Malloy Drain

"Water doesn't collaborate, but people can!"

or

Water crossing Human Designed Boundaries

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Outline

- Introductions
  - Kalen Hastings
  - Ann Mitchell
  - Terrence Lazarus
- History of Malloy
- Malloy Drain location and district boundaries
- Construction Phases
- Conclusions

Workable Options?

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Workable Options?

Collaboration NOT Walls

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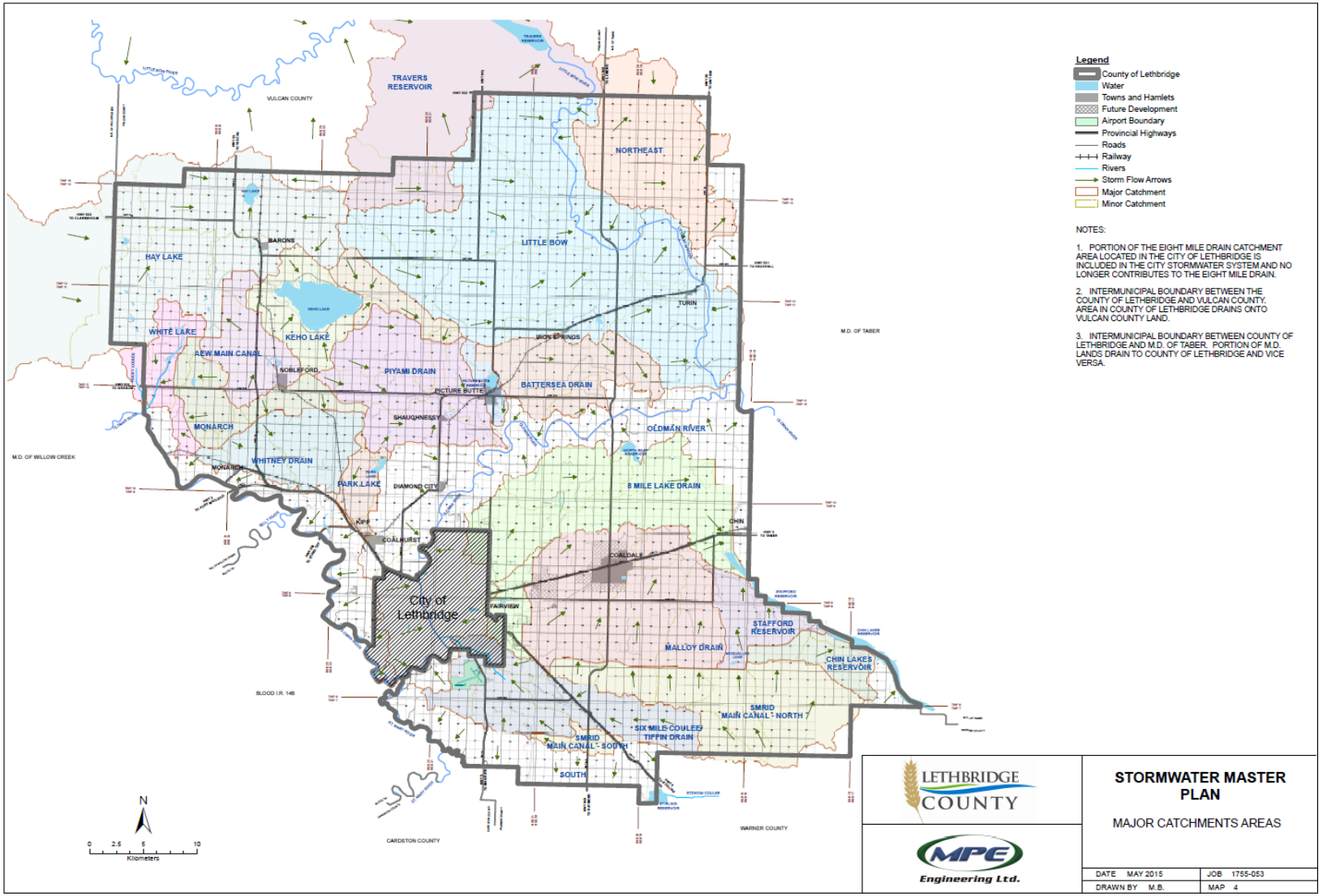
Malloy Drain Partnership



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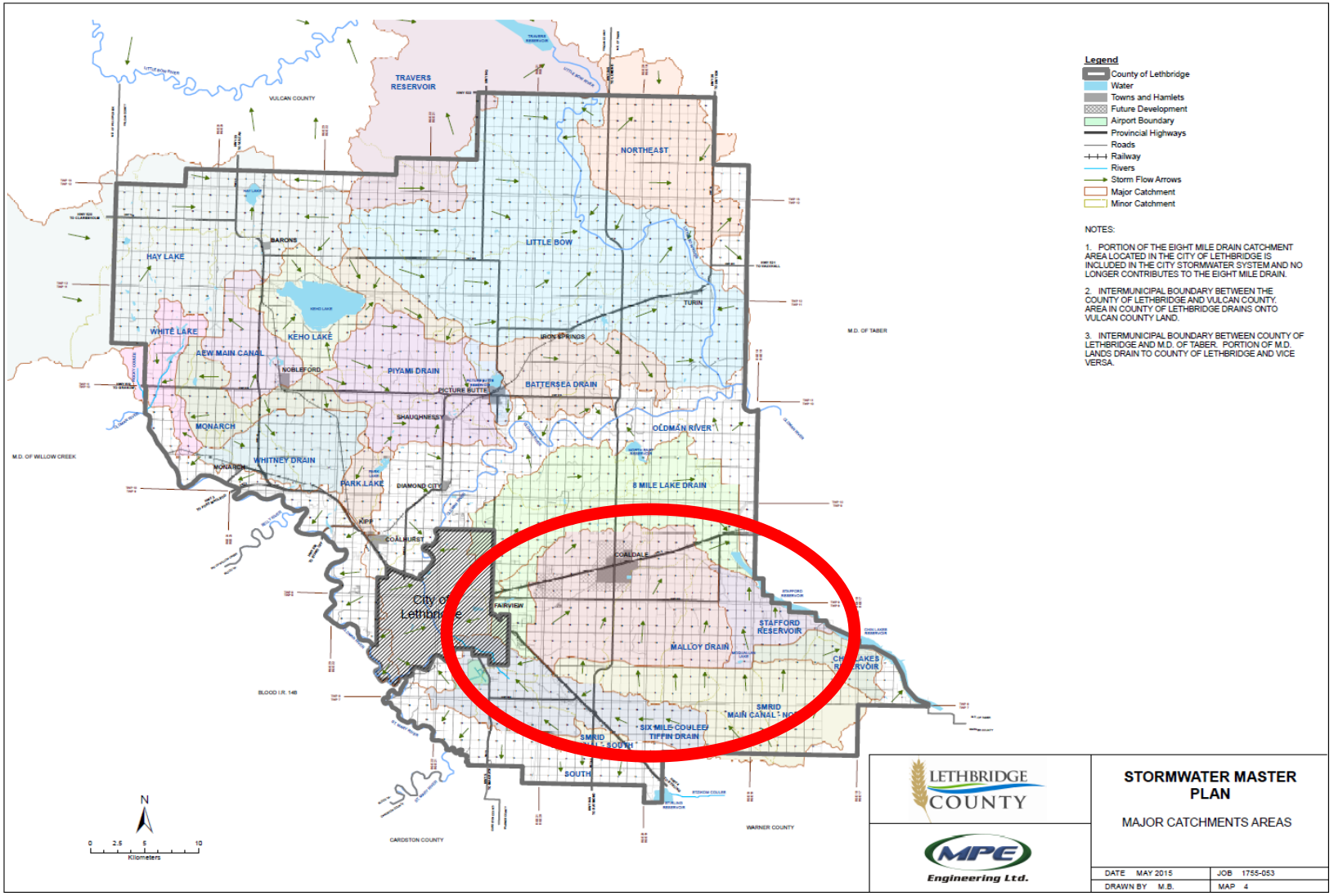

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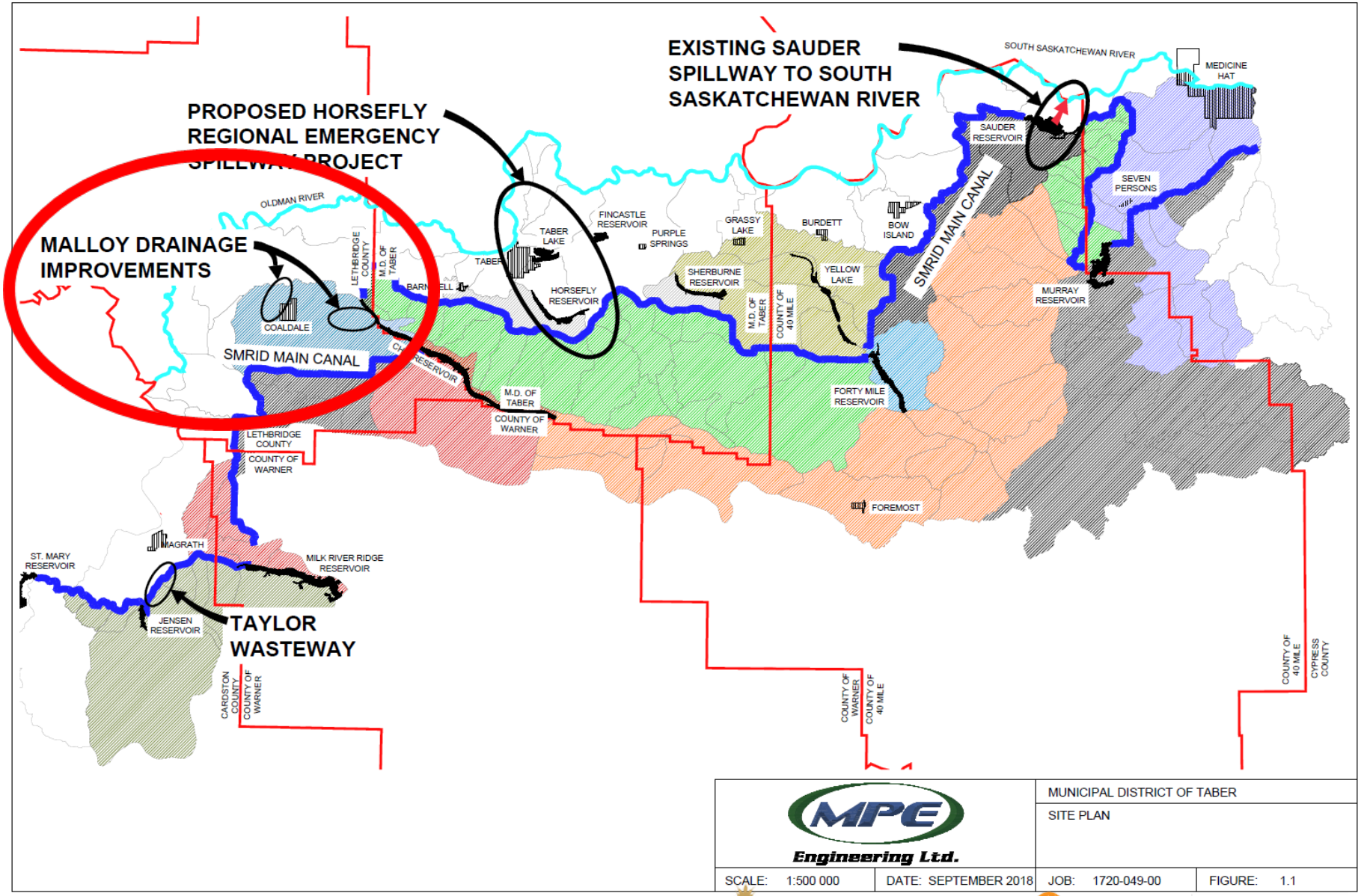

MPE Engineering Ltd.		MUNICIPAL DISTRICT OF TABER	
		SITE PLAN	
SCALE: 1:500 000	DATE: SEPTEMBER 2018	JOB: 1720-049-00	FIGURE: 1.1

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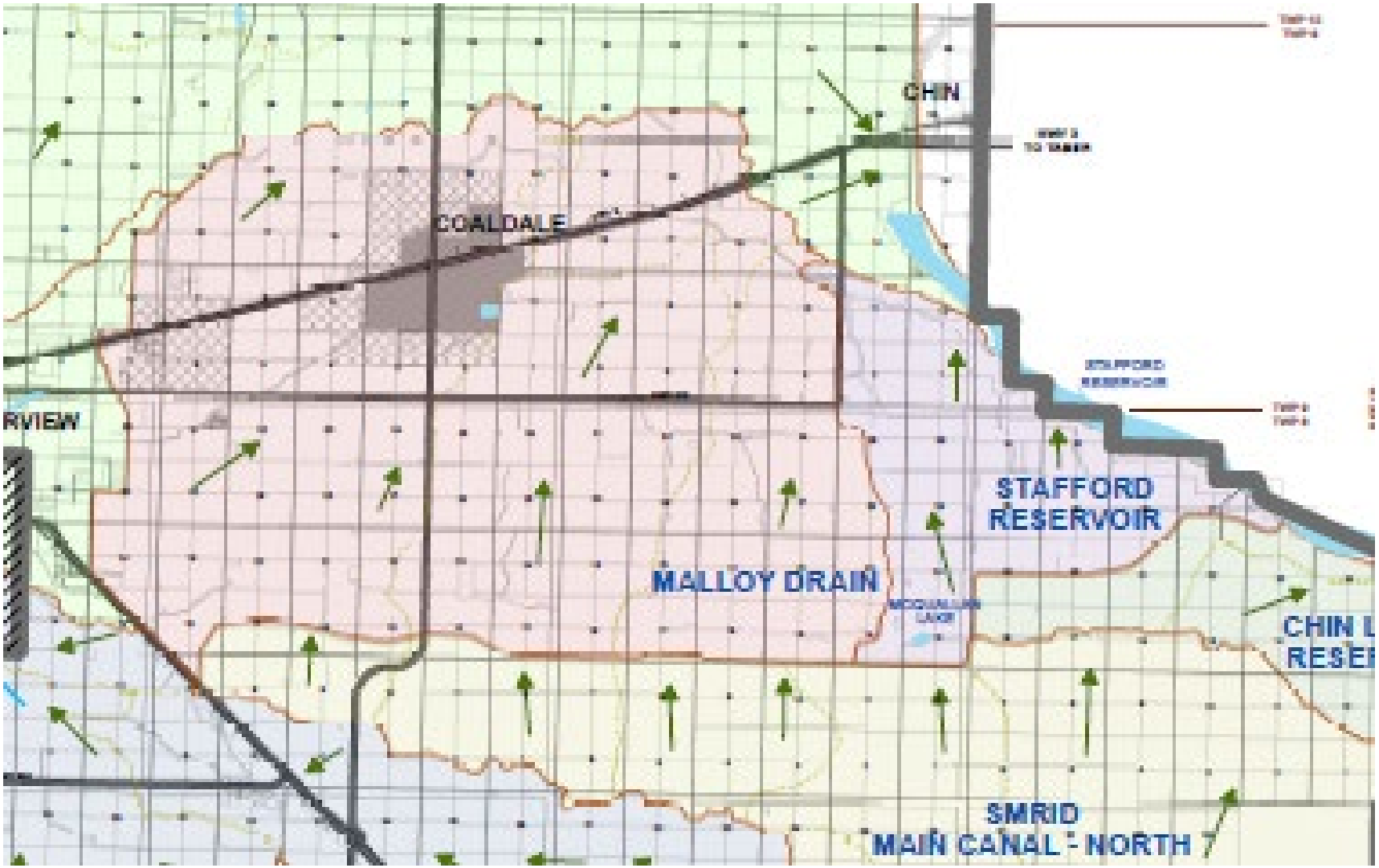

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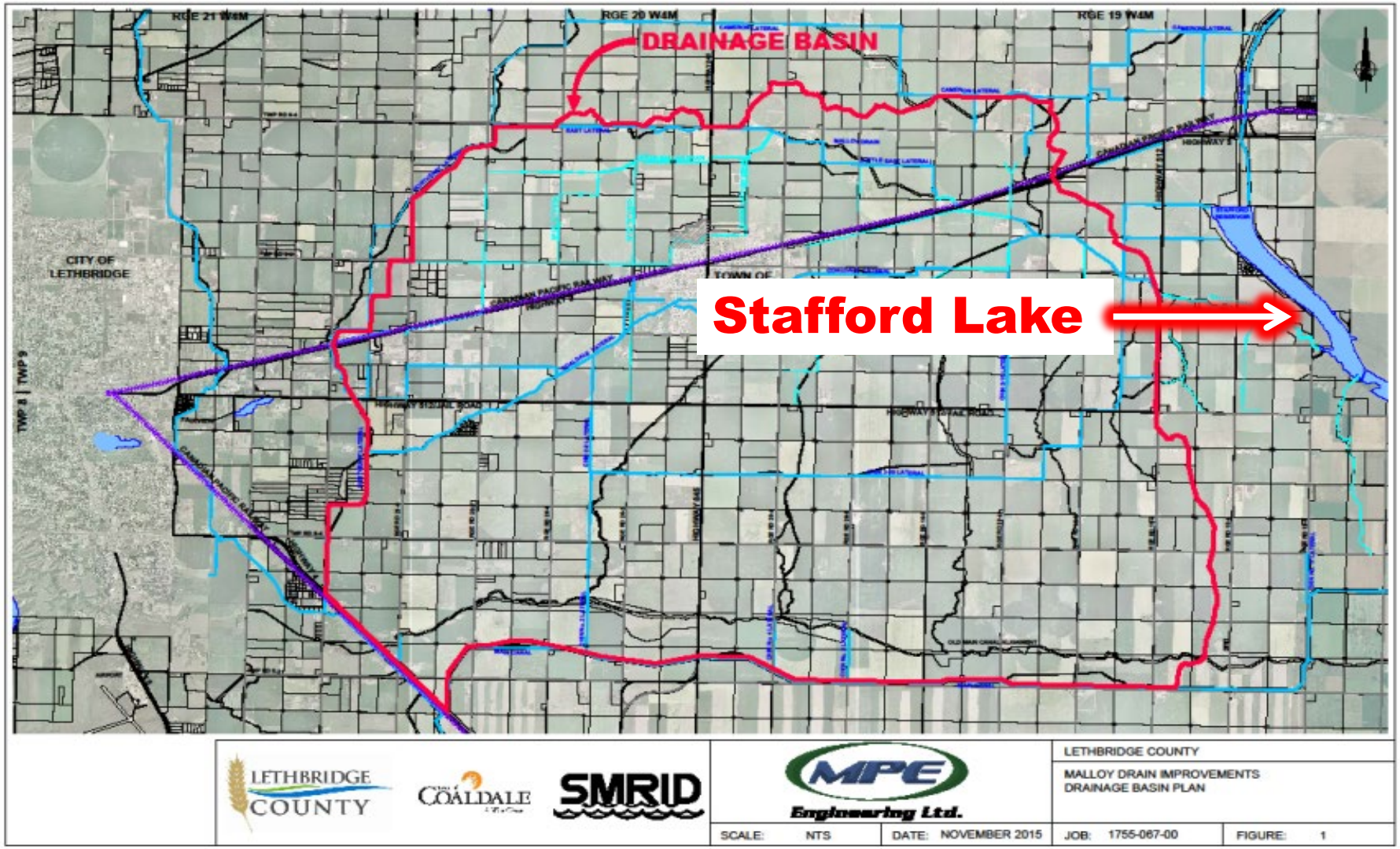

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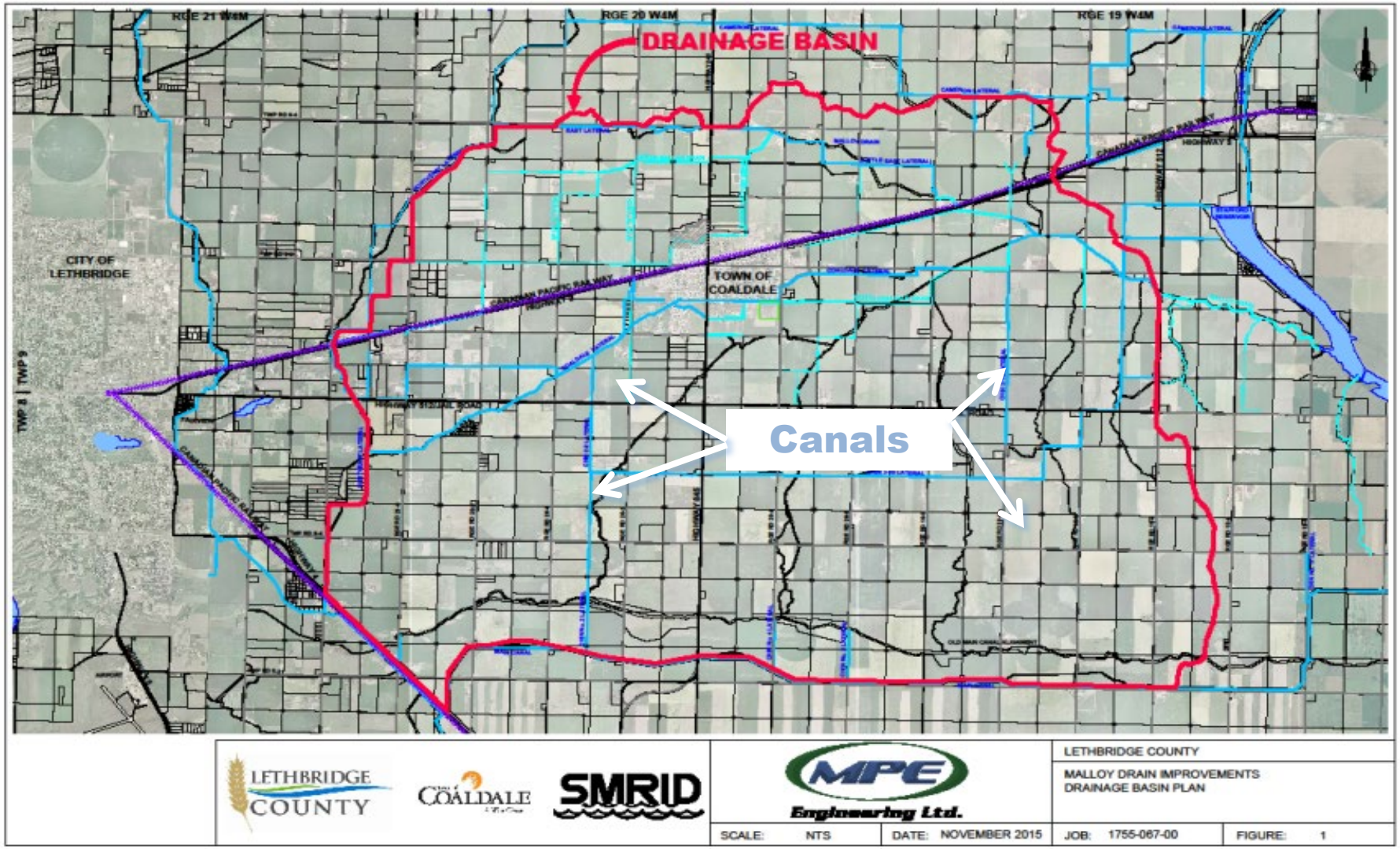

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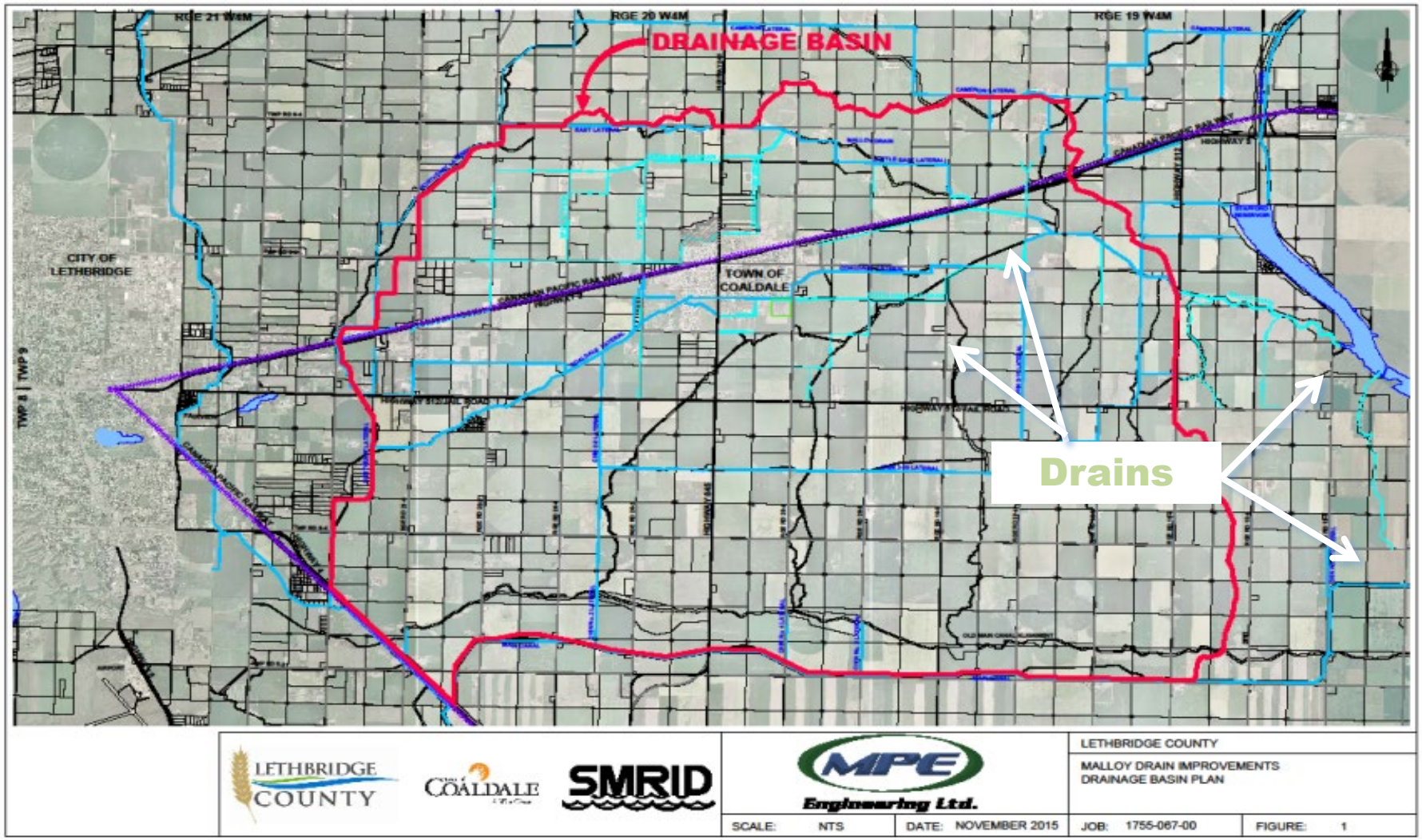

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Malloy Drain Partnership

- Total area of approximately 21,600 ha or 53,500 acres.
- Return flow period of 1:20 is 2.0 l/s/ha.
- About 3.7 million m^3 / day.
- 17% of storage of Stafford Reservoir.

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Malloy Drain Partnership

- **Major Rainfall Events becoming more common:**

Key Rainfall Events

Year	Period	Precipitation (mm)	Storm Duration
1978	August	140.5	30 days
1995	June 6	55.0	24 hours
	June 1 - 30	102.4	30 days
2002	June 8 - 10	174.8	72 hours
	June 1 - 30	251.2	30 days
2005	June 1 - 30	272.0	30 days
2010	Apr 1 - 30	85.5	30 days
	May 1 - 31	123.0	31 days
	June 1 - 30	127.5	30 days
	Apr - June	*336.0*	*3 months*
2014	June 17	72.5	24 hours
	June 11 - 19	148.2	9 days

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Malloy Drain Partnership

HISTORY

- After 2002 event, the Town, County and SMRID elected officials and administrations begin discussions on the Malloy Basin drainage issues.
- The three parties jointly retain MPE Engineering on October of 2003 to undertake the initial Malloy Drain Study.
- In 2008 joint meetings of elected officials not making any progress – Steering Committee formed.

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Malloy Drain Partnership

- Steering Committee made up of:
- Two elected reps with voting capacity each from:
  - SMRID Board
  - Lethbridge County
  - Town of Coaldale
- Senior Manager from each agency.
- Reps with advisory capacity from:
  - Alberta Environment
  - Alberta Transportation

Malloy Drain Partnership

- Work on Malloy Drain Master Drainage Plan commences 2009.
- The Terms of Reference for the Committee approved and adopted June – July 2010.
- Technical Committee comprised of CAO's, senior operations and technical managers from each agency plus engineering consultant reps.
- Alberta Environment requires that the Town and County sign Water Conveyance Agreements with the SMRID.

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Malloy Drain Partnership

- The District is the owner and operator of The Malloy Drain
- The Town and County have caused or diverted flow into the Malloy Drain.
- Neither the Town or County have received licences or permits under the *Water Act* nor authorization from the District.
- The agreement is pursuant to Section 21 of the *Irrigation Districts Act* authorizing the use of the Malloy Drain for drainage.
- MOU detailing continued joint use, operation, maintenance and rehabilitation of the Malloy Drain.

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Tri-Party Agreement – Phase 1

- Detail Project Management Responsibilities.
- Detail Cost Sharing for unfunded portion.
- Other Legalities.
- Future / Subsequent Phases

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Phase 1

- Completed Spring 2016 on schedule and under budget

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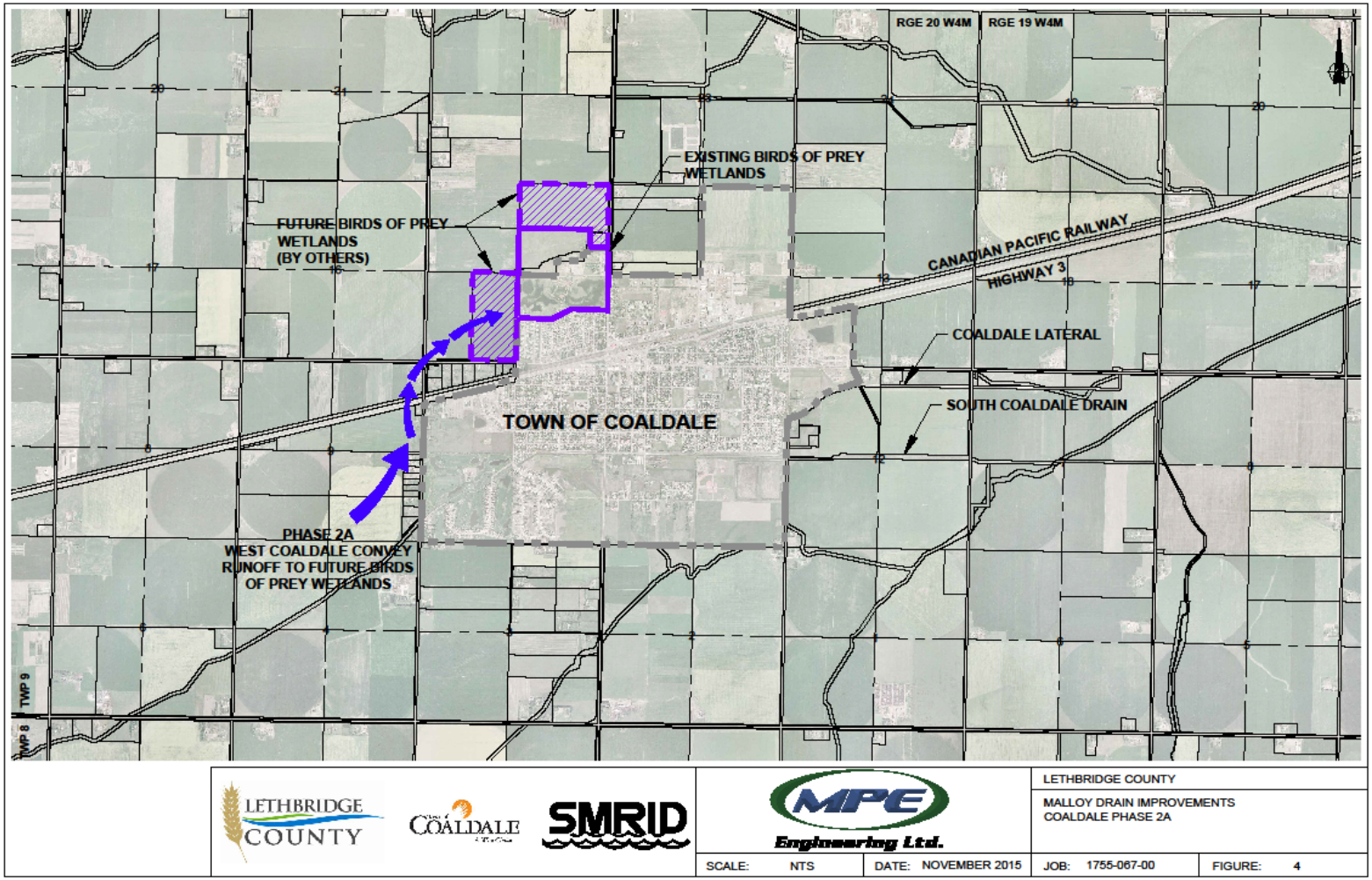
Phase 2A



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Phase 2A

- ACRP Funding Application for 2016-17 Construction
- Approved total budget of $5,400,000
- Three party individual share $340,000
- Inclusion of Birds of Wetland Component

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Phase 2A

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Phase 2A

Phase 2A

Phase 2A

Future?

- Incorporation of Bike Path
- Wetland Park for Public access

Lessons Learned

- Develop a rigorous project vision and mandate that would ensure success by identifying:
- The greater good of all
- Project phases should be decided by science and engineering, not politics;
- Project design should incorporate value-added elements wherever possible
- Flexibility - budgets are a moving target;
- Keep your eyes on the horizon as a way to avoid the pitfalls of group work "sea sickness";
- Collaboration “a choice that one consciously makes to practice; it doesn't appear magically; it is, more than anything else, a matter of the will”.

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