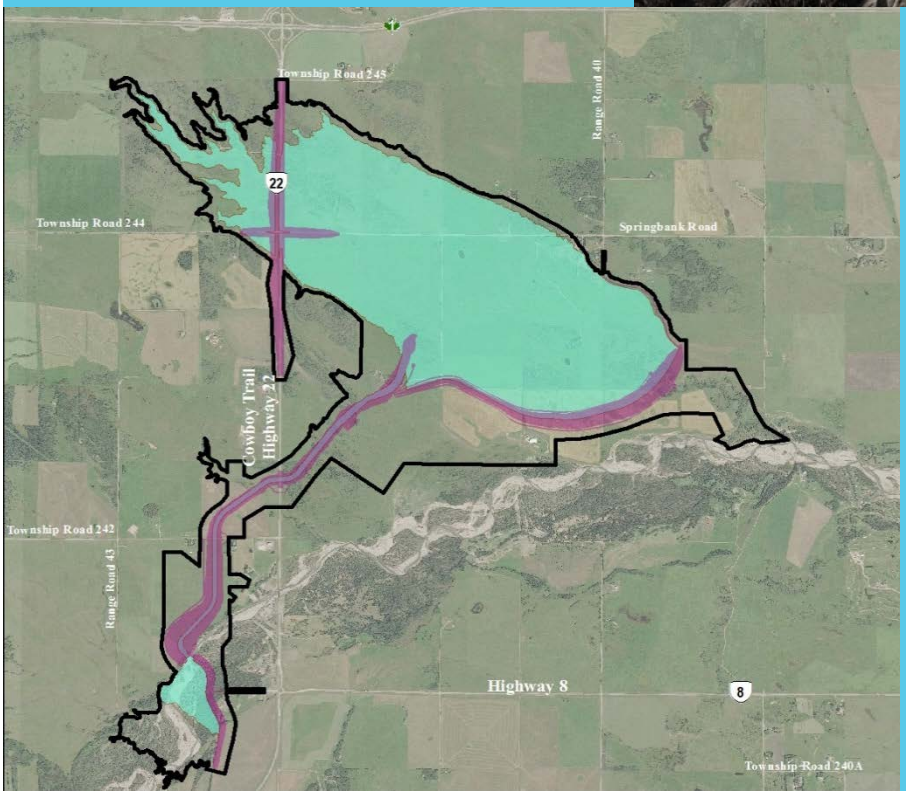
Springbank Off-stream Reservoir Project

Environmental Impact Assessment



Volume 4 Appendices

March 2018

Alberta Transportation

APPENDIX A
CONCORDANCE TABLES

March 2018

Appendix A CONCORDANCE TABLES

This Appendix outlines the concordance between the Environmental Impact Assessment and the Terms of Reference provided by Alberta Environmental and Parks (Dated February 5, 2017) and the Guidelines from the Canadian Environmental Assessment Agency (Dated August 10, 2017).

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
CONTENT OF THE EIA REPORT			
1 PUBLIC ENGAGEMENT AND ABORIGINAL CONSULTATION			
[A]	Describe the concerns and issues expressed by landowners and the public. Describe the actions taken to address those concerns and issues, including the process and extent of public consultation used to arrive at the current proposal for flood mitigation and how public input was incorporated into the Project development, impact mitigation and monitoring.	1	6.3
		4	Appendix B
[B]	Describe the concerns and issues expressed by Aboriginal communities and the actions taken to address those concerns and issues, including how Aboriginal community input was incorporated into the Project, EIA development, mitigation, monitoring and reclamation. Describe consultation undertaken with Aboriginal communities and groups with respect to traditional ecological knowledge and traditional use of land and water.	1	7.4
		3A	14.1.2, 14.3.2, 14.3.3, 14.3.4, 14.3.5, 14.8
		3B	14.2, 14.5, 14.6
		4	Appendix B
[C]	Describe plans to maintain the landowner and public engagement and Aboriginal consultation process following completion of the EIA report to ensure that the landowners, the public and Aboriginal peoples will have an appropriate forum for expressing their views on the ongoing development, operation and reclamation of the Project.	1	6.4, 7.5
2 PROJECT DESCRIPTION			
2.1 Overview			
[A]	Provide a brief project description in sufficient detail to provide context for the EIA, including:		
	a) proponent information;	1	1.1.1
	b) need for the Project and why this project was chosen over other flood mitigation projects;	1	2.1
	c) which communities would benefit from the project; and	1	2.1.1

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	d) development plan and schedule.	1	3.3.8
[B]	Provide maps and/or drawings of the Project components and activities including:		
	a) total potential areas to be flooded in extreme flood scenarios;	1	3.2.4
	b) existing infrastructure, leases and clearings;	1	1.1, 1.3, 1.3.2, 2.2.6.4
	c) proposed facilities, buildings and infrastructure (e.g., pipelines and utilities);	1	3.2, 3.2.7, 3.2.8
	d) temporary structures;	1	3.3
	e) transportation and access routes;	1	2.2.6.4, 3.2.7
	f) containment structures;	1	3.2.4, 3.2.5
	g) water wells/intakes, pipelines and storage structures;	1 3A	3.2.8.1, 4.4 5.2.2.2, 5.2.2.3, 5.2.2.4
	h) sources of aggregate resources, borrow material and other construction material and locations of any stockpiles that will be developed; and	1 4	3.2, 3.3, Figure 3-1 Appendix D
	i) waste storage area and disposal sites.	1	3.3.4, 3.3.5, 3.4.5, 3.5.5, 3.6.5, 3.8, 4.4, 4.5
[C]	Discuss the implications (positive and negative) of a delay in proceeding with the Project, or any phase of the Project, or not going ahead with the Project.	1	1.2.1
[D]	Describe the impacts and benefits of the Project, including jobs created, local training, employment and business opportunities that accrue to:		
	a) landowners;	1	1.3.2.1

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	b) local and regional communities, including Aboriginal communities;	3A 3B	14, 17.3, 17.4 17.3
	c) the local authority;	3A 3B	17.3, 17.4 17.3
	d) Alberta; and	3A 3B	17.3; 17.4 17.3
	e) Canada.	3A 3B	17.4 17.3
[E]	Provide the adaptive management approach that will be implemented throughout the life of the Project. Include how monitoring, mitigation and evaluation were incorporated.	1 3C 4	1.1.1.1 2.0 Appendix C
[F]	Provide a list of commitments Alberta Transportation has made. This would include any mitigation, monitoring and operational commitments made as part of this assessment.	4	Appendix C
2.2 Constraints			
[A]	Discuss the process and criteria used to identify constraints to development, and how the Project has been designed to accommodate those constraints. Include the following:		
	a) any applicable *Alberta Land Stewardship Act* Regional Plan, sub-regional plan or watershed plan;	1	1.4.2.3, Attachment A
	b) any applicable municipal plan;	1	1.4.3
	c) land use policies and resource management initiatives;	1	1.3.2.1, 1.4.1, 1.4.2, 1.4.3
		3A	12.1.1
	d) Aboriginal traditional land and water use;	3A	14.2
		3B	14.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	e) the environmental setting;	1	1.3
		3A	3.2; 4.2; 5.2; 6.2; 7.2; 8.2; 9.2; 10.2; 11.2; 12.2; 13.2; 14.2; 15.2; 16.2; 17.2
	f) cumulative environmental impacts in the region;	3C	1.2, 1.3
	g) cumulative social impacts in the region; and	3C	1.2.8, 1.2.9, 1.2.10, 1.2.11, 1.3.9, 1.3.10, 1.3.11, 1.3.11
	h) regional monitoring.	3C	2.0
[B]	Discuss the selection criteria used, options considered (including McLean Creek option), and rationale for selecting the location of facilities and infrastructure.	1	2.2
[C]	Provide a list of Project components for which locations will be determined later. Discuss the selection criteria that will be used to determine the specific location of these.	Not Applicable	Not Applicable
2.3 Regional and Cooperative Efforts			
[A]	Describe opportunities for sharing infrastructure (e.g., access roads, utility corridors, water infrastructure). Provide rationale where these opportunities will not be implemented.	1	3.2.7, 3.2.8
2.4 Transportation Infrastructure			
[A]	Describe and map the locations of any new road or intersection construction, or any improvements to existing roads or intersections, related to the development of the Project, from the boundary of the Project Area up to and including the highway access points, and:	1	2.2.6, Figure 2-7
	a) discuss the alternatives and the rationale for selection for the preferred alternative;	1	2.2.6

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	b) discuss compatibility of the preferred alternative to Alberta Transportation's immediate and future plans;	1	2.2.6.4
	c) describe the impacts to local landowners and communities of the changes in transportation and infrastructure; and	1 3A	1.3.2.1, 2.2.6 12.4.2, 16.4.2
	d) provide a proposed schedule for the work.	1	3.3.8, Table 3-7
[B]	Describe any infrastructure or activity that could have a potential impact on existing roads (e.g., pipelines or utilities crossing provincial highways, any facilities in close proximity of the highways, any smoke, dust, noise, light or precipitation generated by the Project that could impact the highway and road users).	1 3A	3.2.7, 3.2.8, 3.3, 3.5 3.3.1, 4.3
[C]	Indicate where Crown land dispositions may be needed for roads or infrastructure required for the Project.	1	1.4.1
2.5 Air Emissions Management			
[A]	Discuss the selection criteria used, options considered, and rationale for selecting mitigation measures to minimize air emission and ensure air quality management.	3A	3.2.2.2, 3.3.1, 3.4.3, 3.4.4.1
		3B	3.1, 3.2.4.1, 3.2.5.1
[B]	Provide emission profiles (type, rate and source) for the Project's construction and operating emissions including point and non-point sources, area, mobile and fugitive emissions. Consider both reservoir drawdown and post flood sediment deposit conditions. Discuss:	3A 3B	3.4.2 3.2.2
		4	Appendix E – Attachment 3A, 3C, 3E

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	a) odorous and visible emissions from the Project;	3A	3.4.5.9
		3B	3.2.3.3, 3.2.6
		4	Appendix E – Attachment 3A, 3C
	b) greenhouse gas emissions during all stages of the Project. Identify the primary sources and provide calculations;	3A	3.4.7
		4	Appendix E – Attachment 3F
	c) amount and nature of Criteria Air Contaminants emissions; and	3A	3.5.1.1
	d) control technologies and mitigative measures used to reduce emissions.	3A 3B	3.4.4 3.2.4
2.6 Dam Safety			
[A]	Describe: a) the project components and scope;	1	3.2
	b) the overall approach for design and technical specification;	1	3.1
	c) any hypotheses and assumptions used;	1	3.1, 5.0
	d) data collection methods, models and studies;	1	5.0
	e) the degree of uncertainty, reliability and sensitivity of models used to reach conclusion; and	1	5.0
	f) any gaps in knowledge and understanding related to key conclusions, including steps to address these gaps.	1	5.0

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[B]	Describe the consequence classification of the proposed dam and its appurtenant structures.	1	3.2, 5.0, Table 5-1
[C]	Describe: a) the principal dimensions of the earthfill dam and appurtenant structures;	1	3.2
	b) the anticipated quantities of material used to construct the dam and appurtenant structures;	1	3.2
	c) seepage control and drainage provisions;	1	3.2.5.3, 3.2.5.4
	d) freeboard requirements;	1	2.2.6.1, 3.2.2
	e) the field and lab testing that has been performed to determine the suitability of the materials; and	1	3.2.5, 5.0
	f) the characteristics/geotechnical properties of the in-situ and construction materials and describe their suitability for use as construction materials.	1	3.2.5, 5.0
[D]	Describe the physical characteristics of the reservoir, including:		
	a) normal operating range;	1	3.2, 5.1.2
	b) spatial extent/overlap into other tributaries, if any	1	1.3.2
	c) surface area at the maximum normal reservoir level, with the area of each tributary arm; and	1	3.4
	d) normal operating water volume, and the volume between the maximum normal reservoir level and the minimum normal reservoir level.	1	3.1, 3.2.4, 3.5.1

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[E]	Describe the activities for construction of the Dam, Floodplain Berm, Diversion Channel, and other appurtenant structures, including:		
	a) site clearing and grubbing;	1	3.3.1
	b) construction and operation of the temporary works required for construction (e.g., cofferdam, river diversion, etc.), if any;	1	3.3.1.1, 3.3.1.4, 3.3.1.6
	c) excavations, slope stabilization and foundation preparation;	1	3.3.1
	d) construction of the dam and its appurtenant structures;	1	3.3
	e) placing impervious lining and erosion protection;	1	3.3.1
	f) installation of instrumentation, mechanical and electrical equipment;	1	3.3.1
	g) testing and commissioning the facility; and	1	3.3.6
	h) removal of temporary construction facilities.	1 4	3.3.6.2 Appendix D
[F]	Describe the construction activities for reservoir preparation, including:		
	a) reservoir filling; and	1	3.3, 3.5, Attachment A
	b) methods for managing wood debris and shoreline stabilization during reservoir filling.	1	3.6.1, Attachment A
[G]	Describe the excavation and stockpiling of suitable material, including drilling, blasting, sorting and screening in rock quarries and moisture conditioning of impervious material.	1 4	3.3.1.4 Appendix D, Supporting Documentation – Document 13

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[H]	Describe the operations phase activities, including:		
	a) operation and maintenance activities needed for the safe operation of the dam and to prolong its operational capacity;	1	3.2.5.2, 3.4, 3.6.1, 5.1.2
	b) reservoir fluctuations;	1	3.5.1, 3.6.1
	c) water management approach (for flood, normal and drought conditions), including reservoir operations and resulting downstream flows and water levels; and	1	Attachment A
	d) operation and maintenance plans.	1	3.2.5.2, 3.4, 3.6.1, 5.1.2 Supporting Documentation, Document 5
[I]	Describe the decommissioning activities, including:		
	a) decommissioning of temporary construction facilities and any associated reclamation (e.g., cofferdam); and	1	3.3.6.2, 3.7
	b) dam decommissioning in the future, a plan to address decommissioning and restoration in accordance with applicable regulations at that time.	1	3.7
2.7 Water Management			
2.7.1 Water Supply			
[A]	Describe the water supply for the Project, including:		
	a) the criteria used, options considered and rationale for selection of water sources(s);	1	1.2. 2.2.1
	b) the expected water balance during all stages of the Project. Discuss assumptions made or methods chosen to arrive at the water balances;	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	c) the process water requirements and sources for construction (including, but not limited to, road construction, winter road construction, lease construction, production well drilling and dust suppression), normal and emergency operating situations. Identify the volume of water from each source;	1 3A	3.3.1 7.3
	d) the location of sources/intakes and outlets and associated infrastructure (e.g., pipelines for water supply);	1	3.3.1.1, 3.3.1.3, 3.3.1.5
	e) the variability in the amount of water required on an annual and seasonal basis as the Project is implemented; and	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	f) the expected cumulative effects on water losses/gains resulting from the Project operations.	3B 3C	6.4.2 1.3.3
2.7.2 Surface Water			
[A]	Describe the surface water management strategy for all stages of the Project, including:		
	a) design factors considered; and	1	2.2, 3, Attachment A
	b) permanent or temporary alterations or realignments of watercourses, wetlands and other waterbodies.	3A 3B	6.4.2, 6.4.4, 10.2 6.4.2, 6.4.4, 10.2.4
[B]	Describe and map all roadway, pipeline, powerline and any other utility crossings of watercourses or waterbodies.	1	2.2.6.4, Figure 2-7, 3.2.8.1, Figure 3-12

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
2.7.3 Flood Control			
[A]	Describe how the project will be utilized to manage back to back storm events effectively.	1 3B	3.5.1 6.4.2
[B]	Describe the operations of the project and Glenmore Reservoir together to achieve the maximum benefit of flood control.	1 3B	3.5.1 6.4, 6.4.2
2.8 Waste Management			
[A]	Discuss the selection criteria used, options considered, and rationale for waste disposal.	1	3.3.4, 3.3.5, 3.4.5, 3.5.5, 3.6.5
[B]	Characterize and quantify the anticipated dangerous goods, and hazardous, non-hazardous, and recyclable wastes generated by the Project, and describe:	1	3.3.4, 3.3.5, 3.6.5, 4.5
	a) plans for pollution prevention, waste minimization, recycling, and management to reduce waste quantities for all stages of the Project.	1	3.3.4, 3.3.5, 3.4.5, 3.5.5, 3.6.5, 4.5
2.9 Conservation and Reclamation			
[A]	Provide a conceptual conservation and reclamation plan for the Project. Describe and map as applicable:		
	a) current land use and capability and proposed post-development land use and capability;	4	Appendix D
	b) anticipated timeframes for completion of reclamation stages including an outline of the key milestone dates for reclamation and how progress to achieve these targets will be measured;	4	Appendix D
	c) constraints to reclamation such as timing of activities, availability of reclamation materials and influence of natural processes and cycles including natural disturbance regimes;	4	Appendix D

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	d) a revegetation plan for the disturbed terrestrial, riparian and wetland areas;	4	Appendix D
	e) reclamation material salvage, storage areas and handling procedures; and	4	Appendix D, Supporting Documentation, Document 13
	f) existing and final reclaimed site drainage plans.	4	Appendix D
[B]	Discuss, from an ecological perspective, the expected timelines for establishment and recovery of vegetative communities and wildlife habitat, the expected success of establishment and recovery, and the expected differences in the resulting communities.	4	Appendix D
[C]	Describe how the Proponent considered the use of progressive reclamation in project design and reclamation planning.	4	Appendix D
[D]	Discuss uncertainties related to the conceptual reclamation plan.	4	Appendix D
3 ENVIRONMENTAL ASSESSMENT			
3.1 Air Quality, Climate and Noise			
3.1.1 Baseline Information			
[A]	Discuss the baseline climatic and air quality conditions including:	3A	3.2
	a) the type and frequency of meteorological conditions that may result in poor air quality; and	3A 4	3.2.2.1, 3.4.1 Appendix 4 – Attachment 3B, 3C, 3D
	b) appropriate ambient air quality parameters.	3A 4	3.2.2.2 Appendix E, Attachment 3D

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.1.2 Impact Assessment			
[A]	Identify components of the Project that will affect air quality, and:	3A	3.1.3
	a) describe the potential for reduced air quality (including odours and visibility) resulting from the Project and discuss any implications of the expected air quality for environmental protection and public health;	3A 3B 4	3.4 3.2 Appendix E - Attachment 3A, 3B, 3C, 3E, 3F
	b) estimate ground-level concentrations of appropriate air quality parameters;	3A 3B 4	3.4.1, 3.4.5, 15.4.2 3.2.1, 3.2.5 Appendix E - Attachment 3B, 3C, 3E
	c) discuss any expected changes to particulate deposition patterns;	3A 3B 4	3.4.5.5 3.2.3.1 Appendix E – Attachment 3E
	d) discuss interactive effects that may occur resulting from co-exposure of a receptor to all emissions; and	3A 3B	15. 3.1, 15.4.1 15.3.1, 15.4.3

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	e) describe air quality impacts resulting from the Project, and their implications for other environmental resources.	3A 3B 4	3.4 3.2 Appendix E – Attachment 3A, 3B, 3C, 3E, Dispersion Modelling for Blown Sediment from the Off-stream Reservoir Technical Data Report
[B]	Identify stages or elements of the Project that are sensitive to changes or variability in climate parameters, including frequency and severity of extreme weather events and discuss the potential impacts over the life of the Project.	3D	2.3
[C]	Summarize the noise assessment, and:	3A 3B	4.7 4.5
	a) identify the nearest receptor used in the assessment; and	3A 4	4.2.1.1, Table 4-3 Appendix F - Attachment 4B
	b) discuss the design, construction and operational factors considered for the Project.	3A 4	4.4.2.2 Attachment 4C

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.2 Dam Safety			
[A]	Describe the expected performance of the dam and its appurtenant structures during and after extreme weather events (e.g., floods, earthquakes, etc.), including the ability of earth dams, diversion channel and flow control structures to withstand those events, potential challenges and mitigation measures.	1 4	3.5, 5.1.2, 5.2 Appendix C
[B]	Describe the potential challenges that could impact the safety of the proposed structure and proposed mitigation measures (e.g., during excavations, foundation/treatment, slope stabilization, materials, QA/QC, etc.)	1	5.0
[C]	Describe the potential challenges that could impact the safety of the proposed structure and proposed mitigation measures (e.g., during reservoir filling, debris management, operations, maintenance and surveillance philosophy, performance under extreme weather events (floods, tornados, etc.), emergency preparedness and response, etc.)	1 3D	5.0 1.0, 2.0
[D]	For all stages of the Project, identify potential accidents and malfunctions that could occur (e.g., cofferdam leakage or failure, sediment control failure, any other Dam Safety incidents).	3D	1.4.1, 1.4.2
[E]	Describe the effects of a dam/channel breach by tabulating the expected flood arrival time and water surface elevation at Glenmore Reservoir/Dam as well as downstream until the estimated water surface is within the estimated 100 year flood level.	1 3D	5.2 1.5.1, 1.5.2, 1.6.1, 1.6.2
[F]	Describe the possibility of cascade failure and its impacts.	1 3D	5.0 2.4.2, 2.5.2, 2.6.2
[G]	Describe the potential challenges during decommissioning of the temporary dam works as well as for any future decommissioning of the proposed dam.	1	3.7, 5.1.3

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.3 Hydrogeology			
3.3.1 Baseline Information			
[A]	Provide an overview of the existing geologic and hydrogeologic setting from the ground surface down to, and including, the Base of Groundwater Protection for the area, and:	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	a) present regional and Project Area geology to illustrate depth, thickness and spatial extent of lithology, stratigraphic units and structural features; and	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	b) present regional and Project Area hydrogeology describing:		
	i) the major aquifers, aquitards and aquicludes (Quaternary and bedrock), their spatial distribution, properties, hydraulic connections between aquifers, hydraulic heads, gradients, groundwater flow directions and velocities. Include maps and cross sections,	3A 4	5.2.2, 6.2.2.4 Appendix I - Hydrogeology Baseline Technical Data Report
	ii) the chemistry of groundwater aquifers including baseline concentrations of major ions, metals and hydrocarbon indicators,	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	iii) the potential discharge zones, potential recharge zones and sources, areas of groundwater-surface water interaction and areas of Quaternary aquifer-bedrock groundwater interaction,	3A 4	5.2.2, 6.2.2.4 Appendix I - Hydrogeology Baseline Technical Data Report
	iv) water well development and groundwater use, including an inventory of groundwater users,	3A 4	5.2.1, 5.2.2.2, 5.2.2.3, 5.2.2.4 Appendix I - Hydrogeology Baseline Technical Data Report
	v) the recharge potential for Quaternary aquifers,	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	vi) potential hydraulic connection between the aquifers and the Project (i.e. groundwater mounding), and	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report, Hydrogeology Modelling Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	vii) the locations of major structures associated with the Project, including the reservoir, the dam and channels and describe site-specific aquifer and shallow groundwater conditions beneath these proposed structures. Provide supporting geological information.	1 3A 4	3.2, Figure 3-1 5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
3.3.2 Impact Assessment			
[A]	Describe project components and activities that have the potential to affect groundwater resource quantity and quality at all stages of the Project.	3A 3B	5.3 5.1
[B]	Describe the nature and significance of the potential project impacts on groundwater with respect to:	3A 3B	5.4.4, 5.5 5.2.4, 5.3
	a) inter-relationship between groundwater and surface water in terms of both groundwater and surface water quantity and quality;	3A 3B	5.4, 6.5, 7.4 5.0, 6.4, 7.4
	b) implications for terrestrial or riparian vegetation, wildlife and aquatic resources including wetlands;	3A	5.2.2
	c) changes in groundwater quality, quantity and flow;	3A 3B	5.4.2, 5.4.3 5.2.2., 5.2.3
	d) conflicts with other groundwater users, and proposed resolutions to these conflicts;	3A 3B	5.4.2 5.2.2
	e) groundwater protection including reclaiming wells in the Project area prior to construction of the Project;	3A	5.4.2.3
	f) potential implications of seasonal variations; and	3A 3B	5.4.2.4, 5.4.3.3 5.2.2.3, 5.2.3.3

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	g) groundwater withdrawal for project operations, including any expected alterations in the groundwater flow regime during and following project operations.	3A	5.4.2
3.4 Hydrology			
3.4.1 Baseline Information			
[A]	For the local and regional study area:		
	a) describe the rationale used to define the local and regional study areas considering the location and range of probable project and cumulative effects;	3A	6.1.1, 6.1.4
	b) provide maps illustrating boundaries of the local and regional study areas;	3A	6.1.4.1, Figure 6-1
	c) describe and map the surface hydrology;	3A 4	6.2.2.4; Figure 6-12 Appendix J – Hydrology Technical Data Report
	d) describe meteorological conditions; and	3A 4	6.2.2.2 Appendix J – Hydrology Technical Data Report
	e) describe sediment yield.	3A 4	6.2.2.1, 6.2.2.3 Appendix J – Hydrology Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[B]	Discuss the existing flow regime, including:		
	a) seasonal variation, low, average and peak flows for watercourses;	3A 4	6.2.2.4 Appendix J – Hydrology Technical Data Report
	b) low, average and peak levels for waterbodies; and	3A 4	6.2.2.4 Appendix J – Hydrology Technical Data Report
	c) natural flow contribution of the existing creek to Elbow River.	3A 4	6.2.2.4 Appendix J – Hydrology Technical Data Report
[C]	Provide an inventory of all surface water users who have existing approvals, permits or licenses in the local and regional study areas.	3A	6.2.2.6
3.4.2 Impact Assessment			
[A]	Identify Project activities that may affect surface water during all stages of the Project, including site preparation, construction, operation, decommissioning and reclamation.	3A 3B	6.3 6.4
[B]	Discuss potential hydrological changes (in terms of quantity, extent and duration) to watersheds due to the project implementation, including changes in:		
	a) surface and near-surface drainage conditions;	3A 3B	6.5.2 6.4.2
	b) channel regime (during minimum, average and peak flows);	3A 3B	6.5.2 6.4.4

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	c) water levels in water bodies and water courses;	3A 3B	6.5.2 6.4.25
	d) evaporation, transpiration and seepage amounts;	3A 3A	6.5.2 6.4.2
	e) sediment transport and yield; and	3A 3B	6.5.3 6.4.3
	f) open-water surface areas.	1	3.2.4
[C]	Discuss impacts including cumulative effects of:		
	a) diverting water from Elbow River due to construction of a diversion weir. Consider flood-flow conditions and water conservation objectives established for the Elbow River;	3A 3C	6.3.1 1.3.3.1
	b) removing/plugging of Elbow River tributaries;	3A	6.5.2
	c) creating a reservoir due to construction of an off-stream storage dam;	3C	1.0
	d) returning flow from the reservoir;	4B	6.4, 7.4
	e) constructing a diversion channel;	3A	6.5.2
	f) improving existing creek channel downstream of future low-level outlet structure;	3A	6.5.2, 6.5.3
	g) realigning Springbank road or constructing a causeway; and	1 3A	2.2.6.2 16.4.2
	h) changing hydrology (e.g., timing, volume, peak and minimum flow rates, river regime and reservoir levels) and sediment transport on the Elbow River, the diversion channel, new reservoir and its outlet channel watercourse.	3B 3C	6.4.2, 6.4.3, 6.4.4 1.3.3

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[D]	Discuss changes in geomorphic conditions (river bed aggradation, degradation and bank erosion) that could occur as a result of changed flow regimes due to project implementation (including all temporary and permanent stream realignments or other disturbances).	3A 3B	6.5.3 6.4.2, 6.4.3, 6.4.4
[E]	Describe impacts on other surface water users resulting from the Project. Identify any potential water use conflicts.	3A	6.4.2, 12.4.2
[F]	Identify predicted changes to existing surface and groundwater relationships within the watershed as a result of diversion from Elbow River, and construction and operation of the reservoir.	3A 3B	5.4.2.1, 6.5.2, 6.5.3, 5.2.2, 5.2.3, 6.4.2, 6.4.3, 6.4.4
3.5 Surface Water Quality			
3.5.1 Baseline Information			
[A]	Describe the current baseline water quality of watercourses and waterbodies (unnamed creek, Elbow River, and the Glenmore Reservoir) and their seasonal variations, temporal and spatial trends. Include water quality for high flow events (1:20-year and 1:100-year) under current conditions. Consider appropriate water quality parameters (e.g., metals, nutrients, pesticides, temperature, BOD/TOC, bacteria, aquatic and benthic invertebrates, aquatic plants, algae, dissolved oxygen, etc.). Provide a summary of existing information available from literature review(s).	3A 4	6.2.2.4, 7.2.2 Appendix K – Surface Water Quality Technical Data Report
[B]	Describe and map the current point and identify non-point sources in the project area.	3A 4	7.2.2 Appendix K – Surface Water Quality Technical Data Report
[C]	Describe the intended water uses of the proposed Springbank Road Reservoir (e.g., flood storage, fish habitat, hydroelectric, municipal discharge, recreation, etc.)	1	1.2, 3.2.4

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.5.2 Impact Assessment			
[A]	Identify project components (during construction, operation and maintenance) that may influence or impact future surface water quality of the Elbow River and/or Glenmore Reservoir, including diversions out of the Elbow River and reservoir releases back to the Elbow River.	3A 3B	7.3 7.4
[B]	Describe and predict the potential impacts of the Project (during construction, operation, maintenance) on surface water quality of the Elbow River and Glenmore Reservoir using modelling or other scientifically defensible approach, including:	3A 3B	7.4.2 7.4.2, 7.4.3, 7.4.4
	a) changes in water quality that may exceed the Environmental Quality Guidelines for Alberta Surface Waters, the Canadian Water Quality Guidelines for the Protection of Aquatic Life or the Water Quality Management Framework (WQMF) included in the South Saskatchewan Regional Plan;	3A 3B	7.4.2 7.4.2, 7.4.3, 7.4.4
	b) changes in loading amounts and timing of key water quality parameters including nutrients, dissolved/total organic carbon, metals, sediment, etc. that could impact the Elbow River and Glenmore Reservoir, including:	3A 3B	7.4.2 7.4.2, 7.4.3, 7.4.4
	i) impacts on their use as a drinking water supply, recreation, agriculture, domestic use, aesthetics, and other water uses,	3A 3B	7.4.2, 14.3.3, 15.4 7.4.2, 7.4.3, 7.4.4, 14.2.3, 15.4
	ii) potential implications to water quality (e.g., high water temperature, low dissolved oxygen, lower dilution, etc.) on the Elbow River due to the water drawn during the initial filling of the Springbank Road Reservoir,	3B	7.4.2, 7.4.3, 7.4.4
	iii) implications to aquatic resources (e.g., aquatic and benthic invertebrates, biota, vegetation, algae, biodiversity, habitat),	3A 3B	7.4.2, 8.4.4 7.4.2, 7.4.3, 7.4.4, 8.2.2, 8.2.3, 8.2.4

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	iv) changes in seasonal variation,	3A 3B 4	6.5.2, 7.4.2, 6.4.2, 6.4.4, 7.4.2, 7.4.3, 7.4.4 Appendix K, Appendix J
	v) groundwater –surface water interactions,	3A 3B	5.4.2.1, 6.5.2, 6.5.3, 5.2.2, 5.2.3, 6.4.2, 6.4.3, 6.4.4
	vi) changes in surface runoff,	3A 3B	6.5.2 6.4.2, 6.4.4
	vii) implications to the health and extent of riparian lands,	3A 3B	8.4.4 8.2.2, 8.2.3, 8.2.4
	viii) impact on river banks during flood events, and	3B	6.4.4.1
	ix) impacts in the event of a catastrophic failure of the reservoir; and	3D	1.5.1, 1.6.1
	c) describe the level of uncertainty derived from the models and tools used in the previous analysis.	3A 3B	6.5.1, 7.4.1 6.4.1, 7.4.1
[C]	Describe the water quality expected in the proposed Springbank Off-Stream Reservoir. Discuss any limitations of expected water quality on municipal/domestic use, recreational use, fisheries, stock watering or other uses.	3B	7.4.2, 7.4.3, 7.4.4, 15.4.2
[D]	Describe the potential and implications for lead, arsenic, cadmium and mercury methylation in the reservoir to:		
	a) enter the aquatic food chain, including downstream in the Elbow River and Glenmore Reservoir; and	3B	7.4.2, 7.4.3, 7.4.4, 8.2.2
	b) impact treatment of water from Glenmore Reservoir for drinking water purposes.	3B	15.4.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[E]	Describe the potential and implications for Cyanobacteria/Microcystin in the reservoir to:		
	a) impact treatment of water from Glenmore Reservoir for drinking water purposes; and	3B	7.4.2, 15.2.2
	b) impact recreation of the Springbank Off-Stream Reservoir, Elbow River and Glenmore Reservoir.	3B	7.4.4, 14.2.3, 15.2.2
[F]	Describe the potential and implications for release and contamination of hydrocarbons (and associated materials) from pipelines and other oil and gas infrastructure, farm infrastructure and/or contaminated surface soil or subsoil in the area, on water quality and aquatic environment.	3D	1.5.6, 1.6.6
[G]	Describe the potential and implications for nutrient management in the proposed Springbank Off-Stream reservoir, based on the proposed operating regime.	3B	7.4.2, 7.4.3
[H]	Describe any potential cumulative effects in the Bow River and the implications to the WQMF and regional initiatives such as the Bow River Phosphorus Management Plan.	3C	1.3.4
3.6 Aquatic Ecology			
3.6.1 Baseline Information			
[A]	Describe and map the fish, fish habitat and aquatic resources (e.g., riparian, aquatic and benthic invertebrates) of the Elbow River and tributaries (i.e. upstream and downstream of the reservoir) affected by the project and all ancillary project components. Describe the species composition, distribution, relative abundance, quantitative population estimate, movements and general life history parameters of fish resources at appropriate times of year, which take into account regional use of the Elbow River system (i.e., Elbow Falls to Glenmore Reservoir). Identify any species that are:		

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	a) listed as "at Risk, May be at Risk and Sensitive" in the *General Status of Alberta Wild Species* (Alberta Environment and Sustainable Resource Development);	3A 4	8.2.2.1, 8.2.2.3, Table 8-3 Appendix M – Aquatic Ecology Technical Data Report
	b) listed in Schedule 6 of the provincial *Wildlife Regulation*;	3A 4	8.2.2.3, Table 8-3 Appendix M – Aquatic Ecology Technical Data Report
	c) listed in Schedule 1 of the federal *Species at Risk Act*;	3A 4	8.2.2.3, Table 8-3 Appendix M – Aquatic Ecology Technical Data Report
	d) listed as "at risk" by COSEWIC; and	3A 4	8.2.2.3, Table 8-3 Appendix M – Aquatic Ecology Technical Data Report
	e) traditionally used species.	3A 4	8.2.2.3, Table 8-4, 14.2.4 Appendix M – Aquatic Ecology Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[B]	Describe and map existing critical or sensitive areas such as spawning, rearing, and over-wintering habitats, seasonal habitat use including migration and spawning routes.	3A 4	8.2.2, Figure 8.2-2 Appendix H – Attachment 11A: Habitat Suitability models; Wildlife and Biodiversity Technical Data Report.
[C]	Describe the current and potential use of the fish resources by Aboriginal, sport or commercial fisheries.	3A	8.2.2, 12.2.2, 14.2.7, 14.3.5
3.6.2 Impact Assessment			
[A]	Describe and assess the potential impacts of the Project to fish and fish habitat, and other aquatic resources, including but not limited to the following:		
	a) habitat loss and alteration:	3A	8.5.2
	i) during construction and from infrastructure footprint,	3A	8.4.4
	ii) changes to hydrology on the Elbow River, including below Glenmore Reservoir, due to all aspects of water operations (e.g., low flow diversion especially during drought years), and	3A 3B	6.5.2 6.4.2, 6.4.4
	iii) of unnamed tributary to Elbow River above and below proposed reservoir;	3A 3B	6.5.2 6.4.2, 6.4.4
	b) entrainment and entrapment of fish at the diversion structure, canals, outlet structure, and reservoir, including:	3B	8.2
	i) measures to prevent fish entrainment,	3A 3B	8.4.2.2, 8.4.3 8.2.2; 8.2.3; 8.2.4
	ii) ability for entrained fish to return to Elbow River system;	3B	8.2.4.1, 8.2.4.3

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	iii) population level impacts from added mortality or loss from the Elbow River system, including other cumulative effects (e.g., fish mortality, habitat loss, summerkill, winterkill, competition with non-native species);	3A 3B 3C	8.4.4 8.2.2; 8.2.3; 8.2.4 1.2.4, 1.3.5
	iv) effects of reservoir design (e.g., shape, depth) on fish stranding and mortality with respect to drawdown; and	3B	8.2.4
	v) mitigative measures to return fish to the Elbow River system in the event of stranding due to drawdown;	3B 4	8.2.4.2 Supporting Documentation 15
	c) fish passage at the diversion weir throughout the year and across years, considering all species and life stages;	3A 3B 4	8.4.2.1, 8.4.4 8.2.3 Appendix M - Attachment 8A
	d) biodiversity;	3A 3B	8.4.4 8.2.3, 8.2.4
	e) a description of maintenance requirements to maintain fish passage at all times of year for spring and fall spawning species;	3A 4	8.4.3.8 Appendix M - Attachment 8A
	f) effects on water quality including, but not limited to:		
	i) changes to water temperature and dissolved oxygen in the Elbow River system and reservoir and potential effects of these changes on fish; and	3A 3B	7.4.2, 8.4.2.1. 8.4.4 7.4.2; 7.4.3; 7.4.4,
	ii) contaminants (e.g., methylmercury) and bioaccumulation in fish;	3B	8.2.2; 11.3.6; 11.3.8
	g) the current use of local and regional fisheries resources to support the assessment of potential changes in angling pressure;	3A	8.4.4.1

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	h) increased habitat fragmentation; and	3A	8.4.2.1
	i) groundwater-surface water interactions.	3A 3B	5.2.2.2, 5.3, 6.2.2.4 5.2.2; 5.2.3, 6.4.2, 6.4.3, 6.4.4
[B]	Identify the key aquatic indicators that Alberta Transportation used to assess project impacts. Discuss the rationale for their selection.	3A	8.1.3
[C]	Identify all aspects of potential serious harm to fish and fish habitat resulting from the construction and ongoing operation of all project components (i.e. operation of weir, fish entrainment via ongoing diversions to maintain Full Supply, fish kills due to dewatering of pond and thermal increases in water temperature, etc.)	3A 3B	8.4.2, 8.4.4 8.2.2, 8.2.3, 8.2.4
[D]	Identify plans proposed to offset any loss in the productivity of fish habitat. Indicate how environmental protection plans address applicable provincial and federal policies on fish habitat including the development of a “No Net Loss” fish habitat objective.	3A 4	8.4.4.2 Appendix M - Attachment 8A
[E]	Describe measures to ensure aquatic invasive species do not occupy or establish in the project infrastructure; describe measures to remove aquatic invasive species should they be found.	3A 4	8.4.3 Appendix C
[F]	Identify/describe monitoring plans/strategies that can be implemented to evaluate potential project impacts to regional fisheries resources in the Elbow River watershed. (i.e., include population level surveys conducted at appropriate times of year which take into account regional use of the Elbow River system (i.e., Elbow Falls to Glenmore Reservoir)).	3C 4	2.7.3 Appendix M – Aquatic Ecology Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.7 Vegetation			
3.7.1 Baseline Information			
[A]	Describe and map the vegetation communities, wetlands, riparian lands, rare plants, invasive species and communities of rare and scarce distribution. Identify the occurrence, relative abundance and distribution and identify any species that are:	3A	10.2.2
	a) listed as "at Risk, May be at Risk and Sensitive" in the *General Status of Alberta Wild Species* (Alberta Environment and Sustainable Resource Development);	3A 4	10.2.2.3, Table 10-5, Table 10-6 Appendix L – Attachment 10A
	b) listed in Schedule 1 of the federal *Species at Risk Act*;	3A 4	10.2.2.3, Table 10-5 Appendix L – Attachment 10A
	c) listed as "at risk" by COSEWIC; and	3A 4	10.2.2.3, Table 10-5 Appendix L – Attachment 10A
	d) traditionally used species.	3A	10.2.2.3, Table 10-7
[B]	Describe and quantify the current extent of natural vegetative communities, and identify the risks to those communities.	3A	10.2.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.7.2 Impact Assessment			
[A]	Describe and assess the potential impacts of the Project on vegetation communities and biodiversity, considering:		
	a) both temporary (include timeframe) and permanent impacts;	3A 3B	10.4 10.2
	b) the potential for introduction and colonization of weeds and non-native invasive species;	3A 3B	10.4.3 10.2.2
	c) potential increased fragmentation and loss of upland, riparian and wetland habitats; and	3A 3B	10.4 10.2
	d) implications of vegetation changes for other environmental resources (e.g., terrestrial and aquatic habitat diversity and quantity, water quality and quantity, erosion potential).	3A 3B	8.3, 10.4, 11.4.1, 11.4.5 8.3, 10.2, 11.3.2, 11.3.5
[B]	Identify key vegetation indicators used to assess the Project impacts. Discuss the rationale for the indicator's selection.	3A	10.3, Table 10-1
3.8 Wildlife and Biodiversity			
3.8.1 Baseline Information			
[A]	Describe and map current and potential wildlife resources (amphibians, reptiles, birds, and terrestrial and aquatic mammals) in the area from the diversion weir to the dam and outflow. Describe species relative abundance, distribution and their use and potential use of habitats. Also identify any species that are:	3A 4	11.2.2 Appendix H – Wildlife and Biodiversity Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	a) listed as "at Risk, May be at Risk and Sensitive" in the *General Status of Alberta Wild Species* (Alberta Environment and Sustainable Resource Development);	3A 4	11.2.2.2, Attachment A Appendix H – Wildlife and Biodiversity Technical Data Report
	b) listed in Schedule 1 of the federal *Species at Risk Act*;	3A 4	11.2.2.2, Attachment A Appendix H – Wildlife and Biodiversity Technical Data Report.
	c) listed as "at risk" by COSEWIC;	3A 4	11.2.2.2, Attachment A Appendix H – Wildlife and Biodiversity Technical Data Report.
	d) traditionally used species; and	3A	11.2.2.2
	e) migratory bird species listed under the *Migratory Birds Convention Act*.	3A 4	11.2.2.2, Attachment A Appendix H – Wildlife and Biodiversity Technical Data Report.

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[B]	Describe and map existing wildlife habitat and habitat disturbance including assessment activities. Identify habitat disturbances that are related to existing and approved projects.	3A 4	11.2.2.1, 11.2.2.3, 11.2.2.6 Appendix H – Attachment 11A, Wildlife and Biodiversity Technical Data Report.
[C]	Describe and map existing levels of biodiversity including a description of the biodiversity metrics, biotic and abiotic indicators used. Discuss the rationale for their selection.	3A 4	11.2.2.1, 11.2.2.3, 11.2.2.6 Appendix H – Attachment 11A, Wildlife and Biodiversity Technical Data Report.
3.8.2 Impact Assessment			
[A]	Describe and assess the potential impacts of the Project to wildlife, wildlife habitats, and biodiversity considering:	3A 3B	11.4, Attachment A 11.3, Attachment A
	a) how the Project will affect wildlife relative abundance, habitat availability, habitat fragmentation, mortality, movement patterns, and distribution for all stages of the Project, including a prediction of future use due to habitat alteration;	3A 3B	11.4, Attachment A 11.3, Attachment A
	b) how improved or altered access may affect wildlife, including future prediction of wildlife use and movements;	3A 3B	11.4.3 11.3.3
	c) how altered habitat conditions (loss, change, fragmentation) may effect wildlife and biodiversity values. Consider habitat change (e.g., riparian), the availability of habitat and the influence of anthropogenic features and infrastructure on wildlife movements and predator-prey relationships; the contribution of the Project to changes in regional biodiversity and the impact to local and regional ecosystems;	3A 3B	11.4, Attachment A 11.3, Attachment A

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	d) potential effects on wildlife resulting from changes to air and water quality, including both acute and chronic effects to animal health; and	3B	11.3.6
	e) how the risk to wildlife and habitat can be managed.	3A 3B	11.4, Attachment A 11.3, Attachment A
[B]	Identify the key wildlife and habitat indicators used to assess project impacts. Discuss the rationale for their selection.	3A	11.2.2.4
3.9 Terrain and Soils			
3.9.1 Baseline Information			
[A]	Describe and map the terrain and soils conditions in the Project Area.	3A 4	9.2.2 Appendix G, Terrain and Soils Technical Data Report; Appendix I, Hydrogeology Baseline Technical Data Report
3.9.2 Impact Assessment			
[A]	Describe Project activities that could affect soil quality (e.g., wetting/drying/rewetting of soil, salinization, silt accumulation, soil crusting, compaction, anaerobic decomposition of organic matter, contaminants) and:	3A	9.1.3
	a) indicate the amount (ha) of surface disturbance, aggregate and borrow sites and other infrastructure-related construction and operational activities;	3A 4	9.4.2.1 Appendix D, Appendix G: Terrain and Soils Technical Data Report

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	b) discuss the relevance of any changes for the local and regional landscapes, biodiversity, productivity, ecological integrity, aesthetics and future use; and	3A 3B	12.4.2 12.2.2
	c) describe potential sources of soil contamination (e.g., industry infrastructure and activities, agricultural infrastructure and activities, contaminated sites, etc.)	3D	1.4.4, 1.4.5, 1.4.6
[B]	Discuss the potential impacts caused by the mulching and storage of woody debris considering, but not limited to, vulnerability to fire, degradation of soil quality, increased footprint.	3D	1.4.3
3.10 Land Use and Management			
3.10.1 Baseline Information			
[A]	Describe and map the current land uses in the Project Area, including all Crown land dispositions and Crown Reservations (Holding Reservation, Protective Notation, Consultative Notation).	3A	12.2.2.1, 12.2.2.2, 12.2.2.3
[B]	Indicate where Crown land dispositions may be needed for roads or other infrastructure for the Project (e.g., weir, diversion, creek improvements, water intake, water outlet).	1	1.4.1
[C]	Identify and map unique sites or special features such as Parks and Protected Areas, Heritage Rivers, Historic Sites, Environmentally Significant Areas, culturally significant sites and other designations (e.g., World Heritage Sites, Ramsar Sites, Internationally Important Bird Areas).	3A	12.2.2
[D]	Describe and map land clearing activities, showing the timing of the activities.	4	Appendix D, Section 4.4
[E]	Describe existing access control measures.	3A 3B	12.4.3 12.2.3.1

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
3.10.2 Impact Assessment			
[A]	Identify the potential impacts of the Project on land uses, including:	3A 3B	12.4 12.2
	a) unique sites or special features;	3A 3B	12.2.2.2 12.2.3
	b) changes in public and landowner access arising from the development, including secondary effects related to increased hunter, angler and other recreational access;	3A 3B	12.2.2.3 12.2.3
	c) aggregate reserves that may be located on land under Alberta Transportation's control and reserves in the region;	1	3.3; Figure 3-1
	d) compare the baseline and reclaimed percentages and distribution of vegetation communities in the Project Area;	3A 3B	10.2.2.1, 10.4.2, 12.4.2.1 12.2.2.1
	e) the operations of any agricultural crown leases, provincial grazing reserves or other crown dispositions;	3A 3B	12.4 12.2
	f) anticipated changes (type and extent) to the topography, elevation and drainage patterns within the Project Area; and	3A 3B	9.4.2, 12.2.2.2 9.2.3.1
	g) access control for landowners, public, regional recreational activities, Aboriginal land use and other land uses during and after development activities.	1 3A	3.2.8, 3.3.2 12.4.2,
[B]	Describe how Integrated Land Management has been used.	3A; and	12.1.1.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[C]	Provide a fire control plan highlighting:	4	Supporting Documentation, Document 4, Document 10
	a) measures taken to ensure continued access for firefighters to adjacent wildland areas; and	4	Supporting Documentation- Document 4, Document 10
	b) fire prevention, detection, reporting, and suppression measures, including proposed fire equipment.	4	Supporting Documentation- Document 4, Document 10
4 HISTORIC RESOURCES			
4.1 Baseline Information			
[A]	Provide a brief overview of the regional historic resources setting, including a discussion of the relevant archaeological, historic and palaeontological records.	3A	13.2.2
[B]	Describe and map known historic resources sites in the Project Area, considering:	3A	13.2.2
	a) site type and assigned Historic Resources Values; and	3A	13.2.2
	b) existing site-specific *Historical Resources Act* requirements.	3A	13.1.1
[C]	Provide an overview of previous Historic Resources Impact Assessments that have been conducted within the Project Area, including:	3A	13.2.2.1
	a) a description of the spatial extent of previous assessment relative to the Project Area, noting any assessment gap areas; and	3A	13.2.2.1
	b) a summary of *Historical Resources Act* requirements and/or clearances that have been issued for the Project to date.	3A	13.2.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[D]	Identify locations within the Project Area that are likely to contain previously unrecorded historic resources. Describe the methods used to identify these areas.	3A	13.2.1, 13.3.1
4.2 Impact Assessment			
[A]	A Historic Resources Impact Assessment is required for the Project and a summary of the results of the Historic Resources Impact Assessment must be included.	3A	13.3.1, 13.3.2
		3C	2.12.3, Attachment 2
[B]	Describe all project components and activities, including all ancillary activities that have the potential to affect historic resources at all stages of the Project.	3A 3B	13.3 13.1
[C]	Describe the nature and magnitude of the potential project impacts on historical resources, considering:	3A 3B	13.5 13.3
	a) effects on historic resource site integrity; and	3A 3B	13.4 13.2
	b) implications for the interpretation of the archaeological, historic and palaeontological records.	3A 3B	13.3, 13.4 13.2
5 TRADITIONAL ECOLOGICAL KNOWLEDGE AND LAND USE			
[A]	Provide:		
	a) a map and description of traditional land use areas including fishing, hunting, trapping and nutritional, medicinal or cultural plant harvesting by affected Aboriginal peoples (if the Aboriginal community or group is willing to have these locations disclosed);	3A	14.1.1.1, 14.2.3
	b) a map of cabin sites, spiritual sites, cultural sites, graves and other traditional use sites considered historic resources under the *Historical Resources Act* (if the Aboriginal community or group is willing to have these locations disclosed), as well as traditional trails and resource activity patterns; and	3A	14.1.1.1, 14.2.3, 14.2.6

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	c) a discussion of:		
	i) the availability of vegetation, fish and wildlife species for food, traditional, medicinal and cultural purposes in the identified traditional land use areas considering all project related impacts; and	3A 3B	14.2.3,14.2.4, 14.2.5, 14.2.6 14.2.2, 14.2.3, 14.2.4, 14.2.5
	ii) access to traditional lands in the Project Area during all stages of the Project.	3A 3B	14.2.5 14.2.2, 14.2.3, 14.2.4, 14.2.5, 14.6
[B]	Determine the impacts of the Project on traditional medicinal and cultural purposes and identify mitigation strategies.	3A 3B	14.4, 14.5 14.3, 14.4 14.2.4, 14.6.1, 14.6.2
6 PUBLIC HEALTH			
6.1 Public Health			
[A]	Describe aspects of the Project that may have implications for public health or the delivery of regional health services. Determine quantitatively whether there may be implications for public health arising from the Project.	3A 3B	15.3 15.3
[B]	Document any health concerns regarding the Project raised by stakeholders during consultation.	3A 3B	15.1.2, 15.1.2
[C]	Document any health concerns identified by Aboriginal communities or groups regarding the Project, specifically on their traditional lifestyle. Include an Aboriginal receptor type in the assessment.	3A 3B	15.1.2 15.1.2

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
6.2 Public Safety			
[A]	Describe aspects of the Project that may have implications for public safety. Specifically:		
	a) describe the emergency response plan including public notification protocol and safety procedures to minimize adverse environmental effects, including emergency reporting procedures for spill containment and management;	4 3D	Supporting Documentation, Document 7, Document 8 1
	b) document any safety concerns raised by stakeholders during consultation on the Project;	1 4	6 Appendix B
	c) describe how local residents will be contacted during an emergency and the type of information that will be communicated to them;	4 3D	Supporting Documentation, Document 7, Document 8 1
	d) describe the existing agreements with area municipalities or industry groups such as safety cooperatives, emergency response associations, regional mutual aid programs and municipal emergency response agencies; and	3D	1
	e) describe the potential safety impacts resulting from higher regional traffic volumes.	3A 4	16.4.2.1, 16.4.2.2 Appendix C

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
7 SOCIO-ECONOMIC ASSESSMENT			
7.1 Baseline Information			
[A]	Describe the project alternatives considered for flood mitigation.	1	2.2
[B]	Describe the existing socio-economic conditions in the region and in the communities in the region.	3A	17.2.2
[C]	Describe factors that may affect existing socio-economic conditions including:	3A	17.3
	a) population changes;	3A	17.4.2
	b) workforce requirements for all stages of the Project, including a description of when peak activity periods will occur;	3A	17.4.2
	c) planned accommodations for the workforce for all stages of the Project. Discuss the rationale for their selection;	1 3A	3.3.3 17.4.2
	d) Alberta Transportation's policies and programs regarding the use of local, regional and Alberta goods and services;	3A	17.4.2.4
	e) the project schedule; and	1	3.3.8
	f) the overall engineering and contracting plan for the Project.	3A	17.4.3.5
7.2 Impact Assessment			
[A]	Describe the effects of construction and operation of the Project on:		
	a) landowners;	3A	12.4.2.1
	b) housing;	3A	16.3
	c) availability and quality of health care services;	3A	16.3
	d) local and regional infrastructure and community services;	3A 3D	16.3,16.4 16.2.2 1.5

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
	e) recreational activities;	3A 3B	12.4.2.1,12.4.2.3 12.2.2.1, 12.2.2.3
	f) agricultural productivity;	3A 3B	12.4.2.1 12.2.2
	g) hunting, fishing, trapping and gathering; and	3A 3B	14.2.2, 14.2.4, 14.2.6, 14.3.2, 14.3.4 14.2.2
	h) First Nations and Métis (e.g., traditional land use and social and cultural implications).	3A 3B	14.3 14.2
[B]	Describe the impacts of additional proposed flood mitigation projects or a combination of those projects on the effectiveness of the Project.	1 3C	2.2.1 1.1.4, 1.2, 1.3
[C]	Describe the need for additional Crown land or private land.	1	1.3.2
[D]	Discuss opportunities to work with Aboriginal communities and groups, other local residents and businesses regarding employment, training needs and other economic development opportunities arising from the Project.	1 3A	7.3, 7.5 17.4.1.4
[E]	Describe the financial costs of 1:50, 1:100 and 2013 flood events to the public and local/provincial and federal governments. Indicate the extent to which these financial costs are mitigated by the project.	3B	17.2.2, 17.3.1
[F]	Provide the estimated total project cost, including a breakdown for engineering and project management, relocation of infrastructure, acquisition of land, maintenance, equipment and materials, and labour for both construction and operation stages. Indicate the percentage of expenditures expected to occur in the region, Alberta, Canada outside of Alberta, and outside of Canada.	3A	17.4.3.5
[G]	Provide a discussion as to which communities will benefit from the proposed Project.	3A	17.4.3.5

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
[H]	Describe other potential impacts and benefits of the project (e.g., recreation, open green space, aesthetics).	3A	12.4.3
8 MITIGATION MEASURES			
[A]	Discuss mitigation measures planned to avoid, minimize or eliminate the potential impacts for all stages of the Project.	4	Appendix C Mitigation Measures
[B]	Identify the mitigation objectives for each associated impact and describe those mitigation measures that will be implemented. Provide rationale for their selection, including a discussion on the effectiveness of the proposed mitigation.	3A	3.4.4, 4.4.2.2, 5.4.2.2, 6.4, 7.4.2.2, 8.4.3, 9.4, 10.3.1, 11.4, 12.4, 13.3, 14.3, 15.4.3,16.4.2.2, 17.4,
		3B	3.2.2, 4.2.2, 5.2, 6.4, 7.4, 8.2, 9.2, 10.1.1, 11.3, 12.2, 13.2, 14.2, 15.4.2, 16.2.2.2, 17.3.1.4
9 RESIDUAL IMPACTS			
[A]	Describe the residual impacts of the Project following implementation of Alberta Transportation's mitigation measures and Alberta Transportation's plans to manage those residual impacts.	3A	Section 3.4.8; Table 3-23; Section 4.4.1.1; Table 4-15; Table 5.2; Section 6.5.2; Section 6.5.3; Table 6-12; Section 7.4.2.3; Table 7-4; Section 8.4.3.1; Section 9.4.3.3; Table 9-16; Section 10.4.2; Section 10.4.3; Section 10.4.4.1; Section 10.4.4.2;

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
			Section 10.4.5; Table 10-14; Section 10.6; Section 11.4.2.3; Section 11.4.3.2; Section 11.4.3.3; Section 11.4.4.3; Section 11.4.5.3; Table 11-14; Section 11.4.7.1; 11.4.7.2; Table 11-17; Section 11.4.7.2; 11.4.7.3; Table 11-19; Section 11.4.7.4; Section 11, Attachment A, Table A-1; Section 12.4.2.3; 12.4.3.3; Table 12-6; Section 13.4; Section 14.3.3.3; Section 14.3.4.3; Table 14-8; Section 15.3, Table 15-2, Table 15-16; Section 16.4.3; Table 16-7; Section 17.4.1.5; Section 17.4.2.5; Table 17-24; Section 17.4.3.5; Table 17-27

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
		3B	Section 3.2.8; Table 3-2; Section 4.2.2; Table 4-2; Section 5.2.2.3; Table 5-3; Section 6.4.2.1; Section 6.4.3.1; Table 6-11; Section 7.4.2; Section 7.4.3; Section 7.4.4; Table 7-4; Section 7.4.5; Section 8.2.1; Section 8.2.4.3; Table 8-2; Section 9.2.4; Table 9-7; Section 10.2.2; Section 10.2.3.1; Section 10.2.3.2; Section 10.2.4; Table 10-13; Section 11.3.2.3; Section 11.3.3.3; Section 11.3.4.3; Section 11.3.6.3; Section 11.3.8.3; Table 11-7; Table 11-9; Table 11-11; Section 12.2.2.3; 12.2.3.3; Table 12-3; Section 15.4.2.1; Table 15-6; Section 16.2.3; Table 16-2; Section 17.5; Table 17-8

Table A-1 Concordance with AEP Final Terms of Reference for the EIA Report

TOR Section	Final Terms of Reference (TOR)	EIA Report	
		Volume	Section
		3D	Section 3.0; Table 3-1
10 MONITORING			
[A]	Describe Alberta Transportation's current and proposed monitoring programs, including:	3C	2.0
	a) how the monitoring programs will assess any project impacts and measure the effectiveness of mitigation plans. Discuss how Alberta Transportation will address any project impacts identified through the monitoring program;	3C	2.2.2, 2.3.2, 2.4.2, 2.5.2, 2.6.2, 2.7.2, 2.9.2, 2.10.2, 2.12.2
	b) how Alberta Transportation will contribute to current and proposed regional monitoring programs;	3C	2.1.1
	c) monitoring performed in conjunction with other stakeholders, including Aboriginal communities and groups;	3C	2.1.3
	d) new monitoring initiatives that may be required as a result of the Project;	3C	2.0
	e) regional monitoring that will be undertaken to assist in managing environmental effects and improve environmental protection strategies;	3C	2.0
	f) how monitoring data will be disseminated to landowners, the public, Aboriginal communities or other interested parties; and	3C	2.0
	g) how the results of monitoring programs and publicly available monitoring information will be integrated with Alberta Transportation's environmental management system.	3C	2.1.1
[B]	Identify the surface water quality monitoring program that will be implemented to assess the future impacts of construction and operation (including maintenance) of the reservoir project on the Elbow/Glenmore/Bow. Consider appropriate water quality parameters (e.g., metals, nutrients, pesticides, temperature, BOD/TOC, bacteria, aquatic and benthic invertebrates, aquatic plants, algae, dissolved oxygen, etc.), and their seasonal and flow variations.	3C	2.6

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
PART 2 – CONTENT OF THE ENVIRONMENTAL IMPACT STATEMENT			
1 INTRODUCTION AND OVERVIEW			
1.1 The Proponent			
1.1	In the EIS, the proponent will: • provide contact information (e.g. name, address, phone, fax, email);	1	1.1.1
	• identify itself and the name of the legal entity that would develop, manage and operate the project;	1	1.1.1
	• describe corporate and management structures;	1	1.1.1.1
	• specify the mechanism used to ensure that corporate policies will be implemented and respected for the project; and	1	1.1.1.1
	• identify key personnel, contractors, and/or sub-contractors responsible for preparing the EIS.	All Volumes - Stantec Consulting Ltd	
1.2 Project Overview			
1.2	The EIS will describe the project, key project components and associated activities, scheduling details, the timing of each phase of the project and other key features. If the project is a part of a larger sequence of projects, the EIS will outline the larger context. The overview is to identify the key components of the project, rather than providing a detailed description, which will follow in Section 3 of this document.	1	1.2; 3.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
1.3 Project Location			
1.3	The EIS will contain a description of the geographical setting in which the project will take place. This description will focus on those aspects of the project and its setting that are important in order to understand the potential environmental effects of the project. The following information will be included:	1	1.3
	• the UTM coordinates of the main project site;	1	1.3
	• current land use in the area;	1	1.3.1; 1.3.2.1; Figure 1-7
	• distance of the project facilities and project components to any federal lands;	1	1.3.1; 7.2; Figure 7-1
	• the environmental significance and value of the geographical setting in which the project will take place and the surrounding area;	1	1.3.1; 1.3.2.1; Figure 1-1; Figure 1-6
	• environmentally sensitive areas, such as national, provincial and regional parks, ecological reserves, wetlands, estuaries, and habitats of federally or provincially listed species at risk and other sensitive areas;	1	1.3.1; Figure 1-1; Figure 1-6
	• local and Indigenous communities and residences; and,	1	1.3.1; 7.2; Figure 7-1
	• traditional territories, treaty lands, Indian reserve lands and Métis harvesting regions and/or settlements.	1	7.2; Figure 7-1
1.4 Regulatory Framework and the Role of Government			
1.4	The EIS will identify: • any federal power, duty or function that may be exercised that would permit the carrying out (in whole or in part) of the project or associated activities;	1	1.4.2
	• the environmental and other regulatory approvals and legislation that are applicable to the project at the federal, provincial, regional and municipal levels;	1	1.4.1; 1.4.3
	• government policies, resource management, planning or study initiatives pertinent to the project and/or EA and their implications;	1	1.4.2.3

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
1.4 (cont'd)	• any treaty or self-government agreements, existing or known to be under negotiation, with Indigenous groups that are pertinent to the project and/or EA;	1	7.2
	• any relevant existing or draft land use plans, land zoning, transportation infrastructure plans, or community plans; and	1	1.3.2; 1.4.2.3; 1.4.3; 2.2.6; 3.2.7;
	• any regional, provincial and/or national objectives, standards or guidelines that have been used by the proponent to assist in the evaluation of any predicted environmental effects.	1	1.4
2 PROJECT JUSTIFICATION AND ALTERNATIVES CONSIDERED			
2.1 Purpose of the Project			
2.1	The EIS will describe the purpose of the project by providing the rationale for the project, explaining the background, the problems or opportunities that the project is intended to satisfy and the stated objectives from the perspective of the proponent. If the objectives of the project are related to broader private or public sector policies, plans or programs, such as, but not limited to, provincial and/or municipal flood mitigation plans and strategies, this information will also be included.	1	1.2; 2.1
	The EIS will identify and describe the potential additional, alternative, or modified uses, objectives, or applications of the project.	Not Applicable	Not Applicable
	The EIS will also describe the predicted environmental, economic, and social costs and benefits of the project. This information will be considered in assessing the justifiability of any significant adverse residual environmental effects, if such effects are identified.	1 4	1.2; 2.1; Supporting Documentation – IBI Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
2.2 Alternative Means of Carrying Out the Project			
2.2	The EIS will identify and consider the effects of alternative means of carrying out the project that are technically and economically feasible. The proponent will complete the assessment of alternative means in accordance with the Agency's Operational Policy Statement entitled "Addressing "Purpose of" and "Alternative Means" under the *Canadian Environmental Assessment Act, 2012*".	1	2.2
	In its alternative means analysis, the proponent will address, at a minimum, the following project components: • location of the project;	1	2.2.1
	• project component configurations;	1	2.2.2; 2.2.3; 2.2.4; 2.2.5; Figure 2-1
	• routing and realignment of access roads;	1	2.2.6
	• modifications to pipelines and transmission lines (if under care and control of the proponent);	1	3.2.8
	• construction methods for instream components;	1	2.2.2; 2.2.5
	• reservoir capacity selection;	1	2.2.1
	• project design components related to environmental effect mitigation, such as sediment control, navigation, and fish movement; and	1	2.2.1; 2.2.2; 2.2.3; 2.2.4; 2.2.5
	• any other relevant key project components.	1	2.2

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
2.2 (cont'd)	The analysis of alternative means of carrying out the project will also consider project operation and parameters for the regulation of flow rates. The Agency recognizes that projects may be in the early planning stages when the EIS is being prepared. Where proponents have not made final decisions concerning the placement of project infrastructure, the technologies to be used, or that several options may exist for various project components, they are strongly encouraged to conduct an environmental effects analysis at the same level of detail assessment of the various options available (alternative means) within the EIS.	1	2.2
	An analysis of alternative means of meeting the project purposes or objectives will also be presented in relation to potential environmental effects under CEAA 2012		
3 PROJECT DESCRIPTION			
3.1 Project Components			
3.1	The EIS will describe the project, by presenting the project components (as identified in section 3.1), associated and ancillary works, and other characteristics that will assist in understanding the environmental effects. This will include:	1	3.2
	• maps, at an appropriate scale, of the project location, the project components, boundaries of the proposed site with UTM coordinates, the major existing and proposed infrastructure, adjacent land uses, and any important environmental features.	1	Section 1.3, Figure 1-1; Figure 1-6; Figure 1-7; Figure 1-8; Figure 3-1; Figure 3-2; Figure 3-3; Figure 3-5; Figure 3-6; Figure 3-8; Figure 3-9; Figure 3-10; Figure 3-11; Figure 3-12
	• permanent and temporary linear infrastructures (road, railroad, pipelines, power supply), identifying the route of each of these linear infrastructures, the location and types of structure used for stream crossings;	1	3.2.7; 3.2.8

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
3.1 (cont'd)	• storage areas for explosives, fuels, chemicals, contaminated soils, wastewater, solid waste, and hazardous wastes;	1	3.3.4; 3.3.5; 3.5.5; 3.5.6; 3.6.5
	• energy supply (source, quantity); and	1	3.3
	• waste disposal (type of waste (including hazardous), method of disposal, quantity).	1	3.3.4; 3.3.5; 3.4.5; 3.5.5; 3.6.5; 3.8.1; 3.8.4; 4.4; 4.5
3.2 Project Activities			
3.2	The EIS will include descriptions of the construction, operation, decommissioning, and abandonment associated with the proposed project. This will include descriptions of the activities to be carried out during each phase, the location of each activity, expected outputs, and an indication of the activity's magnitude and scale. Although a complete list of project activities should be provided, the emphasis will be on activities with the greatest potential to have environmental effects. Sufficient information will be included to predict environmental effects and concerns identified by the public and Indigenous groups. Highlight activities that involve periods of increased environmental disturbance or the release of materials into the environment.	1	3.0
	The EIS will include information regarding the proposed project lifespan and the potential for future expansion or modification.	1	3.7
	The EIS will include a summary of the changes that have been made to the project since originally proposed, including the benefits of these changes to the environment, Indigenous Peoples, and the public.	1	2.2
	The EIS will include a schedule including time of year, frequency, and duration for all project activities. The information will include a description of:	1	1.2.1; 3.3.8

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
3.2.1	**Site Preparation and Construction**	1	3.3; Table 3-7
	• site clearing, excavation;	1	3.3; Table 3-7
	• if blasting, then list frequency and methods, type of explosive used, and storage of explosives;	1	3.3.1.3
	• borrow materials requirements (source, quantity, and characterization);	1	3.3; Figure 3-1
	• water management, including water diversions, dewatering or deposition activities required (location, methods, timing);	1	3.8
	• equipment requirements (type, quantity);	1	3.3.2
	• construction accommodations (location, capacity, wastewater treatment);	1	3.3
	• contribution to atmospheric emissions, including emissions profile (type, rate and source);	1	4.1
	• waste management and recycling;	1	3.3.4; 3.8; 4.5
	• storage and management of hazardous materials, fuels and residues. Characterization and management of workforce, including transportation, work schedules and lodging; and	1	3.3.5; 3.8.1.2; 4.5
	• progressive restoration and reclamation.	1	3.3.6.2; 3.3.7
3.2.2	**Operation**	1	3.4, 3.5, 3.6
	• equipment requirement;	1	3.4.4; 3.5.4; 3.6.4
	• criteria used to determine the start, stop, and nature of operations;	1	3.4, 3.5, 3.6
	• water management throughout each project component, including a detailed water management plan	1	3.8.2; 3.8.3; 3.8.4
	• contribution to atmospheric emissions, including emissions profile (type, rate and source);	1	4.1

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
3.2.2 (cont'd)	• waste management and recycling;	1	3.4.5; 3.5.5; 3.6.5; 3.8
	• characterization and management of workforce, including transportation, work schedules and lodging; and	1	3.4.6; 3.5.6; 3.6.6
	• ongoing and post-flood recovery and/or maintenance, of each project component.	1	3.6
3.2.3	**Decommissioning and Abandonment**	1	3.3.6.2; 3.3.7; 3.7
	• the preliminary outline of a decommissioning and reclamation plan for any components associated with the project;	1	3.3.6.2; 3.3.7; 3.7
	• the ownership, transfer and control of the different project components;	1	1.0; 3.4.1
	• the responsibility for monitoring and maintaining the integrity of any remaining structures and the hydrological function of the surrounding environment; and	1	1.0; 3.4.1
	• for permanent facilities, a conceptual discussion on how decommissioning and abandonment could occur, and a description of any progressive restoration or reclamation plans.	1	3.7
4 PUBLIC PARTICIPATION AND CONCERNS			
4	The EIS will describe the ongoing and proposed participation and the information sessions that the proponent will hold or that it has already held on the project. It will provide a description of efforts made to distribute project information and provide a description of information and materials that were distributed during the consultation process.	1 4	6.0 Appendix B
	The EIS will indicate the methods used, where the consultation was held, the persons and organizations consulted, the concerns voiced and the extent to which this information was incorporated in the design of the project as well as in the EIS.	1 4	6.1; 6.2 Appendix B
	The EIS will provide a summary of key issues raised related to the environmental assessment as well as describe any outstanding issues and ways to address them.	1 4	6.3 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5 INDIGENOUS ENGAGEMENT AND CONCERNS			
5	For the purposes of developing the EIS, the proponent will engage with Indigenous groups that may be affected by the project, to obtain their views on: • Effects of changes to the environment on Aboriginal peoples (health and socio-economic conditions; physical and cultural heritage, including any structure, site or thing that is of historical, archaeological, paleontological or architectural significance; and current use of lands and resources for traditional purposes) pursuant to paragraph 5(1)(c) of CEAA 2012, and	1 3A 3B 4	7.0 14.1.2; 14.2; 14.3; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B
	• Potential adverse impacts of the project on Section 35 rights, title and related interests, in respect of the Crown's duty to consult, and where appropriate, accommodate Aboriginal peoples.	1 3A 4	7.0 14.5 Appendix B
	With respect to the effects of changes to the environment on Aboriginal peoples, the assessment requirements are outlined in Part 2, sections 6.1.9 and 6.3.4 of these Guidelines. With respect to potential adverse impacts of the project on section 35 rights, title and related interests, the EIS will document for each group identified in section 5.1 of these Guidelines (or in subsequent correspondence from the Agency): • Section 35 rights, title and related interests, when this information is directly provided by a group to the proponent, the Agency or is available through public records including: – Geographical extent, nature, frequency and timing of the practice or exercise of the right; and, – Maps and data sets (e.g., fish catch numbers);	3A 3B 4	14.2; 14.3; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5 (cont'd)	• Potential adverse impacts of each of the project components and physical activities, in all phases, on section 35 rights, including title and related interests. This assessment is to be based on a comparison of the exercise of the identified rights, title and related interests between the predicted future conditions with the project and the predicted future conditions without the project. Include the perspectives of Indigenous groups on the impacts assessment methodology and conclusions;	3A 3B 4	14.1; 14.3; 14.5; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B
	• Measures identified to mitigate or accommodate potential adverse impacts of the project on potential or established section 35 rights, including title and related interests. These measures will be written as specific commitments that clearly describe how the proponent intends to implement them, and may go beyond mitigation measures that are developed to address potential adverse environmental effects;	3A 3B 4	14.1; 14.3; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B
	• Potential adverse impacts on potential or established section 35 rights, including title and related interests that have not been fully mitigated or accommodated as part of the EA and associated engagement with Indigenous groups. The proponent will also take into account the potential adverse impacts that may results from the residual and cumulative environmental effects. Include the perspectives of Indigenous groups.	3A 3B 4	14.1; 14.3; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B
	The information sources, methodology and findings of the assessment of CEAA 2012 paragraph 5(1)(c) effects may be used to inform the assessment of potential adverse impacts of the project on Section 35 rights, title and related interests. However, there may be distinctions between the adverse impacts on Section 35 rights, title and related interests and paragraph 5(1)(c) effects. The proponent will carefully consider the potential distinction between these two aspects and, where there are differences will include the relevant information in its assessment.	3A 3B 4	14.1; 14.3; 14.7; 14.8; Attachment A 14.2; 14.5; 14.6 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5 (cont'd)	In terms of gathering views from Indigenous groups with respect to both environmental effects of the project and the potential adverse impacts of the project on potential or established section 35 rights, including title and related interests, the EIS will document: • VCs suggested by Indigenous groups for inclusion in the EIS, whether they were included, and the rationale for any exclusions;	1 3A 3B	7.0 14.0 14.0
	• specific suggestions raised by each Indigenous group for mitigating the effects of changes to the environment on Aboriginal peoples or mitigating or accommodating potential adverse impacts of the project on potential or established section 35 rights, including title and related interests;	1 4	7.0 Appendix B
	• views expressed by each Indigenous group on the effectiveness of the mitigation or accommodation measures;	1 4	7.0 Appendix B
	• from the proponent's perspective, any potential cultural, social and/or economic impacts or benefits to each Indigenous group identified that may arise as a result of the project. Include the perspectives of Indigenous groups;	1 4	7.0 Appendix B
	• any other comments, specific issues and concerns raised by Indigenous groups and how they were responded to or addressed;	1 4	7.0 Appendix B
	• changes made to the project design and implementation directly as a result of discussions with Indigenous groups;	1 3A 3B	7.0 14.0 14.0
	• where and how Aboriginal traditional knowledge was incorporated into the environmental effects assessment (including methodology, baseline conditions and effects analysis for all VCs) and the consideration of potential adverse impacts on potential or established section 35 rights, including title and related interests and related mitigation measures; and	3A; and 3B	3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 13.0,14.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5 (cont'd)	• any additional issues and concerns raised by Indigenous groups in relation to the environmental effects assessment and the potential adverse impacts of the project on potential or established section 35 rights, including title and related interests.	1 4	7.0 Appendix B
	A suggested format for providing some of the information above is the creation of a tracking table of key issues raised by each Indigenous group, including the concerns raised related to the Project, proposed mitigation options, and where appropriate, a reference to the proponent's analysis in the EIS. Information provided related to potential adverse impacts on potential or established section 35 rights will be considered by the Crown in meeting its common law duty to consult obligations as set out in the Updated Guidelines for Federal Officials to Fulfill the Duty to Consult (2011).	1 4	7.0 Appendix B
5.1 Indigenous Groups to Engage & Engagement Activities			
5.1	With respect to engagement activities, the EIS will document:		
	• the engagement activities undertaken with Indigenous groups prior to the submission of the EIS, including the date and means of engagement (e.g., meeting, mail, telephone);	1 4	7.0 Appendix B
	• any future planned engagement activities; and,	1	7.5
	• how engagement activities by the proponent allowed Indigenous groups to understand the project and evaluate its effects on their communities, activities, Section 35 rights and other interests.	1 4	7.0 Appendix B
	In preparing the EIS, the proponent will ensure that Indigenous groups have access to timely and relevant information on the project and how the project may adversely impact them. The proponent will structure its engagement activities to provide adequate time for Indigenous groups to review and comment on the relevant information, and will provide an anticipated engagement schedule. Engagement activities are to be appropriate to the groups' needs and should be arranged through discussions with the groups.	1 4	7.0 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5.1 (cont'd)	The EIS will describe all efforts, successful or not, taken to solicit the information required from Indigenous groups to the preparation of the EIS.	1 4	7.0 Appendix B
	The proponent will ensure that views of Indigenous groups are recorded. The proponent will keep detailed tracking records of its engagement activities, recording all interactions with Indigenous groups, the issues raised by each Indigenous group and how the proponent addressed the concerns raised. The proponent will share these records with the Agency.	1 4	7.0 Appendix B
	The proponent should consider translating information for Indigenous groups into the appropriate Indigenous language(s) in order to facilitate engagement activities during the environmental assessment.	1 4	7.0 Appendix B
	For the Indigenous groups expected to be most affected by the project, the proponent is expected to strive toward developing a productive and constructive relationship based on on-going dialogue with the groups in order to support information gathering and the effects assessment. These groups include: • Kainai First Nation (Blood Tribe) • Tsuut'ina Nation • Stoney Nakoda Nations (Bearspaw First Nation, Chiniki First Nation, Wesley First Nation) • Piikani Nation • Siksika Nation • Ermineskin Cree Nation • Louis Bull Tribe • Samson Cree Nation • Montana First Nation • Foothills Ojibway • Métis Nation of Alberta, Region 3	1 4	7.0 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
5.1 (cont'd)	For the above groups, the proponent will strive to use primary data sources and hold face-to-face meetings to discuss concerns. The proponent will facilitate these meetings by making key EA summary documents (baseline studies, EIS, key findings, plain language summaries) accessible in advance. The proponent will ensure there are sufficient opportunities for individuals and groups to provide oral input in the language of their choice. If possible, the proponent should consider translating information for these Indigenous groups into the appropriate Indigenous languages(s) in order to facilitate engagement activities during the EA process.	1 4	7.0 Appendix B
	For Indigenous groups that may also be affected by the project, but to a lesser degree, the proponent will ensure these groups are notified about key steps in the EIS development process and of opportunities to provide comments on key EA documents and/or information to be provided regarding their community. The proponent will still ensure these groups are reflected in the baseline information and assessment of potential effects or impacts in the EIS. These Indigenous groups include: • Ktunaxa Nation • Métis Nation, British Columbia The groups referenced above may change as more is understood about the environmental effects of the project and/or if the project or its components change during the EA. The Agency reserves the right to alter the list of Indigenous groups that the proponent will engage as additional information is gathered during the assessment.	1 4	7.0 Appendix B
	Upon receipt of knowledge or information of potential effects to an Indigenous group not listed above, the proponent shall provide that information to the Agency or review panel at the earliest opportunity.	1	7.2

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6 EFFECTS ASSESSMENT			
6.1 Project Setting and Baseline Conditions			
6.1	Based on the definition of the project described in section 3 (Part 1), the EIS will present baseline information in sufficient detail to enable the identification of how the project could affect the VCs and an analysis of those effects. Should other VCs be identified during the conduct of the EA, the baseline condition for these valued components will also be described in the EIS. To determine the appropriate spatial boundaries to describe the baseline information, refer to section 3.3.3 (Part 1). As a minimum, the EIS will include a description of:		
6.1.1	**Atmospheric Environment**	3A 3B	3.0 3.0
	• ambient air quality in the project areas and the results of a baseline survey of ambient air quality, including the following contaminants, expressed in concentration units in keeping with guidelines, total suspended particulates, fine particulates ($PM_{2.5}$), particulate matters up to 10 micrometers in size (PM-10), diesel particulate, sulfur oxide (SO_x), volatile organic compounds (VOCs) and nitrogen oxide (NOx_x);	3A 4	3.2.2.2 Appendix E, Attachment 3D
	• identify and quantify existing greenhouse gas emissions by individual pollutant measured as kilotonnes of CO_2 equivalent per year in the project study areas, and current provincial/territorial/federal limits for greenhouse gas emissions targets;	3A 4	3.2.2.4 Appendix E - Attachment 3F
	• current ambient daytime and night time noise levels at key receptor points (e.g. Indigenous communities), including the results of a baseline ambient noise survey. Information on typical sound sources, geographic extent and temporal variations will be included;	3A 4	4.2.2 Appendix F - Attachment 4A; Attachment 4B; Attachment 4C

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.1 (cont'd)	• existing ambient night-time light levels at the project site and at any other areas where project activities could have an effect on light levels. The EIS will describe night-time illumination levels during different weather conditions and seasons; and	3A 4	3.2.2.3 Appendix E - Attachment 3G
	• historical records of relevant meteorological information (e.g. total precipitation (rain and snow); mean, maximum and minimum temperatures; and typical wind speed and direction).	3A 4	3.2.2.1 Appendix E - Attachment 3B, Attachment 3C; Attachment 3D
6.1.2	**Geology and Geochemistry**		
	• the bedrock and host rock geology of the deposit, including a table of geologic descriptions, geological maps and cross-sections of appropriate scale;	3A 4	5.2.2; 9.2.2 Appendix G - Terrain and Soils Technical Data Report; Appendix I, Hydrogeology Baseline Technical Data Report
	• geomorphology, topography and geotechnical characteristics of areas proposed for construction of major project components;	3A 4	5.2.2; 9.2.2 Appendix G - Terrain and Soils Technical Data Report; Appendix I, Hydrogeology Baseline Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.2 (cont'd)	• the geochemical characterization of road cuts, blast materials, and excavated materials such as waste rock and potential construction material (e.g. borrow materials) in order to predict and mitigate metal leaching and acid rock drainage;	3A	Section 9.4.2.1
		4	Appendix G - Terrain and Soils Technical Data Report
	• the geochemical characterization of sediment within the Elbow;	4	Appendix J -Hydrology Technical Data Report, Appendix K, Surface Water Quality
	• geological hazards that exist in the areas planned for the project facilities and infrastructure, including:		
	– slope erosion and the potential for ground and rock instability, and subsidence during and following project activities;	3A	9.2; 9.3; 9.4
	– history of seismic activity in the area; and	3D	2.3.1.2
	– isostatic rise or subsidence;	3D	9.2; 9.3; 9.4
	• sites that may be of paleontological and paleobotanical interest;	3A	13.2.2; 13.3.2
	• a description of regional and local geological structures, including major and local features, their formation, and general distribution; and	3A	5.2.2; 9.2.2
		4	Appendix G - Terrain and Soils Technical Data Report; Appendix I, Hydrogeology Baseline Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.2 (cont'd)	• baseline concentrations of contaminants of concern within the local, regional, and downstream receiving environments;	3A	5.2.2.3; 7.2.2
		4	Attachment K – Surface Water Quality Technical Data Report; Appendix I - Hydrogeology Baseline Technical Data Report
6.1.3	**Topography and Soil**		
	• baseline mapping and description of landforms and soils within the local and regional project area;	3A 4	9.2 Appendix G - Terrain and Soils Technical Data Report
	• soil maps depicting soil type distribution and diversity and properties (soil pH, organic matter, depths of horizon);	3A	Figure 9-5; Figure 9-7; Figure 9-8
	• potential for soil instability and erosion; and	3A	9.4.2
	• suitability of topsoil and overburden for use in the rehabilitation of disturbed areas;	3A	9.2.4; 9.4.3
6.1.4	**Groundwater and Surface Water**		
	• local and regional hydrogeology, including:		
	– the hydrogeological context, including the delineation of key stratigraphic and hydrogeologic boundaries, spatial distribution of major features, flow characteristics;	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.4 (cont'd)	– the physical properties of the hydrogeological units (e.g., hydraulic conductivity, transmissivity, saturated thickness, storativity, porosity, specific yield);	3A 4	5.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	– the groundwater flow patterns and rates;	3A 4	5.2.2.2 Appendix I - Hydrogeology Baseline Technical Data Report
	– a delineation and characterization of groundwater - surface water interactions including the locations of groundwater discharge to surface water and surface water recharge to groundwater, and interactions with respect to water quality and quantity;	3A	5.2.2.2; 5.3; 6.2.2.4
	– variations in surface water quality, including seasonal changes in runoff entering watercourses;	3A	6.2.2.4; 7.2.2
	– temporal changes in groundwater flow (e.g., seasonal and long term changes in water levels);	3A 4	6.2.2.4 Appendix I - Hydrogeology Baseline Technical Data Report
	– a discussion of the hydrogeologic, hydrologic, geomorphic, climatic and anthropogenic controls on groundwater flow;	3A 4	5.2 Appendix I - Hydrogeology Baseline Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.4 (cont'd)	– any local and regional groundwater well and/or groundwater resource use, including potable water and agricultural water uses, and a description of their current use and potential for future use;	3A 4	5.2.2.2; 5.2.2.3; 5.2.2.4 Appendix I - Hydrogeology Baseline Technical Data Report
	– all groundwater monitoring wells that may provide data relevant to the project, including their locations;	3A 4	5.2.1 Appendix I - Hydrogeology Modelling Technical Data Report
	– any monitoring protocols in place for collection of existing groundwater data; and	3A 4	5.2.1 Appendix I - Hydrogeology Modelling Technical Data Report
	– an appropriate hydrogeologic model for the project area, including major structures such as the diversion structures, off-stream reservoir, that discusses hydrogeological systems, flow regimes, analyses sensitivity to climactic variations (e.g. seasonal recharge) and hydrogeologic parameters (e.g. hydraulic conductivity) and includes a discussion of model assumptions.	3A 4	5.2.1 Appendix I - Hydrogeology Modelling Technical Data Report
	• hydrology and water quality of the Elbow River watershed, including;		
	– the delineation of drainage basins, at appropriate scales (water bodies and watercourses), including intermittent streams, flood risk areas and wetlands, boundaries of the watershed and subwatersheds, overlaid by key project components;	3A 4	6.2.2.3; 6.2.2.4 Appendix J – Hydrology Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.4 (cont'd)	– regional and local hydrology, including maps and relevant diagrams;	3A 4	6.2.2 Appendix J – Hydrology Technical Data Report
	– historic hydrology conditions, including a description of flood patterns that discusses flood extent and periodicity;	3A 4	6.2.2.4 Appendix J – Hydrology Technical Data Report
	– for each affected water body and watercourse, the total surface area, bathymetry, maximum and mean depths, water level fluctuations, type of substrate (sediments), discharge data at monthly, seasonal and annual flow rates and sediment transport characteristics;	3A 4	6.2.2.3; 6.2.2.4 Appendix J – Hydrology Technical Data Report
	– any seasonal water quality data (e.g. water temperature, turbidity, pH, dissolved oxygen, total suspended solids (TSS), chemistry, nutrients, metals, methyl mercury, dissolved/total organic carbon, biochemical oxygen demand (BOD)/carbonaceous biochemical oxygen demand (CBOD), pesticides, aquatic indicators, sediment quality) and analytical interpretation at several representative local stream and water body monitoring stations established throughout the project site;	3A 4	7.2.2 Appendix K – Surface Water Quality Technical Data Report
	– seasonal and interannual variation of baseline surface water quality;	3A 4	7.2.2 Appendix K – Surface Water Quality Technical Data Report
	– sediment quality and quantity;	4	Appendix K – Surface Water Quality Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.4 (cont'd)	– comparison of baseline datasets against applicable guidelines and standards, including the identification of exceedances and trends;	3A	7.4
	– any local and regional potable surface water resource; and	3A	6.1.2; 7.1.2
	– ice formation and break-up processes on the Elbow River.	3A 4	6.2.2.5 Appendix J – Hydrology Technical Data Report
6.1.5	**Fish and Fish Habitat**		
	For potentially affected surface waters:		
	• a characterization of fish populations on the basis of species and life stage, abundance, distribution, and movements, including information on the surveys carried out and the source of data available (e.g. location of sampling stations, catch methods, date of catches, species);	3A 4	8.2.2.1; 8.2.2.3; 8.2.2.4 Appendix M – Aquatic Ecology Technical Data Report
	• a description of primary and secondary productivity of aquatic resources (e.g. benthic communities, aquatic invertebrates, feeder species, aquatic plants) in terms of abundance, distribution, general life cycles, movements, and seasonal availability;	3A 4	8.2.2.1; 8.2.2.3; 8.2.2.5 Appendix M – Aquatic Ecology Technical Data Report
	• a description of habitat by homogeneous section, including the length of the section, width of the channel from the high water mark (bankful width), water depths, type of substrate (sediments), aquatic and riparian vegetation, habitat types and functions, cover components, and photos;	3A 4	8.2.2.2 Appendix M – Aquatic Ecology Technical Data Report
	• a description of instream flow needs and habitat preferences for resident fish species in the Elbow River and its tributaries;	3A 4	8.2.2.2; 8.2.2.3 Appendix M – Aquatic Ecology Technical Data Report

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.5 (cont'd)	• natural obstacles (e.g. falls, beaver dams) or existing structures (e.g. water crossings) that hinder the free passage of fish;	Not Applicable	Not Applicable
	• maps, at a suitable scale, indicating the surface area of potential or confirmed fish habitat for spawning, nursery, feeding, overwintering, migration routes, etc. This information should be linked to water depths (bathymetry) to identify the extent of a water body's littoral zone;	3A	8.2.2, Figure 8.2-2
	• fish or invertebrate species at risk that are known to be present; and	3A	8.2.2.1; 8.2.2.3
	• type and location of suitable habitats for fish species at risk that appear on federal and provincial lists and that are found or are likely to be found in the study area. Note that certain intermittent streams or wetlands may constitute fish habitat or contribute indirectly to fish habitat. The absence of fish at the time of the survey does not irrefutably indicate an absence of fish habitat.	3A	8.2.2.3
6.1.6	**Migratory Birds and Their Habitat**		
	• birds and their habitats that are found or are likely to be found in the study area. This description may be based on existing sources, but supporting evidence is required to demonstrate that the data used are representative of the avifauna and habitats found in the study area. The existing data must be supplemented by surveys, if required;	3A 4	11.2 Appendix H – Attachment 11A: Habitat Suitability models; Wildlife and Biodiversity Technical Data Report.
	• abundance, distribution, movements, seasonal habitat use and presence, and life stages of migratory and non-migratory birds (including waterfowl, raptors, shorebirds, marsh birds and other land birds) likely to be affected in the project area based on existing information, or surveys, as appropriate, to provide current field data; and	3A 4	11.2 Appendix H – Attachment 11A: Habitat Suitability models; Wildlife and Biodiversity Technical Data Report.

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.6 (cont'd)	• year-round migratory bird use of the area (e.g., winter, spring migration, breeding season, fall migration), based on preliminary data from existing sources and surveys to provide current field data if appropriate.	3A 4	11.2 Appendix H – Attachment 11A; Wildlife and Biodiversity Technical Data Report
6.1.7	**Species at Risk**		
	• a list of all potential or known federally listed species at risk that may be affected by the project (fauna and flora), using existing data and literature as well as surveys to provide current field data.	3A 4	10.2.2.3; 11.2.2.2; Appendix H – Attachment 11A; Wildlife and Biodiversity Technical Data Report Appendix L – Attachment 10A: Vegetation and Wetlands Supplementary Data
	• a list of all federal species designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) for listing on Schedule 1 of the *Species at Risk Act*. This will include those species in the risk categories of extirpated, endangered, threatened and special concern.	3A 4	11.2.2.2; Appendix H – Attachment 11A; Wildlife and Biodiversity Technical Data Report
	• any published studies that describe the regional importance, abundance and distribution of species at risk including recovery strategies or plans. The existing data must be supplemented by surveys if required; and	3A 4	11.2.2.2; 11.2.2.3; Appendix H –Wildlife and Biodiversity Technical Data Report.

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.7 (cont'd)	• residences, seasonal movements, movement corridors, habitat requirements, key habitat areas, identified critical habitat and/or recovery habitat (where applicable) and general life history of species at risk that may occur in the project area, or be affected by the project.	3A 4	11.2.2 Appendix H – Attachment 11A; Wildlife and Biodiversity Technical Data Report.
6.1.8	**Riparian, Wetland and Terrestrial Environments**		
	• characterization of soils in the excavation area, in terrestrial and riparian environments, with a description of past uses;	3A 4	9.2.4 Appendix G – Terrain and Soils Technical Data Report
	• characterization of the shoreline, banks, current and future flood risk areas, and wetlands (fens, marshes, peatlands, mudflats and eelgrass beds, etc.), including the location and extent of wetlands likely to be affected by project activities according to their size, type (wetland class and form, Canadian Wetland Classification System, National Wetlands Working Group, 1997), the description of their ecological function (ecological, hydrological, wildlife, socioeconomic, etc.) and species composition; and	3A	8.2.2.2; 10.2.2
	• identification of ecosystems that are sensitive or vulnerable to changes or alterations to water quality and quantity, plant and animal species (abundance, distribution and diversity) and their habitats, with a focus on species at risk or with special status that are of social, economic, cultural or scientific significance as well as invasive alien species.	3A	10.2.2.1; 10.2.2.2; 10.2.2.3; 11.2.2.4

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.9	**Aboriginal Peoples**		
	With respect to potential effects on Aboriginal peoples and the related VCs, baseline information will be provided for each Indigenous group identified in section 5 of these Guidelines (and any groups identified after these guidelines are finalized). Baseline information will describe and characterize the elements in paragraph 5(1)(c) of CEAA 2012 based on the spatial and temporal scope selected for the assessment according to the factors outlined in Part 1, section 3.3.3.	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	Baseline information will also characterize the regional context of each of the paragraph 5(1)(c) of CEAA 2012 elements to support the assessment of project related effects and cumulative effects.	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	Baseline information will be sufficient to provide a comprehensive understanding of the current state of each VC.	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	Baseline information for current use of lands and resources for traditional purposes will focus on the traditional activity (e.g., hunting, fishing, trapping, plant gathering) and include a characterization of all attributes of the activity that can be affected by environmental change. This includes identifying species of importance and assessing the quality and quantity of preferred traditional resources and locations, timing (e.g., seasonality, access restrictions, distance from community), ambient/sensory environment (e.g., noise, air quality, visual landscape, presence of others), and cultural environment (e.g., historical/generational connections, preferred areas). Specific aspects that will be considered include, but are not limited to:		
	• location of traditional territory (including maps where available);	1 3A	Figure 7-1 14.2.2; Figure 14-2
	• location of reserves and communities;	1 3A	Figure 7-1 14.2.2; Figure 14-2
	• location of hunting camps and cabins;	3A	12.2.2; 14.2

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.9 (cont'd)	• drinking water sources (permanent, seasonal, periodic, or temporary);	3A	14.2.4; 14.3.2
	• consumption of country foods;	3A	14.2.4
	• commercial activities (e.g. fishing, trapping, hunting, forestry, outfitting);	3A	12.2.2; 14.2.7.2
	• recreational uses;	3A	12.2.2; 14.2.3; 14.2.5;
	• traditional uses currently practiced or practiced in recent history;	3A	12.2.2; 14.2.4; 14.2.5
	• fish, wildlife, birds, plants or other natural resources of importance for traditional use;	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• places where fish, wildlife, birds, plants or other natural resources are harvested;	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• access and travel routes for conducting traditional practices;	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• frequency, duration or timing of traditional practices;	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• cultural values associated with the area affected by the project and the traditional uses identified;	3A	14.2.4; 14.2.5
	• areas of concentration of migratory animals, such as breeding, denning and/or wintering areas;	3A	11.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• ungulates, furbearers, amphibians, small mammals, and their habitat;	3A	11.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• existing or proposed protected areas, special management areas, and conservation areas in the regional study area;	3A	11.2; 12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.9 (cont'd)	• wetlands most likely to be affected by project activities according to their location, size, type (wetland class and form), species composition and ecological function (Canadian Wetland Classification System, National Wetlands Working Group, 1997);	3A	10.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• key plant communities and animals that rely on wetlands; and	3A	10.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• any other potential human receptor sites, including seasonal and temporary locations, and potentially affected population size.	3A	15.2.2; 12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	Baseline information for health and socio-economic conditions will include the functioning and health of the socio-economic environment, encompassing a broad range of matters that affect communities in the study area in a way that recognizes interrelationships, system functions and vulnerabilities. Specific aspects that will be considered include, but are not limited to:		
	• drinking and recreational water sources (permanent, seasonal, periodic, or temporary);	3A	14.2.3; 14.2.4; 15.2.2.
	• consumption of country foods (also known as traditional foods) including food that is trapped, fished, hunted, harvested or grown for subsistence or medicinal purposes, outside of the commercial food chain;	3A	14.2.4; 15.2.3
	• which country foods are consumed by which Indigenous groups, how frequently, and where these country foods are harvested;	3A	14.2.4; 15.2.3
	• commercial activities (e.g. fishing, trapping, hunting, forestry, outfitting); and	3A	12.2.2; 14.2.7;
	• recreational uses.	3A	12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.9 (cont'd)	Baseline information for physical and cultural heritage (including any site, structure or thing of archaeological, paleontological, historical or architectural significance) will consider all elements of cultural and historical importance to Indigenous groups in the area and is not restricted to artifacts considered under provincial heritage legislative requirements. Specific aspects that will be considered include, but are not limited to:		
	• burial sites;	3A	13.2.2
	• cultural landscapes;	3A	13.2.2; 12.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
	• sacred, ceremonial or culturally important places, objects or things; and	3A	13.2.2; 14.2.5; 14.2.6
	• archaeological potential and/or artifacts places.	3A	13.2.2; 14.2.5; 14.2.6
	Any other baseline information that supports the analysis of predicted effects on Indigenous Peoples will be included as necessary. The EIS will also indicate how input from Indigenous groups was used in establishing the baseline conditions related to health and socio-economics, physical and cultural heritage and current use of lands and resources for traditional purposes.	3A	12.2.2; 13.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6
6.1.10	**Human Environment**		
	• the rural and urban settings likely to be affected by the project;	3A 4	12.2.2 Appendix N – Attachment 12A
	• transportation infrastructure likely to be affected by the project;	3A 4	12.2.2; 16.2.3 Appendix N – Attachment 12A

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.1.10 (cont'd)	• the current use of land in the study area, including a description of agriculture, grazing, hunting, recreational and commercial fishing, trapping, gathering, outdoor recreation, use of seasonal cabins, outfitters;	3A 4	12.2.2; 13.2.2; 14.2.2; 14.2.3; 14.2.4; 14.2.5; 14.2.6 Appendix N – Attachment 12A
	• current use of all waterways and water bodies that will be directly affected by the project, including recreational uses, where available;	3A	12.2.2.1
	• location of and proximity of any permanent, seasonal or temporary residences or camps;	3A 4	12.2.2.1 Appendix N – Attachment 12A
	• health and socio-economic conditions, including the functioning and health of the socio-economic environment, encompassing a broad range of matters that affect communities in the study area in a way that recognizes interrelationships, system functions and vulnerabilities;	3A 4	12.2.2; 15.2; 17.2.2 Appendix E – Attachment 3D Appendix N – Attachment 12A Appendix O – Human Health and Risk Assessment Technical Data Report
	• physical and cultural heritage, including structures, sites or things of historical, archaeological, paleontological or architectural significance; and	3A	13.2.2; 14.2.5; 14.2.6
	• any other potential human receptor sites, including seasonal and temporary locations, and potentially affected population size.	3A 4	12.2.2; 14.2.2 Appendix N – Attachment 12A

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.2 Predicted Changes to the Physical Environment			
6.2	The assessment will include a consideration of the predicted changes to the environment as a result of the project being carried out or as a result of any powers duties or functions that are to be exercised by the federal government in relation to the project. These predicted changes to the environment are to be considered in relation to each phase of the project (construction, operation, decommissioning, and abandonment) and are to be described in terms of the geographic extent of the changes, the duration and frequency of change, and whether the environmental changes are reversible or irreversible.	3D	3.0
6.2.1	**Changes to the Atmospheric Environment**		
	• the proponent will carry out appropriate atmospheric dispersion modelling of the main contaminants in order to estimate the contaminant concentrations present in the entire area that could potentially be affected by atmospheric emissions (see Part 2, section 6.1.1) resulting from various project- related activities (sources), including the use of heavy machinery during construction, and the deposition of sediment within any areas of the Project that will be temporarily flooded. The proponent will be required to compare anticipated air quality against the *Canadian Ambient Air Quality Standards* (CAAQS) for fine particulate matter;	3A 3B 4	3.4 3.2 Appendix E – Attachment 3A, 3B, 3C, 3E, 3F, Dispersion Modelling for Blown Sediment from the Off-stream Reservoir Technical Data Report
	• a description of all methods and practices that will be implemented to minimize and control atmospheric emissions, including fine particulate matter, throughout the project life cycle. If the best available technologies are not included in the project design, the proponent will need to provide a rationale for the technologies selected;	3A 3B	3.4.4 3.2.4
	• an estimate of the direct greenhouse gas emissions associated with all phases of the Project as well as any mitigation measures proposed to minimize greenhouse gas emissions. This information is to be presented by individual pollutant and should also be summarized in CO_2 equivalent per year. The proponent is responsible for the following:	3A 4	3.4.1.3; 3.4.7 Appendix E - Attachment 3F

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.2.1 (cont'd)	– an estimate of the contribution of the project emissions at the local, provincial and federal scale must be provided. The proponent must indicate the category into which the project falls in terms of the relative magnitude of its contribution to GHG emissions (project with low, medium or high emission rates);	3A 4	3.4.7 Appendix E - Attachment 3F
	– an estimate of any changes, associated with project components or activities, to the carbon sequestration capacity of the project area;	3A 3B	3.4.2.4 3.2.7
	– a GHG emissions management plan should also be provided;	3A	3.4.4
	– all estimated emissions and emission factors used should be justified;	3A 4	3.4.1.3 Appendix E - Attachment 3F
	– provide the estimation or derivation method and all assumptions and emission intensity factors should be disclosed and described;	3A 4	3.4.1 Appendix E - Attachment 3F
	– compare and assess the level of estimated emissions to the regional, provincial and federal emission targets;	3A 4	3.4.1; 3.1.6.3 Appendix E - Attachment 3F
	– an estimate of upstream GHG emissions, including information related to the project's electrical demand and sources of electrical power for facilities and equipment, i.e., the project's main source and any other additional sources (generators, etc.), as appropriate; and	3A	3.4.2.3
	– emission factors for all upstream stages should be recent and pertinent to the region;	3A	3.4.2.3
	• changes in ambient noise levels;	3A 3B	4.4.2 4.2.2

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.2.1 (cont'd)	• odours resulting from the reservoir; and	3A 3B	3.4.5.9 3.2.6
	• changes in night-time light levels.	3A 3B	3.4.6 3.2.5
6.2.2	**Changes to Groundwater and Surface Water**		
	• the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water in all operational scenarios;	3A 3B	5.4.2.1; 6.5.2; 6.5.3; 5.2.2; 5.2.3; 6.4.2; 6.4.3; 6.4.4
	• changes to total suspended solids (TSS), turbidity, oxygen level, water temperature, pH, dissolved oxygen, ice regime, water quality including metals, methyl mercury, nutrients, dissolved/total organic carbon, biochemical oxygen demand (BOD)/carbonaceous biochemical oxygen demand (CBOD), pesticides, aquatic indicators, sediment quality;	3A 3B	7.4.2 7.4.2; 7.4.3; 7.4.4
	• changes to the hydrological and hydrometric conditions including instream flow conditions;	3A 3B	6.5.2; 6.5.3 6.4.2; 6.4.3; 6.4.4
	• changes to groundwater recharge/discharge areas and any changes to groundwater infiltration areas;	3A 3B	5.4.4; 5.4.3 5.2.2; 5.2.3
	• temperature changes in surface water as a result of water diversion and retention;	3B	7.4.3; 7.4.4
	• changes to the quality of drinking water sources;	3A 3B	5.5 5.3
	• changes to water quality and quantity in the Elbow River and associated tributaries;	3A 3B	6.5.2; 6.5.3; 7.4.2 6.4.2; 6.4.3; 6.4.4; 7.4.2; 7.4.3; 7.4.4

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.2.2 (cont'd)	• changes to water quality and quantity and sediment quality and quantity associated with project-related:	3A 3B	6.5.2; 6.5.3; 7.4.2 6.4.2; 6.4.3; 6.4.4; 7.4.2; 7.4.3; 7.4.4
	– erosion and sedimentation;	3A 3B	6.5.3; 7.4.2.1 6.4.3; 6.4.4; 7.4.2
	– ammonium nitrate explosives;	3A 4	7.4.2.2 Appendix C
	– excavation, blasting, and stock-piling of materials and wasterock;	3A 4	6.3.1; 6.5; 7.4.2.2 Appendix C
	– wastes, wastewater, fuels, chemicals, hazardous materials, contaminated soils;	3A 4	7.4.2.2 Appendix C
	– spills and releases; and	3A 4	7.4.2.2 Appendix C
	– metal leaching and acid rock drainage; and	4	Appendix G, Terrain and Soils Technical Data Report
	• changes to water quality and quantity and sediment quality and quantity should flood event(s) exceed capacity of the reservoir system.	3D	1.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.2.3	**Changes to Terrestrial Landscape**		
	• overall description of changes related to landscape disturbance, including changes to vegetation and plant communities;	3A 3B	10.4 10.2
	• changes to migratory and non-migratory bird habitat, with a distinction made between the two birds category, including losses and gains, structural changes and fragmentation of riparian habitat (aquatic grassbeds, intertidal marshes) of terrestrial environments and wetlands frequented by birds (types of cover, ecological unit of the area in terms of quality, quantity, diversity, distribution and functions.	3A 3B 4	11.4.7.2 11.3.8.2 Appendix H – Attachment 11A, Wildlife and Biodiversity Technical Data Report.
	• Changes to habitat for federal listed species at risk listed in Part 2, 6.1.7; and	3A 3B 4	11.4.7.3, Attachment A 11.3.8.3 Appendix H – Attachment 11A, Wildlife and Biodiversity Technical Data Report.
	• Changes to key habitat for culturally important species and species important to Indigenous current use of resources.	3A 3B 4	11.4; 14.3 11.3; 14.5 Appendix H – Attachment 11A, Wildlife and Biodiversity Technical Data Report.

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3 Predicted Effects on Valued Components			
6.3	Based on the predicted changes to the environment identified in section 6.2, the proponent is to assess the environmental effects of the project on the followings VCs. All interconnections between VCs and between changes to multiple VCs will be described:		
6.3.1	**Fish and Fish Habitat**		
	• the identification of any potential adverse effects to fish or fish habitat as defined in subsection 2(1) of the *Fisheries Act*, including the calculations of any potential habitat loss (temporary or permanent) in terms of surface areas (e.g. spawning grounds, fry-rearing areas, feeding), and in relation to watershed availability and significance. The assessment will include a consideration of:		
	– the geomorphological changes and their effects on hydrodynamic conditions and fish habitats (e.g. modification of substrates, dynamic imbalance, silting of spawning beds);	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4
	– the modifications of hydrological and hydrometric conditions on fish habitat and on the fish species' life cycle activities (e.g. reproduction, fry-rearing, movements);	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4
	– potential effects on riparian areas that could affect aquatic biological resources and productivity taking into account any anticipated modifications to fish habitat;	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4
	– any potential imbalances in the food web in relation to baseline;	3B	8.2.2
	– the potential risk of production, increase, interaction, and accumulation of contaminants, including methylmercury, in fish habitat and fish;	3B	8.2.2; 11.3.6; 11.3.8
	– any potential for direct fish morbidity or mortality, including due to entrainment through physical works; and	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.1 (cont'd)	– water quality and sediment quality changes as a result of storing water in, and releasing water from, the off-stream reservoir;	3B	7.4.2; 7.4.3; 7.4.4; 8.2.2; 8.2.3; 8.2.4
	• the effects of changes to the aquatic environment, including those identified under changes to groundwater and surface water, on fish and their habitat, including;		
	– the anticipated changes in the composition and characteristics of the populations of various fish species, included shellfish and forage fish;	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4
	– any modifications in migration or local movements (upstream and downstream migration, and lateral movements) following the construction and operation of works;	3A	8.4.4
	– any reduction in fish populations as a result of potential overfishing due to increased access to the project area; and	3A	12.4.2
	– any modifications and use of habitats by federally or provincially listed fish species;	3A 3B	8.4.4 8.2.2; 8.2.3; 8.2.4
	• a discussion of how project construction timing correlates to key fisheries windows for freshwater and anadromous species, and any potential effects resulting from overlapping periods; and	3A	8.4.4
	• a discussion of how vibration caused by blasting or other construction activities may affect fish behaviour, such as spawning or migrations.	3A	8.4.4
6.3.2	**Migratory Birds**		
	• the identification of any potential direct and indirect adverse effects to migratory birds or their habitat, including staging and nesting areas, foraging grounds, and landing sites. The assessment will include a consideration of:	3A 3B	11.4.7.2 11.3.8.2
	– any potential for direct migratory bird mortality, morbidity, or nest destruction;	3A 3B	11.4.7.2, 11.3.8.2

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.2 (cont'd)	– changes to the environment that may affect migration patterns, flyways, local movement, and seasonal habitat use;	3A 3B	11.4.7.2 11.3.8.2
	– any direct habitat loss, including a discussion of ecosystem availability and ecological context;	3A 3B	11.4.7.2 11.3.8.2
	– water quality and risk of exposure to contaminants	3B	11.3.8.2
	– the potential for habitat fragmentation, loss of connectivity or other change causing a reduction of habitat quality;	3A 3B	11.4.7.2 11.3.8.2
	– changes to predator/prey relationships (including non-migratory predators) and species composition balance and how that may affect bird populations; and	3A 3B	11.4.7.2 11.3.8.2
	– indirect effects caused by increased disturbance (e.g. noise, light, presence of workers, electrical transmission lines) relative abundance movements, and losses or changes in migratory bird habitat, considering the critical breeding and migration periods for the birds.	3A 3B	11.4.7.2 11.3.8.2
6.3.3	**Species at Risk**		
	• identify the potential effects of the project on federally listed species at risk and those species listed by the Committee on the Status of Endangered Wildlife in Canada classified as extirpated, endangered, threatened or of special concern (flora and fauna) and their critical habitat.	3A 3B	10.4; 11.4.7.2, Attachment A 10.2; 11.3.8.3
	• identify any potential direct or indirect effects on those identified species at risk.	3A 3B	10.4; 11.4.7.2, Attachment A 10.2; 11.3.8.3

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.4	**Aboriginal Peoples**		
	With respect to Aboriginal peoples, a description and analysis of how changes to the environment caused by the project will affect each group's:		
	• current use of land and resources for traditional purposes. This assessment will characterize the effect(s) on the use or activity (e.g., hunting, fishing, trapping, plant gathering) as a result of the underlying changes to the environment (i.e., how will the activity change if the project proceeds). The underlying changes to the environment will also be described, including, but not limited to:	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– any changes to resources (fish, wildlife, birds, plants or other natural resources) used for traditional purposes (e.g. hunting, fishing, trapping, collection of medicinal plants, use of sacred sites);	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– any changes or alterations to access into the areas used for traditional purposes, including development of new roads, deactivation or reclamation of access roads and changes to waterways that affect navigation;	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– any changes to the environment that affect cultural value or importance associated with traditional uses or areas affected by the project (e.g. values or attributes of the area that make it important as a place for inter-generational teaching of language or traditional practices, communal gatherings, integrity of preferred practice areas);	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– how timing of project activities that have the potential to affect Indigenous Peoples (e.g. construction, blasting, discharges) interacts with the timing of traditional practices, and any potential effects resulting from overlapping periods;	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– any changes to the alienation of lands from Indigenous traditional use, including consideration of the regional context for traditional use, and the value of the project area in that regional context;	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.4 (cont'd)	– any changes to environmental quality (e.g. air, water, soil) or the sensory environment (e.g. noise, light, visual landscape), or perceived disturbance of the environment (e.g. fear of contamination of water or country foods) that could detract from Indigenous use of the area or lead to avoidance of the area by Indigenous peoples;	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– any changes to the environment resulting from the presence of worker or increased access to the area by non-Indigenous people (e.g. noise, competition for or pressure on resources); and	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	– an assessment of the potential to return affected areas to pre-project conditions to support traditional practices;	3A 3B	14.3; 14.5; 14.7; 14.8 14.2; 14.5; 14.6
	• human health, considering, but not limited to potential changes in air quality, quality, and availability of country foods, drinking water quality, and noise exposure. When risks to human health due to changes in one or more of these valued components are predicted, a complete Human Health Risk Assessment (HHRA) examining all exposure pathways for pollutants of concern will be necessary to adequately characterize potential risks to human health;	3A 3B 4	15.4 15.4 Appendix O – Human Health and Risk Assessment Technical Data Report
	• socio-economic conditions, including but not limited to;	3A	14.3.5
	– the use of navigable waters;	3A	14.3.3
	– forestry and logging operations;	3A 3B	14.3.5 14.2.5
	– commercial fishing, hunting, trapping, and gathering activities;	3A 3B	14.3.5 14.2.5
	– commercial outfitters; and	3A 3B	14.3.5. 14.2.5

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.4 (cont'd)	– recreational use.	3A 3B	14.3.3 14.2.3
	• physical and cultural heritage, and any structure, site or thing of historical, archaeological, paleontological or architectural significance to Indigenous groups, including, but not limited to:		
	– the loss or destruction of physical and cultural heritage;	3A 3B	13.4; 14.3; 14.5; 14.7; 14.8 13.2; 14.2; 14.5; 14.6
	– changes to access to physical and cultural heritage; and	3A 3B	13.4; 14.3; 14.5; 14.7; 14.8 13.2; 14.2; 14.5; 14.6
	– changes to the cultural value or importance associated with physical and cultural heritage.	3A 3B	13.4; 14.3; 14.5; 14.7; 14.8 13.2; 14.2; 14.5; 14.6
	• Other effects of changes to the environment on Indigenous Peoples should be reflected as necessary.	3A 3B	13.4; 14.3; 14.5; 14.7; 14.8; 18 13.2; 14.2; 14.5; 14.6; 18
6.3.5	**Other VCs (selected because of federal lands, interprovincial, international concerns or related to issuance of a permit (if relevant)**		
	Based on the changes to the environment that have been identified in section 6.2, additional VCs are to be selected based on the following:		
	• Interprovincial transboundary effects;	Not Applicable	Not Applicable
	• Effects to federal lands; and	3A 3B	18.0 18.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.3.5 (cont'd)	• Federal decisions under the *Navigation Protection Act* and the *Fisheries Act*	No additional VCs, covered by selected VCs.	
6.4 Mitigation			
6.4	Every EA conducted under CEAA 2012 will consider measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project. Under CEAA 2012, mitigation includes measures to eliminate, reduce or control the adverse environmental effects of a designated project, as well as restitution for damage to the environment through replacement, restoration, compensation or other means. Measures will be specific, achievable, measurable, and verifiable, and described in a manner that avoids ambiguity in intent, interpretation and implementation. Mitigation measures may be considered for inclusion as conditions in the EA decision statement and/or in other compliance and enforcement mechanisms provided by other authorities' permitting or licensing processes. As a first step, the proponent is encouraged to use an approach based on the avoidance and reduction of the effects at the source. Such an approach may include the modification of the design of the project or relocation of project components.	3A 3B	3.4.4; 4.4.2.2; 5.4.2.3; 5.4.3.2; 6.4; 7.4.2.2; 8.4.3; 9.4.2.2; 9.4.3.2; 10.3.1, Table 10-11; 11.4.2.2; 11.4.3.2; 11.4.4.2; 11.4.5.2; 11.4.7.1; 11.4.7.2; Attachment A; 12.4.2.2; 12.4.3.2; 13.3.1;.3.2; 14.3.2.2; 14.3.3.2; 14.3.4.2; 15.4.3; 16.4.2.2; 17.4.1.4;.4.2.4; 17.4.3.4; Table 17-24; 18.0 3.3.4; 5.2.2.2; 5.2.3.2; 8.2.2.2; 8.2.3.2; 8.2.4.2; 9.2.2.2; 9.2.3.2; 10.1.1; 11.3.2.2; 11.3.3.2; 11.3.4.2; 11.3.5.2; 11.3.6.2; 11.3.8; Attachment A; 12.2.2.2; 12.2.3.2; 13.2; 14.2.2.2; 14.2.3.2; 14.2.4.2; 15.4.2.2; 16.2.2.2; 17.2.2.2; 17.3.1.4; Table 17-3; 18.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.4 (cont'd)	The EIS will describe the standard mitigation practices, policies and commitments that constitute technically and economically feasible mitigation measures and that will be applied as part of standard practice regardless of location (including the measures directed at promoting beneficial or mitigating adverse socio-economic effects.	3D 4	1.6 Appendix C Appendix D Supporting Documentation: Document 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
	The EIS will then describe the project's environmental protection plan and its environmental management system, through which the proponent will deliver this plan. The plan will provide an overall perspective on how potentially adverse effects would be minimized and managed over time.	4	Supporting Documentation: Document 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
	The EIS will further discuss the mechanisms the proponent would use to require its contractors and sub-contractors to comply with these commitments and policies and with auditing and enforcement programs.	4	Supporting Documentation: Document 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.4 (cont'd)	The EIS will then describe mitigation measures that are specific to each environmental effect identified. Measures will be written as specific commitments that clearly describe how the proponent intends to implement them and the environmental outcome the mitigation is designed to address. Where mitigation measures have been identified in relation to species and/or critical habitat listed under the *Species at Risk Act*, the mitigation measures will be consistent with any applicable recovery strategy and action plans.	3A	3.4.4; 4.4.2.2; 5.4.2.3; 5.4.3.2; 6.4; 7.4.2.2; 8.4.3; 9.4.2.2; 9.4.3.2; 10.3.1, Table 10-11; 11.4.2.2; 11.4.3.2; 11.4.4.2; 11.4.5.2; 11.4.7.1; 11.4.7.2; Attachment A; 12.4.2.2; 12.4.3.2; 13.3.1;.3.2; 14.3.2.2; 14.3.3.2; 14.3.4.2; 15.4.3; 16.4.2.2; 17.4.1.4;.4.2.4; 17.4.3.4; Table 17-24; 18.0
		3B	3.3.4; 5.2.2.2; 5.2.3.2; 8.2.2.2; 8.2.3.2; 8.2.4.2; 9.2.2.2; 9.2.3.2; 10.1.1; 11.3.2.2; 11.3.3.2; 11.3.4.2; 11.3.5.2; 11.3.6.2; 11.3.8; Attachment A; 12.2.2.2; 12.2.3.2; 13.2; 14.2.2.2; 14.2.3.2; 14.2.4.2; 15.4.2.2; 16.2.2.2; 17.2.2.2; 17.3.1.4; Table 17-3; 18.0
		4	Appendix C

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.4 (cont'd)	The EIS will specify the actions, works, minimal disturbance footprint techniques, best available technology, corrective measures or additions planned during the project's various phases to eliminate or reduce the significance of adverse effects.	4	Appendix C
	The impact statement will also present an assessment of the effectiveness of the proposed technically and economically feasible mitigation measures. The reasons for determining if the mitigation measure reduces the significance of an adverse effect will be made explicit.	3A	3.4.4; 4.4.2.2; 5.4.2.3; 5.4.3.2; 6.4; 7.4.2.2; 8.4.3; 9.4.2.2; 9.4.3.2; 10.3.1, Table 10-11; 11.4.2.2; 11.4.3.2; 11.4.4.2; 11.4.5.2; 11.4.7.1; 11.4.7.2; Attachment A; 12.4.2.2; 12.4.3.2; 13.3.1;.3.2; 14.3.2.2; 14.3.3.2; 14.3.4.2; 15.4.3; 16.4.2.2; 17.4.1.4;.4.2.4; 17.4.3.4; Table 17-24; 18.0
		3B	3.3.4; 5.2.2.2; 5.2.3.2; 8.2.2.2; 8.2.3.2; 8.2.4.2; 9.2.2.2; 9.2.3.2; 10.1.1; 11.3.2.2; 11.3.3.2; 11.3.4.2; 11.3.5.2; 11.3.6.2; 11.3.8; Attachment A; 12.2.2.2; 12.2.3.2; 13.2; 14.2.2.2; 14.2.3.2; 14.2.4.2; 15.4.2.2; 16.2.2.2; 17.2.2.2; 17.3.1.4; Table 17-3; 18.0
		4	Appendix C

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.4 (cont'd)	The EIS will indicate what other technically and economically feasible mitigation measures were considered, and explain why they were rejected. Trade-offs between cost savings and effectiveness of the various forms of mitigation will be justified.	Not Applicable	Not Applicable
	The EIS will identify who is responsible for the implementation of these measures and the system of accountability.	4	Appendix C, Mitigation Measures Supporting Documentation: Document 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
	Where mitigation measures are proposed to be implemented for which there is little experience or for which there is some question as to their effectiveness, the potential risks and effects to the environment should those measures not be effective will be clearly and concisely described.	Not Applicable	Not Applicable
	In addition, the EIS will identify the extent to which technology innovations will help mitigate environmental effects. Where possible, it will provide detailed information on the nature of these measures, their implementation, management and the requirements of the follow-up program. Adaptive management is not considered as a mitigation measure, but if the follow-up program (refer to section 9) indicates that corrective action is required, the proposed approach for managing the action should be identified.	3C 4	2.0 Appendix C, Mitigation Measures
6.5 Significance of Residual Effects			
6.5	After having established the technically and economically feasible mitigation measures, the EIS will present any residual environmental effects of the project on the VCs identified in section 6.3. The residual effects, even if very small or deemed insignificant will be described.	3A 3B	3.4; 4.4; 5.4; 6.5; 7.4; 8.4; 9.4; 10.4; 11.4; 12.4; 13.4; 14.4; 15.4; 16.4; 17.4 3.2; 4.2; 5.2; 6.4; 7.4; 8.2; 9.2; 10.2; 11.3; 12.2; 13.2; 14.3; 15.4; 16.2; 17.3

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.5 (cont'd)	The EIS will then provide an analysis of the significance of the residual environmental effects that are considered adverse, using guidance described in section 4 of the Agency's Operational Policy Statement, *Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects under the Canadian Environmental Assessment Act*, *2012*[6].	3A 3B	3.5; 4.5; 5.4; 6.6; 7.5; 8.5; 9.5; 10.5; 11.5; 12.5; 13.5; 14.4; 15.5; 16.5; 17.5 3.6; 4.6; 5.5; 6.7; 7.6; 8.6; 9.6; 10.6; 11.6; 12.6; 13.6; 14.3; 15.6; 16.6; 17.6
	The EIS will identify the criteria used to assign significance ratings to any predicted adverse effects. It will contain clear and sufficient information to enable the Agency or review panel, technical and regulatory agencies, Indigenous groups and the public to review the proponent's analysis of the significance of effects.	2 3A 3B	5.4; 7.3 3.5; 4.5; 5.4; 6.6; 7.5; 8.5; 9.5; 10.5; 11.5; 12.5; 13.5; 14.4; 15.5; 16.5; 17.5 3.6; 4.6; 5.5; 6.7; 7.6; 8.6; 9.6; 10.6; 11.6; 12.6; 13.6; 14.3; 15.6; 16.6; 17.6
	The EIS will document the terms used to describe the level of significance.	2 3A 3B	5.4; 7.3 3.5; 4.5; 5.4; 6.6; 7.5; 8.5; 9.5; 10.5; 11.5; 12.5; 13.5; 14.4; 15.5; 16.5; 17.5 3.6; 4.6; 5.5; 6.7; 7.6; 8.6; 9.6; 10.6; 11.6; 12.6; 13.6; 14.3; 15.6; 16.6; 17.6

[6] Visit the Canadian Environmental Assessment Agency's website at: http://www.ceaa- acee.gc.ca/default.asp?lang=En&n=363DF0E1-1

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.5 (cont'd)	The following criteria should be used in determining the significance of residual effects: • magnitude; • geographic extent; • duration; • frequency; • reversibility; • ecological and social context; and • existence of environmental standards, guidelines or objectives for assessing the effect.	2 3A 3B	5.4; 7.3 3.5; 4.5; 5.4; 6.6; 7.5; 8.5; 9.5; 10.5; 11.5; 12.5; 13.5; 14.4; 15.5; 16.5; 17.5 3.6; 4.6; 5.5; 6.7; 7.6; 8.6; 9.6; 10.6; 11.6; 12.6; 13.6; 14.3; 15.6; 16.6; 17.6
	In assessing significance against these criteria the proponent will, where possible, use relevant existing regulatory documents, environmental standards, guidelines, or objectives such as prescribed maximum levels of emissions or discharges of specific hazardous agents into the environment. The EIS will contain a section which explains the assumptions, definitions and limits to the criteria mentioned above in order to maintain consistency between the effects on each VC.	2	5.4; 7.3
	In each case where significant adverse effects are identified, the EIS will set out the probability (likelihood) that they will occur, and describe the degree of scientific uncertainty related to the data and methods used within the framework of its environmental analysis.	3A 3B	3.6; 4.6; 5.5; 6.7; 7.6; 8.6; 9.6; 10.6; 11.6; 12.6; 13.6; 14.4; 15.6; 16.6; 17.6 3.7; 4.7; 5.6; 6.8; 7.7; 8.7; 9.7; 10.7; 11.7; 12.7; 13.7; 14.3; 15.7; 16.7; 17.7
6.6 Other Effects to Consider			
6.6.1	**Effects of Potential Accidents or Malfunctions**	3D	1.0
	The failure of certain works caused by human error or exceptional natural events (e.g. flooding, earthquake) could cause major effects. The proponent will therefore conduct an analysis of the risks of accidents and malfunctions, determine their effects and present preliminary emergency measures.	3D	1.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.6.1 (cont'd)	Taking into account the lifespan of different project components, the proponent will identify the probability of potential accidents and malfunctions related to the project, including an explanation of how those events were identified, potential consequences (including the environmental effects as defined in section 5 of CEAA 2012, and the significance of these effects), the plausible worst-case scenarios, alternative accident scenarios, and the effects of these scenarios. Accidents or malfunctions associated with the presence and/or modification of existing or anticipated future overlapping infrastructure (e.g. pipelines, transmission lines) will be included in this assessment.	3D	1.0
	This assessment will include an identification of the magnitude of an accident and/or malfunction, including the quantity, mechanism, rate, form and characteristics of the contaminants and other materials likely to be released into the environment during the accident and malfunction events and would potentially result in an adverse environmental effect as defined in section 5 of CEAA 2012. The assessment should consider all seasons of the year and take into account site-specific sensitivities and potential pathways of effects.	3D	1.0
	The EIS will describe the safeguards that have been established to protect against such occurrences and the contingency and emergency response procedures in place if such events do occur.	3D 4	1.0 Appendix C
6.6.2	**Effects of the Environment on the Project**	3D	2.0
	The EIS will take into account how local conditions and natural hazards, such as severe and/or extreme weather conditions and external events (e.g. flooding, drought, ice jams, landslides, avalanches, erosion, subsidence, fire, outflow conditions and seismic events) could adversely affect the project and how this in turn could result in effects to the environment (e.g., extreme environmental conditions result in malfunctions and accidental events). These events will be considered in different probability patterns (i.e. 5-year flood vs. 100- year flood).	3D	2.0
	The EIS will provide details of planning, design and construction strategies intended to minimize the potential environmental effects of the environment on the project.	3D 4	2.3.3 Appendix C, Table C-1

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.6.3	**Cumulative Effects Assessment**		
	The proponent will identify and assess the project's cumulative effects using the approach described in the Agency's Operational Policy Statement entitled *Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012* and the guide entitled *Cumulative Effects Assessment Practitioners' Guide, 1999*[7]. The cumulative effects assessment will take into consideration regional flood mitigation works and strategies.	3C	1.0
	Cumulative effects are defined as changes to the environment due to the project combined with the existence of other past, present and reasonably foreseeable physical activities. Cumulative effects may result if: • implementation of the project being studied may cause direct residual adverse effects on the valued components, taking into account the application of technically and economically feasible mitigation measures; and, • the same valued components may be affected by other past, present or reasonably foreseeable physical activities Valued components that would not be affected by the project or would be affected positively by the project can, therefore, be omitted from the cumulative effects assessment. A cumulative effect on an environmental component may, however, be important even if the assessment of the project's effects on this environmental component reveals that the effects of the project are minor.		

[7] Visit the Canadian Environmental Assessment Agency's website at: www.ceaa-acee.gc.ca/

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.6.3 (cont'd)	In its EIS, the proponent will: • identify and provide a rationale for the valued components that will constitute the focus of the cumulative effects assessment, emphasizing this assessment on the VCs most likely to be affected by the project and other project and activities. To this end, the proponent must consider, without limiting itself thereto, the following environmental components likely to be affected by the project:	3C	1.1.3, 1.1.4, 1.1.5, 1.1.6
	– Elbow River, including its hydrology and seasonal flood processes;	3C	1.1.3.2, 1.3.3
	– fish and fish habitat, including bull trout, cutthroat trout and other valued fish species;	3C	1.2.4, 1.3.5
	– migratory birds;	3C	1.2.7.2, 1.3.8.2
	– species at risk; and	3C	1.2.7, 1.3.8,
	– Indigenous Peoples;	3C	1.2.9, 1.3.10
	• identify and justify the spatial and temporal boundaries for the cumulative effect assessment for each VC selected. The boundaries for the cumulative effects assessments will generally be different for each VC considered. These cumulative effects boundaries will also generally be larger than the boundaries for the corresponding project effects;	2	5.3 and 7.2
	• identify the sources of potential cumulative effects. Specify other projects or activities that have been or that are likely to be carried out that could cause effects on each selected VC within the boundaries defined, and whose effects would act in combination with the residual effects of the project. This assessment may consider the results of any relevant study conducted by a committee established under section 73 or 74 of CEAA 2012;	3C	1.1.4, 1.15, 1.1.6

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
6.6.3 (cont'd)	• assess the cumulative effects on each VC selected by comparing the future scenario with the project and without the project. Effects of past activities (activities that have been carried out) will be used to contextualize the current state of the VC. In assessing the cumulative effects on current use of lands and resources for traditional purposes by Indigenous Peoples, the assessment will focus on the cumulative effects on the activity (e.g., hunting, fishing, trapping, plant harvesting);	3C	1.2, 1.3
	• describe the mitigation measures that are technically and economically feasible. The proponent shall assess the effectiveness of the measures applied to mitigate the cumulative effects. In cases where measures exist that are beyond the scope of the proponent's responsibility that could be effectively applied to mitigate these effects, the proponent will identify these effects and the parties that have the authority to act. In such cases, the EIS will summarize the discussions that took place with the other parties in order to implement the necessary measures over the long term;	3C 4	1.2; 1.3 Appendix C
	• determine the significance of the cumulative effects; and	3C	1.2, 1.3, 1.4
	• develop a follow-up program to verify the accuracy of the assessment or to dispel the uncertainty concerning the effectiveness of mitigation measures for certain cumulative effects.	3C	2.0
	The proponent is encouraged to consult with key stakeholders and Indigenous groups prior to finalizing the choice of VCs and the appropriate boundaries to assess cumulative effects.	1 4	6.0, 7.0 Appendix B

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
7 SUMMARY OF ENVIRONMENTAL EFFECTS ASSESSMENT			
7	The EIS will contain a table summarising the following key information: • potential environmental effects; • proposed mitigation measures to address the potential environmental effects; and • potential residual effects and the significance of the residual environmental effects; The summary table will be used in the EA Report prepared by the Agency or review panel. An example of a format for the key summary table is provided in Appendix 1 of this document.	3D	3.0
	In a second table, the EIS will summarize all key mitigation measures and commitments made by the proponent which will more specifically mitigate any significant adverse effects of the project on valued components (i.e., those measures that are essential to ensure that the project will not result in significant adverse environmental effects).	4	Appendix C
8 FOLLOW-UP AND MONITORING PROGRAMS			
8	A follow-up program is designed to verify the accuracy of the effects assessment and to determine the effectiveness of the measures implemented to mitigate the adverse effects of the project. Considerations for developing a follow-up program include: • whether the project will affect environmentally sensitive areas. VCs or protected areas or areas under consideration for protection;	3C	2.0 through 2.16
	• the nature of public concerns raised about the project;	3C	2.0
	• the accuracy of predictions;	3C	2.0
	• whether there is a question about the effectiveness of mitigation measures or the proponent proposes to use new or unproven techniques and technology;	3C	2.0
	• the nature of cumulative environmental effects;	3C	2.16
	• the nature of project;	3C	2.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
8 (cont'd)	• whether there was limited scientific knowledge about the effects in the EA; and	3C	2.0
	• identification of applicable guidelines and standards.	3C	2.0 through 2.15
	The goal of a monitoring program is to ensure that proper measures and controls are in place in order to decrease the potential for environmental degradation and impacts to Indigenous peoples during all phases of project development, and to provide clearly defined action plans and emergency response procedures to account for human and environmental health and safety, and potential impacts to Indigenous peoples. The proponent will engage Indigenous groups in the preparation and execution of follow-up and monitoring programs as appropriate.	3C	2.1.3
8.1 Follow-up Program			
8.1	The duration of the follow-up program shall be as long as required for the environment to regain its equilibrium and to evaluate the effectiveness of the mitigation measures. The follow-up program should address any distinct requirements following construction, during non-flood event operations, and each after flood event operation of the project.	3C	2.0
	The EIS shall present a preliminary follow-up program in particular for areas where scientific uncertainty or Indigenous or public concern exists in the prediction of effects. This program shall include:	3C	2.0
	• objectives of the follow-up program and the VCs targeted by the program;	3C	2.1.2; 2.2.2; 2.3.2; 2.4.2; 2.5.2; 2.6.2; 2.8.2; 2.9.2; 2.11.2
	• list of elements requiring follow-up;	3C	2.1 through 2.16
	• number of follow-up studies planned as well as their main characteristics (list of the parameters to be measured, planned implementation timetable, etc.);	3C	2.1.3; 2.2.3; 2.3.3; 2.4.3; 2.5.3; 2.6.3; 2.8.8; 2.9.3; 2.11.3
	• intervention mechanism used in the event that an unexpected deterioration of the environment is observed;	3C	2.0

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
8.1 (cont'd)	• mechanism to disseminate follow-up results among the concerned populations;	3C	2.1 through 2.16
	• accessibility and sharing of data for the general population;	3C	2.1 through 2.12
	• opportunity for the proponent to include the participation of Indigenous groups and stakeholders on the affected territory, during the implementation of the program; and	3C	2.1.3
	• involvement of local and regional organizations in the design, implementation and evaluation of the follow-up results as well as any updates, including a communication mechanism between these organizations and the proponent.	3C	2.0
8.2 Monitoring			
8.2	The proponent will prepare an environmental monitoring program for all phases of the project. This program will help ensure that the project is implemented as proposed, that the mitigation or compensation measures proposed to minimize the project's environmental effects are effectively implemented, and that the conditions set at the time of the project's authorization and the requirements pertaining to the relevant laws and regulations are met. The monitoring program will also make it possible to check the proper operation of works, equipment and facilities. If necessary, the program will help reorient the work and possibly make improvements at the time of construction and implementation of the various elements of the project.	3C	2.2 through 2.16
	Specifically, the environmental impact statement shall present an outline of the preliminary environmental monitoring program, including the: • identification of the interventions that pose risks to one or more of the environmental and/or valued components and the measures and means planned to protect the environment;	3C	2.2 through 2.16
	• description of the characteristics of the monitoring program where foreseeable (e.g., location of interventions, planned protocols, list of measured parameters, analytical methods employed, schedule, human and financial resources required);	3C	2.2 through 2.16

Table A-2 Concordance with *CEAA 2012* - Guidelines for the Preparation of an Environmental Impact Statement

Section	CEAA Guideline	EIA Report	
		Volume	Section
8.2 (cont'd)	• description of the proponent's intervention mechanisms in the event of the observation of non-compliance with the legal and environmental requirements or with the obligations imposed on contractors by the environmental provisions of their contracts; and	3C	2.0
	• guidelines for preparing monitoring reports (number, content, frequency, format) that will be sent to the authorities concerned.	3C	2.1
	• Opportunities for the participation of Indigenous peoples in monitoring during each phase of the Project.	3C	2.1.3