



Central Peace Regional Water Supply Project



Progress Update

June 20, 2024

Overview Outline

- Background
- River Intake and Pumping Station Location
- Permits
- Pipeline Alignment
- Challenges
- Regional Hub Water Plant Location

Background

The scope of the Central Peace Regional Water Supply System project is to provide a regional water system for the G5 group of municipalities consisting of:

- Birch Hills County
- Municipal District of Spirit River
- Saddle Hills County
- Town of Spirit River
- Village of Rycroft



Background - Continued

The overall project is divided into six phases:

1. **Construct an intake on the Peace River close to the Dunvegan Bridge**
2. **Construct raw waterlines to the Town of Spirit River and the Village of Rycroft**
3. Construct a regional hub water treatment plant
4. Convert raw waterlines from the regional hub to communities to potable waterlines
5. Extend raw waterlines from the Town of Spirit River to water treatment plants at Ksituan, Savanna, and Bonanza
6. Extend potable waterlines to Wanham and Woking and upgrade the pipeline from Wanham to Tangent



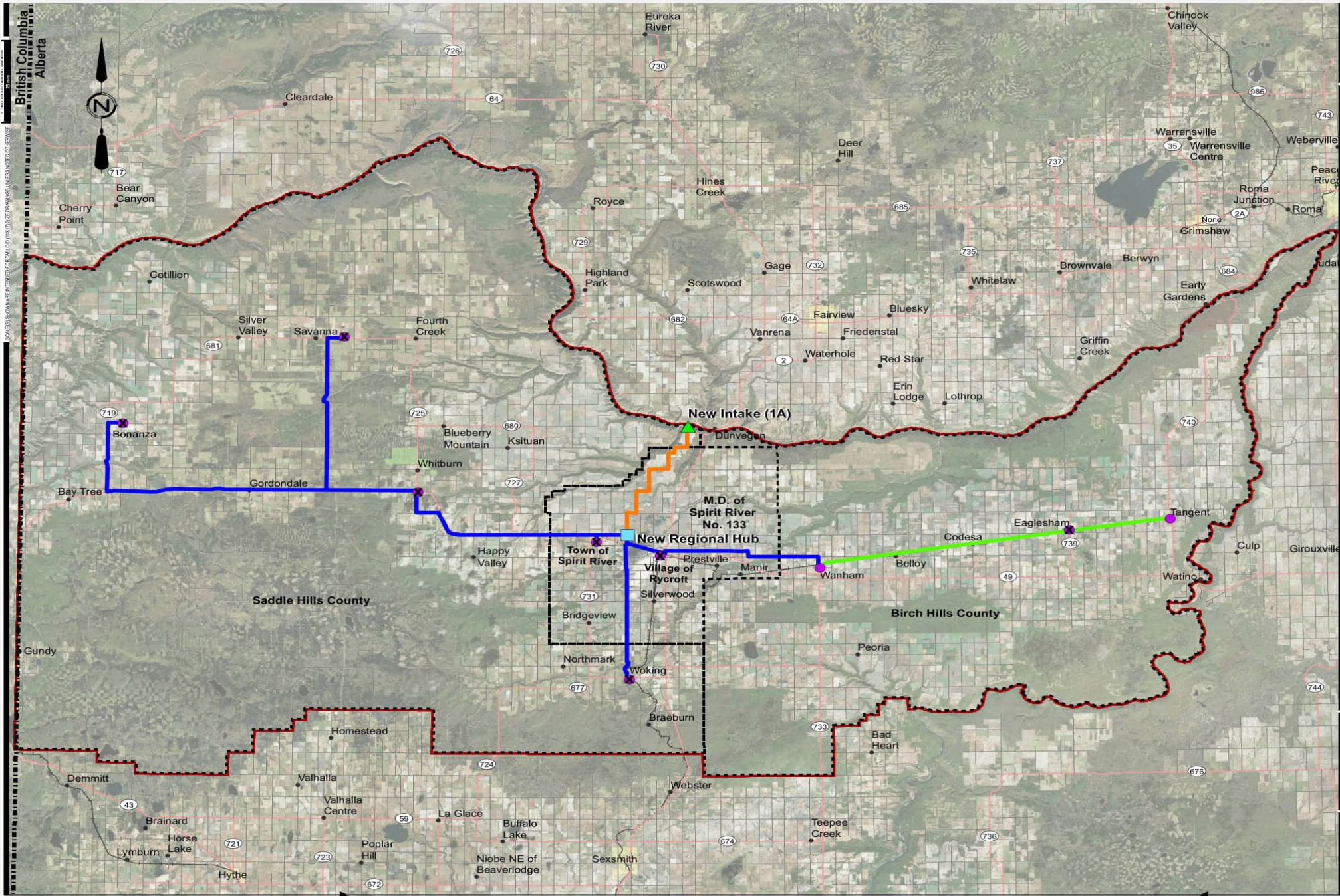
PEACE RIVER ALBERTA

by ELAINE MANLEY

MEMBER SINCE APRIL 2011

pixels.com/profiles/elaine-manley





British Columbia
Alberta



SCALE: 1:50,000 (AS SHOWN ON MAP) (1:100,000 AS SHOWN ON INSET MAP) (1:250,000 AS SHOWN ON OVERVIEW MAP)

Saddle Hills County

Birch Hills County

New Intake (1A)

M.D. of Spirit River
No. 133

New Regional Hub

Town of Spirit River

Village of Rycroft

Eagleham

Tangent

Cherry Point

Bear Canyon

Cottillion

Silver Valley

Savanna

Fourth Creek

Highland Park

Scotswood

Gage

Fairview

Bluesky

Whitelaw

Brownvale

Berwyn

Early Gardens

Griffin Creek

Bay Tree

Bonanza

Gordondale

Whitburn

Blueberry Mountain

Ksituan

Dunvegan

Happy Valley

Bridgeview

Northmark

Woking

Braeburn

Prestville

Manir

Wanham

Belloy

Codesa

Peoria

Watino

Culp

Girouxville

Gundy

Demmitt

Brainard

Horse Lake

Lymburn

Hythe

Valhalla

Valhalla Centre

Poplar Hill

La Glace

Buffalo Lake

Niobe NE of Beaverlodge

Sexsmith

Webster

Bad Heart

Teepee Creek

Peoria

Woking

Watino

Culp

Girouxville

Eureka River

Chinook Valley

Cleardale

Royce

Hines Creek

Deer Hill

Warrensville

Warrensville Centre

Weberville

Peace River

Roma Junction

Roma

Nona

Grimshaw

737

743

717

729

682

64A

2

732

735

685

684

681

725

680

727

740

740

719

731

677

739

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744

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736

676

Background - Continued

- Saddle Hills County is the managing partner
- Funding provided through the Investing in Canada Infrastructure Program (ICIP)
- Original project budget for phase one and two **\$40,000,000**: \$16 million provided by ICIP, \$20 million by Provincial Government, and \$4 million by the G5 municipalities
- New project budget estimated at **\$103,430,000**
- Applied for an additional \$57,000,000 provincial grant
- Received an additional \$22,700,000 in June/2024

Background - Continued

Under the scope of work for the current project MPE Engineering Ltd. is providing Engineering Services for the first two phases of the overall project:

Phase 1: New Raw Water Intake on the Peace River and a Raw Water Pumping Station

Phase 2: Raw Water Pipeline to the Town of Spirit River and the Village of Rycroft

River Intake and Pumping Station Draft Design

River Intake:

- Designed to last 75 years
- Intake pipe is 400 mm in diameter
- Located approximately 1/3 of the way into the river
- Two intake pipes facilitate maintenance
- Inlet louvres installed to protect fish from entering the intake

Raw Water Pumping Station:

- The well is 27 meters deep
- Pumping pressure up the hill will approach 500 psi
- Purchased land from TransAlta



- NOTES:
1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWING.
 2. ALL ELEVATIONS, STATIONS, PIPE LENGTHS AND DIMENSIONS IN METRES AND PIPE SIZES IN MILLIMETRES UNLESS NOTED OTHERWISE.
 3. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
 4. THE CONTRACTOR SHALL CALL ALBERTA ONE-CALL AT 1-800-242-3447 AT LEAST THREE (3) WORKING DAYS PRIOR TO BEGINNING ANY EXCAVATION OR REMOVALS.
 5. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM THE LOCATION AND ELEVATION OF ALL RELEVANT EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY LINE CROSSING WITH UTILITY COMPANIES.
 7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE BARRICADES, CONSTRUCTION SIGNAGE, TRAFFIC CONTROL, AND FLAG PERSONS.
 8. THE CONTRACTOR IS RESPONSIBLE FOR MEETING OCCUPATIONAL HEALTH AND SAFETY REGULATIONS.
 9. AIR PHOTO SHOWN MAY NOT BE COMPLETELY ACCURATE.
 10. LINE ALL DITCHES WITH COMPOSITE TURF REINFORCEMENT MATTING.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 22"x34" FORMAT DRAWINGS

1	22-03-29	FOR PRELIMINARY APPROVAL
ISSUE	YY-MM-DD	REVISION



SADDLE HILLS COUNTY

CENTRAL PEACE REGIONAL WATER SUPPLY

RIVER INTAKE AND PUMPING STATION CIVIL

PUMPING STATION SITE PLAN

DESIGNED	O.S., H.O., S.K.	JOB	S201-005-00
DRAWN	B.W.	SCALE	1:500
DATE	JUNE 2022	DRAWING	C1.4

Permits

- *Water Act* permits for river geotechnical testing, ice bridge platform, intake design and pumping station
- *Public Lands Act* permits for the river intake, pipeline on Crown land, and crossing Dunvegan Creek
- Wetland restrictions around the pipeline and the Regional Water Treatment Plant site
- Restricted Activity Period (RAP) regulations to protect migratory songbirds
- Fish and Habitat Environmental Assessment
- Historical Resources Impact Assessment
- Water Diversion Licence

Pipeline Alignment

- Most of the pipeline located on private land
- Waterline is within a 20 to 30-meter easement
- There are four main sections:
 1. Peace River Valley – 350 mm diameter steel pipe buried up to 40 meters to avoid the slide zone
 2. Top of Valley to Regional Hub – 450 mm HDPE pipe
 3. Regional Hub to Rycroft – 300 mm HDPE pipe
 4. Regional Hub to Spirit River – 300 mm HDPE pipe

Challenges

- Designing pipeline through the Peace River Valley and its slide zones
- Land acquisition and waterline easements
- Engineers and contractors with limited experience building intakes in large rivers
- Working with five municipal governments to build and operate regional water lines
- Multiple engineering specialists to coordinate
- Dealing with various levels of government to acquire permits
- Meeting all the regulatory requirements
- Building a three-phase powerline from Rycroft to the pumping station at the river
- Designing a 27-meter-deep pumping station
- Designing an intake in a large river
- Substantial cost increases





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