for Capital Phase I, balance to Phase II)</i>
<i>Land Purchase</i>	<i>\$197K (land adjacent to the bonebed)</i>
<i>Operating</i>	<i>\$46K</i>
<i>Road Construction</i>	<i>\$1.6M (Wembley area)</i>
 <b>City of Grande Prairie</b>	 <b>\$1.56M</b>
<i>Capital</i>	<i>\$1.5M</i>
<i>Operating</i>	<i>\$60K</i>
 <b>Others</b>	 <b>\$2.24M (only \$262,500 available for Capital)</b>
<i>RADF</i>	<i>\$1.89M (\$262,500 designated to Capital Phase I)</i>
<i>ENCANA</i>	<i>\$150K</i>
<i>PREDA</i>	<i>\$80K</i>
<i>KALDON Construction</i>	<i>\$50K</i>
<i>Grande Prairie Regional College</i>	<i>\$1.5K</i>
<i>Grande Prairie Chamber of Commerce</i>	<i>\$51K</i>
<i>M.D. Greenview</i>	<i>\$5K</i>
<i>Town of Sexsmith</i>	<i>\$5K</i>
<i>Town of Wembley</i>	<i>\$5K</i>
<i>Town of Beaverlodge</i>	<i>\$5K</i>

**Total project cost: \$37.2 M**

**2003-09 site development: \$4.3M**

**Capital Project: \$26.4M**

**Endowment Fund: \$6.5M**

## ***What are the next steps?***

- Create a non-profit society and Board of Directors.
- Engage the Provincial and Federal Governments as full and equal partners.
- Create a sustainability strategy and good business practices for museum.
- Establish partnerships with major post-secondary education institutions.
- Raise awareness in the community and gain support.
- Engage sponsors and secure the local capital funding required for the project.

## ***What are the timelines?***

**Reach capital fundraising goal** **Oct 31, 2010**

### **Bonebed – Phase 1**

• Proceed with work	<u>Feb 2010</u>
• Complete	<b>Mar 31, 2011</b>

### **Museum - Phase 2**

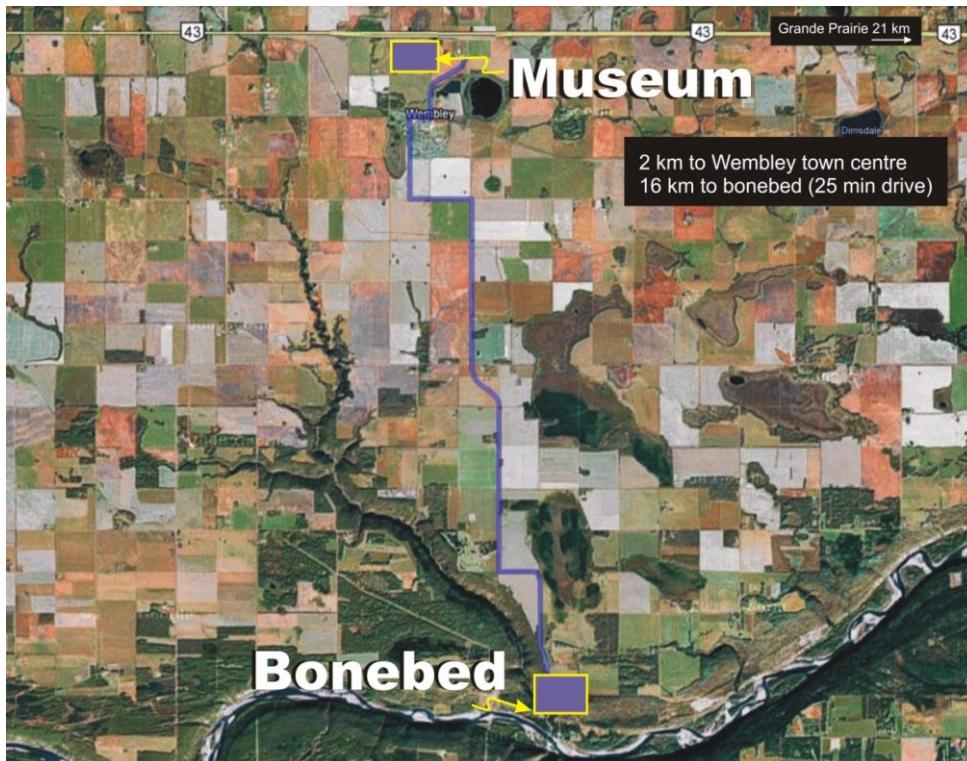
• New Location	Feb 2010
• RFP Designers	Mar 2010
• Select Designers	Jul 2010
• Tender Construction	Jan 2011
• Begin Construction	<u>Spring 2011</u>
• Grand Opening	<b>Dec 31, 2012</b>

### **Time Walk – Phase 3**

• Tender Construction	<u>Jan 2011</u>
• Complete	<b>Dec 31, 2012</b>

## Where is the new location of the museum?

- 10 acre parcel of land provided by the Town of Wembley, within its northern corporate limits.\*
- Adjacent to Hwy 43, along the heavily travelled *Alaskan Highway*.
- 8000 vehicles per day travel that section of hwy; goal is to attract a minimum of 1%.
- Situated 16 km north of the Pipestone Creek bonebed, a 25 min drive. \*\*



## ***Why move the museum from its original proposed location?***

The original intention was to build the museum on the hilltop at Pipestone Creek, overlooking the bone bed. Once soil tests were completed, the original site would no longer be an option because of land stability issues. The process of finding a new site and building concept began. A new location and facility design that would ensure and support the long term sustainability of the museum was key.

## ***What was the selection process for the new museum location?***

There were many factors taken into consideration before a final new museum site was selected.

Some of the evaluation criteria included:

- proximity to the bonebed itself,
- access to municipal services like water and sewer,
- distance to flow thru traffic, can visitors see and access the site easily,
- future taxation and long term sustainability,
- proximity to other tourist related facilities and services i.e. hotels, campgrounds, gas stations or restaurants.

These considerations, in addition to other criteria relating to site development, were passed on to a local engineering consulting firm. ISL Engineering conducted an independent assessment of each proposed site using the evaluation factors mentioned above.

Of the 7 sites considered, the new location had the highest level of suitability. It is a 10 acre site provided by the Town of Wembley. It's adjacent to Hwy 43, 2 kilometers north of the Town's centre but within its northern corporate limits. It is highly visible from the heavily travelled Alaskan highway and is close to the road network leading to the bonebed.

## ***Donor Rewards and Recognition***

- Support from the community is key to the success of this project.
- Many levels of sponsorship available with each offering numerous rewards and recognition for the donor.
- Gift in Kind donations may be considered at or above the *Supporter* level.
- Contact the Pipestone Creek Dinosaur Initiative to learn more about in-kind contributions or the *Donor Rewards & Recognition* program.