

NRDRWSC Waterline Extension Project Plan

Revision 1.2

Revisions

Revision #	Date Approved	Description
1.0	May 17, 2021	 Accepted as information
1.1		 Added to Phase 2 Deliverables: Updated CRD Supply Agreement
		Added ACP and Funding Grant deadlines
		 Board direction to proceed with Phase 1 May 17, 2021
1.2	September 13, 2021	 Board direction to proceed with Phase 2 September 13, 2021 Phase 1 Complete
		2. Fliase 1 Complete

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Introduction

The Administration has attempted to lay out a high-level project plan to extend the waterline to Ermineskin Cree Nation. This is a large, complex project, but this report hones in on the most critical aspects, so the Board is well informed on how the project would generally play out. The plan organizes the project into eight major milestones or phases. As (if) the project advances through each phase, plan revisions will be required to adapt to new information.

Project Phases

The eight phases that make up the project plan are:

- Phase 1: Governance options review
- Phase 2: ECN agreement
- Phase 3: Funding agreement
- Phase 4: Assembling a team
- Phase 5: Design, construction documents, and updated cost estimates
- Phase 6: Contract tender and award
- Phase 7: Construction, system commissioning and water-on
- Phase 8: Project closeout, normal operations

The preliminary estimate to water-on from the start of Phase 1 is 41-60 months.

The Commission approved Phase 1 in May 2021. Administration targets bringing the governance options report to the Board in the fall of 2021. This would also permit the forthcoming Bylaw 1 amendments to be considered in advance of Phase 2.

Project Budget

In the <u>2019 First Nations Feasibility Study</u>, Stantec Consulting estimates the project cost to be \$30M to \$42M. The currently unexecuted grant agreement with Alberta Transportation confirms 100% of the project's capital costs are grant eligible. The agreement uses \$38.9M as the current project budget.

Phase 1: Governance Options Review - Complete

Description: Administration will prepare a report outlining three governance and financial scenarios for the extension of the NRDRWSC system:

- 1. Full membership: like existing members, ECN is a full voting member of the Board and has system ownership share. NRDRWSC builds and operates the waterline extension to ECN's border. This is ECN's strong preference.
- 2. Customer: ECN is a customer of the NRDRWSC; it pays a rate for water purchased and does not have any system ownership share. NRDRWSC builds and operates the waterline extension to ECN's border. The terms and conditions of a customer agreement can resemble the existing membership agreements or be significantly different. For example, a customer agreement may have variable rates based on the actual volume of water purchased. A customer would typically not "buy in" to the system; instead, it typically pays a higher rate.
- 3. 3rd Party Ownership: This is a variation of the customer scenario described above, except the NRDRWSC does not build and operate the waterline extension. The NRDRWSC agrees to supply water to the owner of the waterline extension (e.g. Alberta, ECN, a Regional Services Commission). This is not the scenario contemplated by Alberta nor ECN.

Startup trigger:

✓ Board resolution to proceed with the governance options review. (Board approved May 17th, 2021)

Deliverables:

✓ Report outlining three governance and financial scenarios as described. (Presented to the Board September 13th, 2021)

Important considerations: Administration will need to engage a third-party expert to support its review at an estimated cost of \$5,000 - \$8,000, an eligible cost under the Commission's existing Alberta Community Partnership Grant. **The ACP Grant expired December 31**st, **2021.**

Estimated time: 4 months - Complete September 13th, 2021

Phase 2: ECN Agreement - Underway

Description: Administration will engage ECN to confirm the terms and conditions of membership (or customer) with the NRDRWSC. The existing membership agreement will be used as a basis for a draft agreement with ECN. The Administration will present the draft agreement to the Board for endorsement.

Startup trigger:

- ✓ Board resolution selecting its preferred governance option.
 On September 13th, 2021 the Board resolved:
 "that the Board endorses the full membership of Ermineskin Cree Nation governance option for the system expansion upon completion of the waterline extension."
- ✓ Board resolution to proceed with Phase 2.

 On September 13th, 2021 the Board resolved:

 "that the Board proceeds to Phase 2 of the Project Plan and directs

 Administration work with Ermineskin Cree Nation to draft a membership agreement for the Board's consideration."

Deliverables:

- Board endorsement of the draft ECN agreement.
- Board endorsement of the City of Red Deer supply agreement amendment.
- Final, signed ECN agreement
- Receipt of the buy-in payment.
- Participation in a traditional ceremony.

Important considerations:

- Rates
- Membership or customer relationship
- Payment terms
- Metering
- Operations responsibilities
- Dispute resolution
- Minimum/maximum flows
- Buy-in payment
- Bylaw 1 amendments
- The ACP Grant expired December 31st, 2021 extension to end 2022 requested

Estimated time: 4 months

Phase 3: Funding Agreements

Description: Administration will sign off on the funding agreement with the Government of Alberta, secure start-up funding to cover project costs to the end of Phase 4 and confirm project reporting requirements.

Startup trigger:

• Board resolution to proceed with Phase 3.

Deliverables:

- Final signed agreement w/amended completion date (1n currently states the project must be completed by December 31st, 2022).
- Startup funding/initial draw received

Important considerations:

- Overall funding
- Cashflow
- AT Grant

Estimated time: 3 months

Phase 4: Assembling a Team

Description: The City of Lacombe will hire a project manager to oversee the day-to-day aspects of the project. Administration will also procure the engineering consultant to lead the design, tendering and construction oversight of the waterline extension. This phase also includes the formation of a technical committee empowered to guide the technical and operational aspects of the project.

Startup trigger:

• All Phase 3 deliverables complete.

Deliverables:

- Board endorsement of the City of Lacombe project manager agreement.
- Board endorsement of the engineering services agreement.

Important considerations:

- Alignment with City of Lacombe Procurement Policy or as specified by the Board.
- Funding agreement procurement requirements.
- Amendment to the City of Lacombe Administration agreement to include project management.
- Opportunity to shorten procurement timelines under the North West Partnership Trade Agreement exemptions:

A. GENERAL EXCEPTIONS

- 1. Measures adopted or maintained relating to:
 - (a) Aboriginal peoples;
 - (b) Water, and services and investments pertaining to water;

Estimated time: 8-9 months

- Write PM job description, post PM position, shortlisting, final selection and start date: 2-3 months
- Develop RFP, proposal period, shortlisting, and final selection of engineering consultant: 6 months

Phase 5: Design, Construction Documents, and Updated Cost Estimate

Description: Under the oversight of the project manager, the engineering consultant and technical committee execute the work plan, including engineering, environmental, geotechnical, legal survey, land assembly, and coordinating with ECN's engineers as required. The project manager will advise Alberta Transportation if the total updated project cost estimate exceeds the total project grant funds.

Startup trigger:

• All Phase 4 deliverables complete.

Deliverables:

- Board endorsement of the technical committee work plan.
- Board endorsement of technical recommendations as required, including finalizing the waterline alignment and confirming the location of the chloramine booster.
- Board endorsement of land assembly and easement agreements as required.
- Design, tender and construction documents.

Important considerations:

- Alignment with City of Lacombe Procurement Policy or as specified by the Board.
- Topographic survey, geotechnical investigation, utility sweeps, environmental screening studies and regulatory applications may depend on seasonal conditions (i.e. summer only). This will be confirmed with the engineering consultant.
- Ponoka County's approval is needed early in this phase to locate the waterline in its road allowance.
- The Commission's team will coordinate with ECN's engineers on their onreserve water system and reservoir improvements, including tie-in details, construction schedule, and commissioning.

Estimated time: 10-20 months

Phase 6: Construction Contract Tender and Award

Description: The engineer administers the project pre-qualification and tender on behalf of the Commission, reviews the tender bids, and recommends the contractor. The project manager will advise Alberta Transportation if the total updated project cost estimate exceeds the total project grant funds and will initiate a grant agreement amendment if required.

Startup trigger:

• All Phase 5 deliverables complete.

Deliverables:

- Contractor pre-qualification recommendation
- Engineer's recommendation of award
- Alberta Transportation approval to award the construction contract, including amendments to the grant agreement if required.
- Board awards the construction contract.

Estimated time: 2 months

Phase 7: Construction, System Commissioning and Water On

Description: The project proceeds to construction. The Commission's team, including the construction contractor, will coordinate closely with ECN's team regarding tie-ins and system commissioning through to "water on."

Startup trigger:

• All Phase 6 deliverables complete.

Deliverables:

- Ground-breaking ceremony
- Various construction notifications
- Construction documentation
- Progress payments
- Commissioning complete (warranty period starts)
- Operator training
- Water-on ceremony

Important considerations:

- Maintenance of County roads during construction
- Monitoring of workmanship/quality
- Timeliness of construction

Estimated time: 14-18 months

Phase 8: Warranty Period, Project Closeout, Normal Operations

Description: Engineers and Commission operators closely monitor the system, and deficiencies are identified and corrected during the warranty period. The engineering consultant completes post construction regulatory reports, and the project manager submits final grant reports to the Province. The NRDRWSC operators oversee the day-to-day operations of the system.

Startup trigger:

• P hase 7 commissioning complete.

Deliverables:

- Deficiency trackers
- Plans of record
- Operations and maintenance manuals
- Operator training
- Post-construction regulatory reports
- Final acceptance certificate issued to contractor
- Final grant reporting
- NRDRWSC Management and Operations contract amendment.

Important considerations:

• The project manager's term will end during this phase.

Estimated time: 24 months

Table of Key Project Requirements

#	TASK		DESCRIPTION / ACTIVITIES	IIV	IPORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY	1	APPROVAL	
Phase '	1: Governance Optio	ns	Review	-		-						
1.1 Gov	ernance Options Re	vie	w									
1.1.1	Governance Options Review	•	Administration to prepare a report outlining three governance and financial scenarios for the extension of the NRDRWSC system	•	Full membership vs Customer vs 3 rd Party Owner and the financial and governance items for each option	•	Draft Agreement Final Signed Agreement Receipt of buy-in payment	• •	Commission ECN GOA	•	Commission ECN	
Phase 2	2: ECN Agreement											
2.1 EC	2.1 ECN Agreement											
2.1.1	Water supply agreement with Ermineskin	•	Prepare agreement for water supply between NRDRWSC and ECN Update Commission Bylaws to include ECN	•	Rates (including Rate Stabilization Funding) Membership or Customer relationship Payment Terms Minimum/Maximum Flows Buy-in cost or Connection Fee	•	Draft Agreement Final Signed Agreement Receipt of buy-in payment Participation in a traditional ceremony	•	Commission ECN GOA Commission, ECN	•	Commission ECN	
Phase :	3: Funding Agreeme	nts		-		<u>.</u>		-				
3.1 Fun	ding Agreements											
3.1.1	Establish Funding Agreement with Government of Alberta	•	Send letter to AT for total project cost and cash flow Consult with AT for funding timing and amount	•	Timing Overall funding Timing and amount of each payment	•	Draft Agreement Final Signed Agreement	•	Commission	•	AT	
3.1.2	Secure start-up funding	•	Initial payment so that Commission can proceed with further work	•	Ensure no negative cash flow for Commission	•	Funding received	•	Commission	•	AT	

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#	TASK		DESCRIPTION / ACTIVITIES	IN	IPORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL
3.1.3	Project Reporting	•	Grant reporting requirements	•	Cost and progress updates	•	Periodic reporting (expected quarterly)	•	Commission	•	AT
3.2 Not	ify City of Red Deer	-						_			
3.2.1	Notify CRD of additional water user / volumes	•	Notify CRD of additional water user / volumes	•	Initial and ultimate additional water demand	•	Letter notification	•	Commission	•	Commission
Phase	4: Assembling a Tear	m									
4.1 Ret	ain a Commission Pr	oje	ect Manager								
4.1.1	Retain a Commission Project Manager – Long List Selection	•	Prepare job posting Post publicly or invitational	•	Experience Duration of Agreement Compensation Terms Compliance with NRDRWSC Procurement Policy	•	Shortlist of Candidates	•	Commission	•	Commission
4.1.2	Retain a Commission Project Manager – Short List Selection	•	Interview and select Project Manager	•	Alignment of Commission vision for the Project	•	Executed PM Agreement	•	Commission Project Manager	•	Commission Project Manager
4.2 Ret	ain a Consultant			•		•		<u> </u>			
4.2.1	Consultant Selection	•	Prepare RFP or request scope of work from preferred consultant Consider all disciplines such as: - Engineering - Environmental - Geotechnical - Legal Survey - Land Assembly	•	Consider consultants' past involvement with the Commission, past experience, depth and location of resources and in-house capabilities for all disciplines Consider schedule for environmental and geotechnical field work — preference to complete this work in the summer season.	•	Terms of Reference	•	Commission	•	Commission

#	TASK		DESCRIPTION / ACTIVITIES	IM	PORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL
4.2.2	Consultant Engagement	•	Executed Consultant Agreement	•	Compliance with Funding Authority requirements and NRDRWSC procurement policy (if applicable).	•	Executed Consultant Agreement	•	Commission	•	Commission
4.3 For	m a Technical Comm	nitte	e							-	
4.3.1	Form a Technical Committee	•	Establish Project Technical Committee to work with the Project Manager and Consultant	•	Past experience and expertise, availability, relationship to Commission	•	Finalized Technical Committee	•	Commission	•	Commission
Phase !	5: System Design	-				_				-	
5.1 Prel	liminary Design										
5.1.1	Consult on, and Finalize Alignment	•	Meet with current and future project stakeholders to identify target areas to service and/or avoid with the system alignment	•	Identify whether formal First Nation Consultation Process Required Ermineskin Connection Point Future servicing needs for Ponoka County, and Montana & Samson Cree Nation Optimize system length and hydraulics Environmental Considerations Ponoka Road Allowance use	•	Finalized Alignment Corridor to ECN, consulting with near-by First Nations. Finalized Road Allowance Use Agreement with Ponoka County	•	Commission ECN Ponoka County Montana Samson	•	Commission Ponoka County
5.1.2	Right of Way Usage Agreement with Ponoka County	•	Prepare agreement with Ponoka County to outline requirements for locating waterline within County road right of way	•	Requirements for pre and post construction inspection Approved method(s) of installation Access during construction	•	Draft Agreement Final Signed Agreement	•	Commission Ponoka County	•	Commission Ponoka County

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#	TASK		DESCRIPTION / ACTIVITIES	IIV	IPORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL
5.1.3	Topographic Survey	•	Conduct topographic survey and identify significant features along selected alignment	•	Road crossings / road type Farm accesses Foreign utility conflicts Culverts Wetlands Treed areas Placement of road structure within road allowance	•	Completed Topographic Survey	•	Survey Consultant	•	Commission
5.1.4	Geotechnical Investigation	•	Complete a Geotechnical Investigation of the alignment	•	Soil type Suitability of installation method(s) Trench wall slopes	•	Completed Geotechnical Investigation	•	Geotechnical Consultant	•	Commission Engineering Consultant
5.1.5	Utility Sweeps	•	Identify foreign utility conflicts	•	Sweeps recommended instead of just locates at this stage to minimize potential for realignments and utility conflicts during construction due to unmarked foreign utilities	•	Completed utility sweeps and provision of GIS data for the identified utilities		Utility Locates Consultant	•	Commission Engineering Consultant
5.1.6	Environmental Screening Studies and Regulatory Applications	•	Screening reports including Wetlands Assessment, Historical Resources, Species at Risk Assessment, and development of Environmental Protection Plan for construction specifications and for Conservation and Reclamation Plan submission	•	Summer start up recommended so as not to delay design or construction activities	•	Environmental screening reports	•		•	

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#	TASK		DESCRIPTION / ACTIVITIES	IM	PORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL
5.1.7	Land Assembly (if needed)	•	Secure land for Chloramine Booster Station Secure crossing agreement for foreign utility crossings and parallels	•	Certain utilities will have unique crossing requirements Retention of private land for Chloramine Booster Station will depend on desire of owner to sell and/or price offered. Multiple sites may be required.	•	Retention of crossing agreements and Chloramine Booster Station site	•	Land Agent Engineering Consultant	•	Commission Engineering Consultant
5.1.8	Subdivision (Chloramine Booster Site – if needed)	•	Subdivision of Chloramine Booster Station Site	•	Ponoka County requirements and timelines for subdivision	•	Subdivision Application	•	Legal Survey Consultant	•	Commission Ponoka County
5.1.9	Traffic Impact Assessment (Chloramine Booster Site – if needed)	•	Ponoka County may require a Traffic Impact Assessment to confirm whether intersection improvements are required to support development of Chloramine Booster Station site	•	Existing traffic counts Road geometry at proposed site	•	Completed TIA document and list of recommended access improvements	•	Engineering Consultant	•	Commission Ponoka County
5.2 Deta	ailed Design										
5.2.1	Detailed Design	•	Detailed Design Development of both drawings and technical specifications. Submission of EPEA Notification of Extension to AEP	•	Material selection Line valve selection and delivery timelines Transient analysis of line and inclusion of protection measures such as Combination Air/Vacuum valves. Confirm Operational Needs	•	Issued for Tender Drawings and Specifications EPEA Notification Submission	•	Engineering Consultant Commission	•	Commission
5.2.2	Construction Documents	•	Completion of Issued for Tender Drawings for the waterline extension and chloramine booster station Completion of technical specifications and contract document for tender	•	Special provisions Number of contracts Contract completion dates	•	IFT Drawings and Specifications	•	Engineering Consultant Commission	•	Commission

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#	TASK		DESCRIPTION / ACTIVITIES	IIV	IPORTANT CONSIDERATIONS		DELIVERABLES	l	RESPONSIBILITY	Ì	APPROVAL
5.3 Upo	lated Cost Estimate										
5.3.1	Updated Cost Estimate	•	Update project Opinion of Probable Cost (OPC)	•	Consider current economic conditions, contractor availability and pipe material costs.	•	Updated OPC	•	Engineering Consultant	•	Commission
Phase	6: Construction Cont	rac	t Tender and Award							-	
6.1 Pre	6.1 Prequalification of Contractors										
6.1.1	Optional task to short list qualified contractors	•	Publication of Request for Qualifications document outlining project and establishing	•	Rates Selection criteria Open to all qualifiers or selection of a maximum number of bidders	•	RFQ documents RFQ analysis summary	•	Engineering Consultant	•	Commission Engineering Consultant
6.2 Cor	ntract Tendering	-						_		-	
6.1.2	Tender for Waterline Contract(s) and Chloramine Booster Station	•	Administration of tender(s), including publication of documents, bidder enquiries, addenda, submitted tender analysis	•	Price only or qualifications weighted tender	•	IFT documents Tender Summary Addenda as necessary	•	Engineering Consultant	•	Commission Engineering Consultant
6.1.3	Contractor Award	•	Review submitted bids and award project to a contractor	•	Bid price vs approved funding	•	Award letter Contract agreement with contractor	•	Engineering Consultant	•	Commission

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	7: Construction, Syst	tem Commissioning and Water On				
7.1.1	Groundbreaking Ceremony	 Invite Senior Levels of Government / Coordinate Date and Agenda Convene Ceremony Media Releases 	 Event format and location Event host(s), Master of Ceremonies Guests Acknowledgements Stakeholders Additional FNs participation 	EventMedia Release	CommissionECN	Commission ECN
7.1.2	Construction Process	 Construction of regional waterline extension Construction of Chloramine Booster Station Quality Assurance Monitoring 	 Workmanship / Quality Timeliness of construction Maintenance of County roads during construction 	 Construction Documentation Progress Payment Certificates Substantial Completion Certificates 	ContractorsEngineering Consultant	 Engineering Consultant Commission Ponoka County
7.2 Sys	stem Commissioning	and Water On				
7.2.1	Commission system	 Pressure testing Disinfection Commission Chloramine Booster Station 	Warranty inspections	 Pressure test reports Bacteriological test report Commissioning documentation – Chloramine Booster Station Plan of Record Drawings Construction Completion Certificates Final Acceptance Certificates (2 years after completion 	Contractors Engineering Consultant	 Engineering Consultant Commission

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#	TASK		DESCRIPTION / ACTIVITIES	IM	PORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL	
7.2.2	Substantial Completion	•	Review project for substantial completion per the Alberta Lien Act requirements.	•	Does the completion meet the Lien Act Requirements	•	Issue Substantial Completion Certificate	•	Engineering Consultant	•	Commission	
7.2.3	Water On Celebration	•	Invite Senior Levels of Government / Coordinate Date and Agenda Convene Ceremony Media Releases	•	Event format and location Event host(s), Master of Ceremonies Guests Acknowledgements Stakeholders Additional FNs participation	•	Event Media Release	•	Commission ECN	•	Commission ECN	
7.3 Con	7.3 Construction Completion											
7.3.1	Seasonal Cleanup	•	Reseeding and settlement regrading as required	•	Following Spring thaw and road bans	•	Cleanup inspection report	•	Contractors Engineering Consultant	•	Engineering Consultant Commission	
7.3.2	Construction Completion	•	Review project for total completion of all deficiencies and seasonal items.	•	Is the project totally and fully complete	•	Issue Construction Completion Certificate	•	Engineering Consultant	•	Commission	
Phase 8	3: Warranty Period, P	roj	ect Closeout, Normal Operations									
8.1 War	ranty Period											
8.1.1	Warranty Period	•	Monitor the infrastructure and notify consultant and contractor of any items to correct	•	Timely identification and communication of potential warranty items	•	Correction of warranty items by contractor	•	Engineering Consultant Commission	•	Commission	
8.1.2	Final Acceptance to Contractor	•	Review project following the two-year warranty period	•	All warranty items completed	•	Issue Final Acceptance Certificate	•	Engineering Consultant	•	Commission	

#	TASK		DESCRIPTION / ACTIVITIES	IIV	IPORTANT CONSIDERATIONS		DELIVERABLES		RESPONSIBILITY		APPROVAL
8.2 Pro	8.2 Project Close Out										
8.2.1	Complete all Close Out Documentations	• • • •	Plan of Record drawings Operation and maintenance manuals Operator training Post-construction regulatory reports	•	Timeliness to complete the items The Commission's Project Manager's contract will end during this close out phase.	•	All close out documents submitted	•	Contractors Engineering Consultant	•	Engineering Consultant Commission
8.2.2	Final Grant Reporting	•	Report final costing to the funding authorities	•	Ensure the project is totally and fully complete	•	Final funding report submitted	•	Commission	•	Commission
		•		•		•		•		•	
8.3 Nor	mal Operations										
8.3.1	Normal Operations	•	Perform normal operations of the system	•	Maintenance activities Continued engaging of an engineering consultant for a general engineering, SCADA, and service work.	•	None	•	Commission's Operators	•	Commission

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