Small Modular Reactor Development Project

REGIONAL EVALUATION PROCESS REPORT: FINAL

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TABLE OF CONTENTS

TREATY AND LAND ACKNOWLEDGEMENT

The regional evaluation process touched the ancestral lands of many Indigenous nations. Including those Nations on Treaty 2, 4 and 6, Dakota territories as well as the homeland of the Métis Nations. As regional stakeholders considering the potential development of a SMR facility, we reaffirm our relationship with the Peoples of these lands and honour our shared determination to preserve the lands for generations to come.

EXECUTIVE SUMMARY

SaskPower developed a Regional Evaluation Process (REP) for the Small Modular Reactor (SMR) Development Project. The process was used to share current information about the project with potentially affected Indigenous groups, organizations, and stakeholders. It also allowed SaskPower to gather input on regional identity, siting considerations, potential economic development, and future public participation preferences to support it's regulatory and siting process.

As part of the REP, SaskPower established two Regional Indigenous and Stakeholder Committees (Committee) made up of nominated representatives from each study area (Estevan and Elbow). This report represents the vision and hard work of those who participated on the Committees. As passionate ambassadors of their respective communities, these Committee members have provided valuable insight on the unique identities of their region, their priorities, and what their vision for the future looks like if it were to include the addition of a Small Modular Reactor (SMR) Development Project.

The REP involved a total of four Committee workshops between November 2022 and May 2023, in each of the Estevan and Elbow regions. They were designed to share information through presentations by representatives of SaskPower and their team of specialist consultants, regulatory authorities and leading experts in the nuclear industry; and collect feedback through collaborative activities, review of environmental and economic conditions. The workshops resulted in the submission and incorporation of approximately 200 written comments and over 180 inputs into siting indicators.

On average, Committee workshops were attended by 20 to 30 people representing Indigenous groups and organizations, regional communities, non-government organizations (NGO), industry organizations, research and academic organizations, and technical observers. Based on the feedback collected following each Committee workshop, over 95 per cent of workshop participants indicated that the workshops were a good use of time. Committee members also indicated their intent to share the information that they received through the REP with their respective communities and organizations.

Much of the feedback, interests, and key themes that have been identified throughout the REP centered on how best to position the regions for economic success, while also protecting the environment and preserving their respective regional identity. This input will be carried forward for consideration as future engagement and consultation activities are undertaken. It will also be used to inform the integrated impact assessment and licensing process for the SMR Development Project.

1. INTRODUCTION

SaskPower, like much of the world, is going through a clean energy transition. Climate change goals and the increasing price on carbon emissions – coupled with changing customer expectations and the rising demand for power in Saskatchewan are the key drivers for SaskPower to explore and develop new clean power sources. SaskPower is developing a diverse mix of low or non-emitting generation sources to deliver reliable, sustainable, and cost-effective power while aggressively reducing greenhouse gas (GHG) emissions. One option being explored is nuclear power from Small Modular Reactors (SMRs). To support SMR planning, between 2022 – 2023 SaskPower completed four workshops as part of a Regional Evaluation Process (REP) to directly engage with and obtain feedback from government, regional stakeholders and Indigenous groups to inform the siting decision and the potential development of Saskatchewan's first SMR facility.

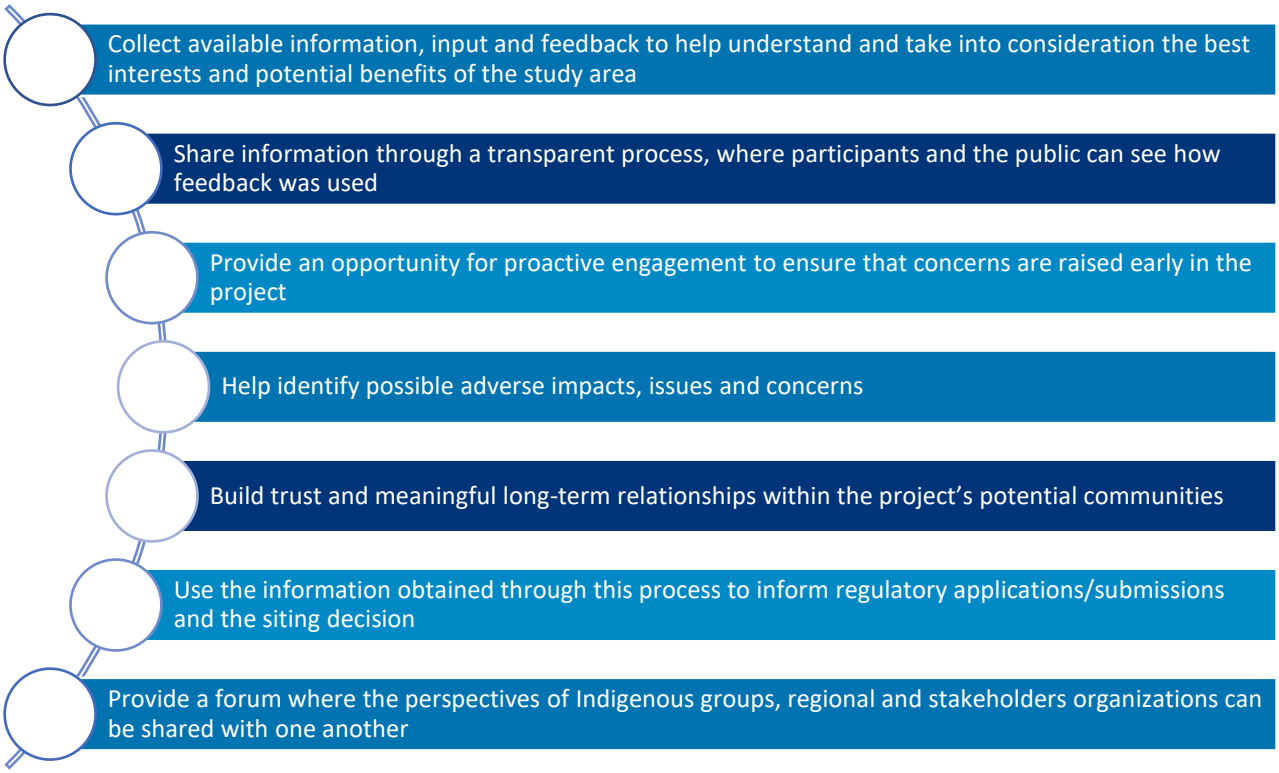
This report documents the Regional Evaluation Process (REP), summarizes the feedback received and identifies key themes raised for further consideration. It outlines how the feedback has informed the siting process and other development phase activities, and identifies areas for future examination. The report is structured as follows:

2. REGIONAL EVALUATION PROCESS

SaskPower developed this Regional Evaluation Process (REP) to help inform project development and support engagement for the SMR Development Project (project) by sharing information with potentially affected Indigenous, regional, and stakeholder organizations. This process has allowed SaskPower to gather input on siting considerations, regional identity, potential economic development opportunities, and future public participation preferences in support of the siting and regulatory approvals processes.

2.1 REGIONAL EVALUATION PROCESS OBJECTIVES

The REP was shaped around the following objectives which was described in a project charter to guide committee activities:



2.2 COMMITTEE MEMBERSHIP

As part of the REP, SaskPower established Regional Indigenous and Stakeholder Committees (Committees) made up of nominated and interested representatives from each prospective siting area (Estevan and Elbow). The formation of the Committees was meant to strengthen

engagement by providing a forum of cross-sector representatives from Indigenous, regional, and stakeholder organizations to share their perspectives.

Committee activities ran in parallel with broader public engagement and Indigenous consultation processes in the same timeframe (fall 2022 through spring 2023) within the siting phase. Proximate First Nations and Métis locals were invited to participate separately in consultations directly with SaskPower to discuss how the proposed SMR siting decision has the potential to adversely impact existing Treaty and Aboriginal Rights.

Four committee workshops were held from November 2022 to May 2023 (Table 2-1):

Table 2-1: REP Committee Workshop Dates and Locations

WORKSHOP	DATE AND LOCATION - ESTEVAN	DATE AND LOCATION - ELBOW
Workshop 1	November 22, 2022	November 24, 2022
Workshop 2	December 13, 2022	December 15, 2022
Workshop 3	March 23, 2023	March 21, 2023
Workshop 4	May 18, 2023	May 16, 2023

The content covered in each workshop is described in the following sections. More information on the REP, the role and scope of the Committees, and copies of all workshop materials can be found on the **saskpower.com/nuclear** webpage.

2.3 REP COMMITTEE WORKSHOP 1

REP Committee Workshop 1 involved SaskPower presenting an overview of:

- Saskatchewan's Future Power Supply
- The SMR project (schedule and siting process)
- Engagement opportunities
- The REP (REP overview, Committee, charter and report).

During Workshop 1, members were asked to inform the charter by proposing their own principles which they would agree to uphold throughout the REP process (see figure 2-1 as examples)

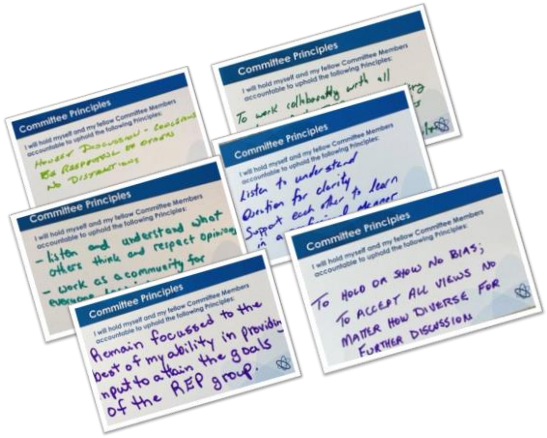


Figure 2-1: Committee Principles – Input to Final Charter

A preliminary scoping report (REP Report Draft 1) was distributed during the workshop for review and input. The report prompted committee members to consider a number of topics related to the siting process, potential impacts to Treaty and Aboriginal Rights; regional identity; and other topics of interest. This feedback was used to shape the content of the subsequent workshops, and this report.

Figure 2-2: Estevan Committee Undertakes Water Valuation Survey

2.4 REP COMMITTEE WORKSHOP 2

Workshop 2 involved:

- Detailed presentations on the siting process, siting indicators and a break-out session on the siting criteria indicator workbooks
- A presentation on the introduction of a water valuation study (environmental, economic and social/cultural values) and completion of a water valuation survey
- Participation in a regional visioning exercise

At the end of Workshop 2, the Committees were asked to rank preliminary interests in order of priority and provide more information regarding the nature of their interest. This information was fed back into planning for Workshop 3 and into this report.

Table 2-2 presents topics of interest identified by each Committee through a review of presentations, ongoing siting and community engagement activities, and publicly available information (e.g., community plans) relevant to the project.

Figure 2-3: Committee Ranking of Topics of Interest

Table 2-2: Preliminary Interests Identified by the REP Committees at Workshop 2

Category	Topic of Interest
Economic	• Cost of SMR technology development and decision-making timelines (e.g., regulatory process) • Investment value and return, export opportunities • Business partnerships with Indigenous groups • Co-benefits with other projects • Uranium mining value chain opportunities • Workforce requirements and transition of current energy work force to nuclear industry • Employment opportunities, resources and partnerships (e.g., training programs, classes) to develop a local workforce • Cost of electricity produced from an SMR • Adverse effects to agriculture and loss of agricultural land • Opportunities for local development investment programs • Economic benefit spin-offs
Environment	• Risk of extreme weather events due to climate change (e.g., flooding) • Effects to air quality, water quality and water consumption • Alternative assessment – water impacts of once-through cooling vs cooling tower • Upstream emissions from uranium mining operations • Impacts during construction • Mitigation for potential impacts on aquatic resources, wetlands, wildlife habitat, protected areas and species at risk • Natural resource use, including traditional land use by Indigenous Rightsholders, commercial and recreational use • Net benefit of emissions reduction (coal phase-out) • Monitoring guidelines and regulations
Accidents/Malfunctions	• Best practices • Historical information • Potential for accidents and malfunctions (mitigation and response plans) • Transparency regarding worst case scenario • Historic perceptions of nuclear accidents • Geopolitical impacts of malfunction

Social	• Pressure on existing community services • Pressure on existing infrastructure (roads, emergency services etc.) • Investments in community services and infrastructure Charitable participation in community Realities of living in the vicinity of a nuclear facility Consideration for population growth Negative connotation/divisive subject in community Impact on recreation Investment in education (elementary, secondary, post, Indigenous)
Nuclear Waste	• Nuclear waste management (storage method, location, quantities, type and long-term viability) • Nuclear waste transportation safety • Best practices and historical information • Risk of contamination and mitigation measures
Human Health	• Radiological hazards to human health and environment, and mitigation measures • Human health exposure compared to coal operations • Risks to employees • Impacts to waterbodies as a result of effluent discharge
Technology	• Timelines for SMR project development and deployment (including supply chain) • Opportunities to retrofit existing coal power plants for SMR development, future update of SMR technology • Fuel type, source (e.g., whether uranium deposits from Saskatchewan will be considered) and associated supply chain • Amount and efficiency of electricity produced by SMR technology • Applications other than power generation (e.g., medical isotopes). • Benefit of reliable, baseload source of non-emitting power (and energy security) • Life cycle management of facility • Replacement and supplementation of future power needs • Rationale for selection of GE-H BWRX-300
Engagement	• Meaningful engagement and voices being heard • Authentic representation for where the public can have influence • Transparent communication and opportunity to provide feedback • Caution regarding engagement fatigue • Focus on Indigenous engagement in addition to general public • Response to engagement activities to date

Cultural Heritage	• Mitigation for potential impacts on:
	  • Archaeological sites
	  • Spiritual sites
	  • Paleontological sites

2.5 REP COMMITTEE WORKSHOP 3

Committee Workshop 3 involved presenting:

- Updated siting indicators and suitability mapping after considering committee input from Workshop 2
- Presentation on ongoing or planned social and technical studies
- Presentation on preliminary water valuation survey results
- An overview of the upcoming Impact Assessment process and discussion on opportunities for stakeholder/rightsholder input
- Information on nuclear waste with a panel discussion between representatives of the Canadian Nuclear Safety Commission (CNSC), Nuclear Waste Management Organization (NWMO) and a Canadian nuclear operator (NB Power)
- Information on how water flows in a SMR: infographic
- Short-listed Region-specific Vision Statements (output from Workshop 2) and selecting the preferred vision
- Socio-economic alignment opportunities for power generation, agriculture and tourism

Workshop 3 was tailored to respond to interests and input provided by the Committees throughout the process. Takeaway information was also provided to support the Committees in external discussions.

2.6 REP COMMITTEE WORKSHOP 4

Committee Workshop 4 involved:

- A Panel Discussion on accidents and malfunctions with representatives of the CNSC and the University of Calgary
- Presentation and review of REP Report Draft 2, including the key themes related to environmental and social factors or components that each community expressed concern or interest in (see Section 9: Moving Forward).

Figure 2-4: Committee Reviews REP Report Draft 2

- Workshop 4 was also curated to reflect the interests and input provided by the Committees throughout the process, a survey to see how closely objectives of the REP were met (see Figure 2-5) and concluded with a commitment by SaskPower to continue to provide project information and updates.

Figure 2-5: Survey results: If the REP objectives were met

3. SMR TECHNOLOGY

3.1 WHAT ARE SMRS?

A key topic of interest expressed by the REP committees included a desire to better understand SMR technology, fuel sources, electricity generation potential, and how nuclear waste is safely managed. This theme is explored below.

SMRs are nuclear reactors that can generate electricity and heat without producing GHGs during operation. Many SMRs are based on existing traditional designs, but are smaller in size and produce smaller amounts of electrical output, and offer enhanced safety features. SaskPower has now selected an SMR nuclear technology, GE-Hitachi BWRX-300 (BWRX-300), that requires uranium fuel to produce heat. One single BWRX-300 reactor produces approximately 300 MW of electrical output. The exact output will depend on the detailed design of the facility, including auxiliary power requirements, but is referred to within this document as a 300 MW reactor design.

Saskatchewan is the largest producer of uranium in Canada. The concentration of fissile uranium required in the fuel for the BWRX-300 SMR is about seven times the concentration of natural uranium mined in Saskatchewan, or anywhere else throughout the world. The manufacturing process necessary to increase this concentration is called enrichment and requires special processing facilities which are not currently available in Canada. Our neighbours in the United States have developed uranium enrichment capability in the early years of the nuclear industry and are well placed to fully meet the SMR fuel requirements.

The enriched uranium is converted to uranium dioxide, a hard heat-resistant ceramic, and pressed into small pellets about 1 cm long and 1 cm in diameter (Figure 3-1). A single pellet in a typical reactor yields about the same amount of energy as one tonne of typical steaming coal.

Figure 3-1: SMR Fuel Core Pellets

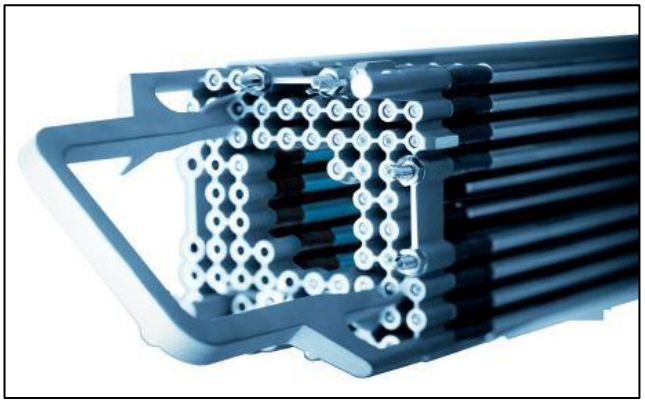


Figure 3-2: SMR Fuel Core Assembly

The small pellets of enriched uranium are inserted in long tubes of zirconium having a small diameter called fuel elements. Both ends of each fully loaded fuel element are seal welded. Once the fuel elements have passed a quality inspection, they are organized into a fuel assembly, and packaged for transportation (Figure 3-2). The BWRX-300 SMR will have 240 such fuel assemblies containing hundreds of fuel elements and thousands of fuel pellets in the SMR core.

About one third of the fuel elements are replaced every two years. While in operation, the fuel elements use a process called nuclear fission to generate heat. Once heat is generated, it is used to create steam and a steam cycle runs a turbine, which converts that heat into electricity. This is a similar process to many power options that exist today, including coal-fired power stations and combined cycle natural gas-fired power stations.

After the fuel is removed from the SMR core, it is put in a used fuel cooling pool for several years, before being stored on-site in a shielded dry cask (Figure 3-3).

Figure 3-3 Shielded dry cask storage example

SMRs have the potential to deliver reliable, zero-emissions electricity available 24 hours a day, seven days a week (Figure 3-4).

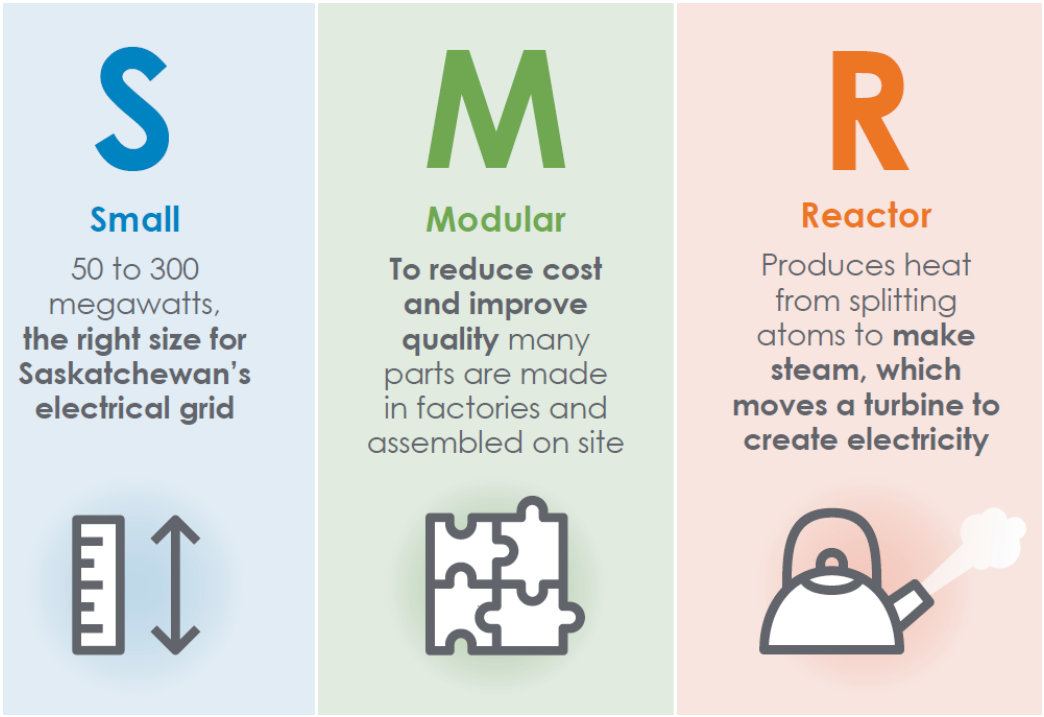


Figure 3-4 What is an SMR?

3.2 WHAT WILL AN SMR PROJECT LOOK LIKE?

The proposed project is early in the development phase. A decision on whether to build the first 300 Megawatt (MW) SMR won't be made until 2029 and will be based on the merits of this supply option weighed against others and the provincial demand for electricity. The decision will require extensive project planning, licensing, a federal and provincial impact assessment, public engagement and consultation with Indigenous Rightsholders. If regulatory approvals are granted and a decision is made to proceed with nuclear power using SMR technology, site preparation work may begin on the selected site in 2029. Site preparation will signal the start of the construction phase which is expected to take four to five years. Commercial operation of the first 300 MW SMR could be as early as 2034, with potential expansion to 600 MW. While initial regulatory approvals, including the impact assessment and licence to prepare the site, are planned to be obtained considering the full 600 MW of nuclear power, construction decisions will be made in 300 MW increments.

Based on our current understanding, a site for 600 MW of output (that can accommodate two 300 MW reactors) is expected to require approximately a half section of land (320 acres).

SaskPower's SMRs project needs access to a water source like a lake or reservoir that can provide a cooling water supply to the power plant. This is similar to how we operate our coal-fired and some natural gas-fired power plants. Most large thermal power plants rely on cooling water to remove waste heat from the steam cycle. This can be done with a nearby waterbody as a heat sink using once through cooling or by evaporating water into ambient air using wet cooling towers.

The water used for once through cooling is generally withdrawn from, and released back to, a large surface waterbody with relatively less consumptive water loss. Water used for wet cooling towers of various types is also drawn from surface waterbodies at much lower rates but is a consumptive use because the wet cooling tower relies on evaporation of the water to release the heat. A comprehensive assessment will be done to weigh the benefits and risks of options to establish a documented decision basis for cooling technology. Some of the decision considerations will depend on quantity and quality of water sources, stability and reliability, climate factors, and cost.

In addition to a large body of water, the location should be close to existing transmission infrastructure or near areas where we have higher demand for power in the province; these additional considerations are explained in Section 4 "Siting Process".

The site preparation and construction phase will see increased activity in and around the site. As site preparation starts and throughout the construction and operation phases, access to the site will be restricted to authorized personnel only. Each 300 MW SMR will operate for approximately 60 years. The reactor, through licenced activities, will then be decommissioned. All phases of the SMR project will be overseen and monitored by the Canadian Nuclear Safety Commission (CNSC).

During operation, the reactor requires refueling every two years when approximately one third of the fuel needs to be replaced. Used nuclear fuel will be transferred out of the reactor core, first into secure cooling pools and then sealed in dry storage containers which safely contains the radioactive nature of the used nuclear fuel. Sealed dry storage containers will be stored on-site until a permanent long-term storage facility is available in Canada. The Nuclear Waste Management Organization (NWMO) is federally legislated and mandated to develop, build and operate long-term storage facilities for all of Canada's used nuclear fuel.

The site will also require resources to support construction and operation activities. Some of these include road upgrades, electricity transmission grid connections, use of rail transportation, and water supply. The location of this infrastructure will remain unknown until project plans are further developed. Figure 3-4 "GE-Hitachi SMR Facility Rendering" provides an illustrative concept of GE Hitachi's BWRX-300 reactor design which is the technology that SaskPower has chosen to advance our planning work to potentially bring nuclear power to Saskatchewan.

Figure 3-4: GE-Hitachi SMR Facility Rendering

From an economic perspective, the project represents a significant opportunity for Saskatchewan and local communities including job creation and tax revenue. During construction, it is estimated that 1,700 new jobs will be created on site and for companies that supply goods and services. Operation of the first 300 MW SMR will create approximately 180 permanent jobs. Companies that support the operation and maintenance of the facility over its 60-year life will also benefit the local and regional economies.

4. SITING PROCESS

SaskPower began the siting process in 2021 with the identification of technical criteria or indicators that are important considerations for the successful construction, operation, and eventual closure of an SMR facility. Key siting criteria that was used to focus in on the two proposed study areas of Estevan (Figure 4-1) and Elbow (Figure 4-2) included proximity to a large lake or reservoir, existing power infrastructure, existing workforce and emergency services.

Each study area includes a siting area in which the SMR will be somewhere located. The extent of each of the siting areas is a 10 km radius around each water body, including Rafferty and Boundary Dam Reservoirs, Grant Devine Lake and the Gordon McKenzie Arm and Thompson Arm of Lake Diefenbaker. Federal regulations for projects of this nature require a much larger area than the actual site itself to be studied and therefore, regional study areas were delineated by extending a 30 km radius from the target siting areas.

To help refine where a SMR could be located a decision support tool called GoldSET© was used to help define, map, and evaluate criteria, which were grouped into three themes:

1. Environmental
2. Social/Cultural
3. Technical

Table 4-1 summarizes the themes and siting indicators applied in the siting process and that were discussed with the Committees during Workshops 2 and 3. The full description of all indicators and their source and the first version of the suitability maps is provided on our website: Regional Evaluation Process (saskpower.com).

Table 4-1: Project Siting Themes and Indicators

Theme	Indicators
Environmental	Protected lands Rare/endangered species Terrestrial wildlife habitat inventory lands Woodland caribou habitat Wetlands Permanent waterbodies Permanent watercourses Aquatic species at risk range Federal critical habitat areas

Theme	Indicators	
	Managed lands	
Social/Cultural *	First Nations Reserves Urban municipal areas Future urban development Heritage sensitivity Department of National Defence military lands Proximity to workforce Population density International border	
Technical	Aerodrome airspace Airspace - advisory Airspace - restricted Managed dams Drought potential Existing power plants Faults Fire hazard Gas storage Highways - primary Highways - secondary Major facilities Mining	O&G wells and facilities Pipelines high pressure Pipelines water Railways SaskPower lands Seismic hazard Severe precipitation Switching stations Surficial geology Tornado potential Transmission grid Water sources Water wells

*Note that impacts to Aboriginal and Treaty rights will be considered in the siting decision through the consultation process triggered by SaskPower on September 22, 2022.

During Workshop 2 Committee members were given the opportunity to comment on the importance of every aspect of each siting indicator. Over 180 comments were captured on 54 indicators. Based on these comments, nine indicators were revised, one additional indicator was added, seven indicators were removed and thirty-nine remained unchanged. A summary and description of the revised or removed indicators, Tables 4-2 and 4-3 respectfully, are provided below.

Based on Committee feedback, Future Urban Development, Urban Municipal Areas and Population Density indicators, amongst others, were adjusted to refine the siting criteria and determine suitability for the SMR.

Table 4-2: Revised Indicators Following REP Workshop 2

Theme	Indicator	Revisions / Action
Social/ Cultural	Future Urban Development	Increase weight to 20 (100% increase). 1 km excluder from urban municipal areas. Buffer starts at municipal boundary (not exclusion area), 0-5km Low suitability, 5-10km distance decay low to high.
Social/ Cultural	Proximity to Workforce	Increase to 100 km. Update distance based on transportation assessment.
Social/ Cultural	Urban Municipal Areas	Add 1 km exclusion to municipal boundary.
Social/ Cultural	Population Density	Obtain 2021 census results and recalculate.
Social/ Cultural	Population Density > 200	Obtain 2021 census results and recalculate.
Technical	Groundwater Aquifers	New Indicator.
Technical	Mining	Active/Restored/Remediated areas are low suitability. Areas considered for future mining were removed from the data.
Technical	Hazardous Facilities Proximity	Reduce distance decay from 8 to 4km.
Technical	Regional Power Demand	Reduced weight from 80 to 10 based on transmission study findings.
Technical	High Pressure Pipeline Proximity	Removed water pipelines from proximity – This allows for communities to consider irrigation synergies associated with the project.

Table 4-3: Removed Indicators Following REP Workshop 2

Theme	Indicator	Rationale
Environmental	Aquatic Species at Risk Range	All siting areas are equally ranked for this indicator, so it is not discerning. This will be considered further at detailed siting phase.
Environmental	Woodland Caribou Habitat	Does not occur within the siting areas.
Social/ Cultural	Department of National Defense (DND) Military Lands	Does not occur within the siting areas.
Technical	Aerodrome - Large	Does not occur within the siting areas.
Technical	Airspace - Restricted	Does not occur within the siting areas.
Technical	Drought Potential	Siting areas are all very similar and the data uncertainty / error is likely high. This will be considered further at detailed siting phase.
Technical	Historical Fires	All siting areas are equally ranked for this indicator, so it is not discerning. This will be considered further at detailed siting phase.

A combination of the feedback on indicators which resulted in direct changes to the areas of suitability for SMR development and the advancement of technical studies which identified potential areas for a water intake; show which regions within the Estevan (Figure 4-1) and Elbow (Figure 4-2) siting area that are preferred for hosting an SMR. Areas with shades of green represent land that appears to be suitable compared to other areas within the siting area boundary. The darker the green, the more suitable the land. The areas in white represent lower suitable land (less than 70% suitability) or areas that have been excluded such as pipelines or land within a municipal boundary.

The water intake suitability maps are expected to change prior to the narrowing decision planned in late 2023 as more information is gathered through engagement and consultation efforts and as technical studies advance at the local level and detailed siting stage.

For more information on the siting process including the role of GoldSET, past and present versions of the Indicator workbooks and their associated suitability maps (version 1 and version 2 with water intake consideration) can be found at **Regional Evaluation Process (saskpower.com)**.

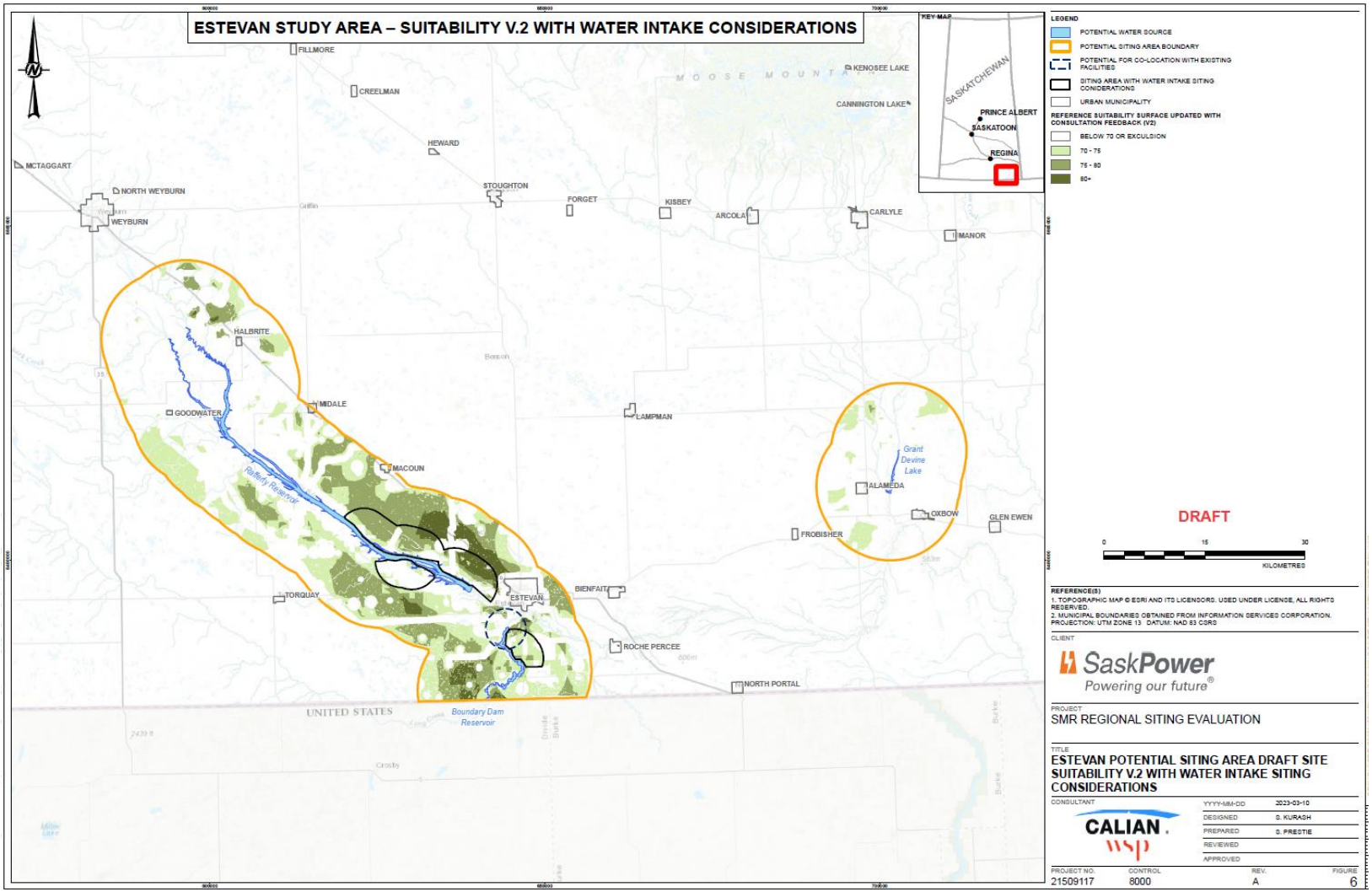


Figure 4-1: Estevan Study Area – Suitability Version 2 with Water Intake Considerations

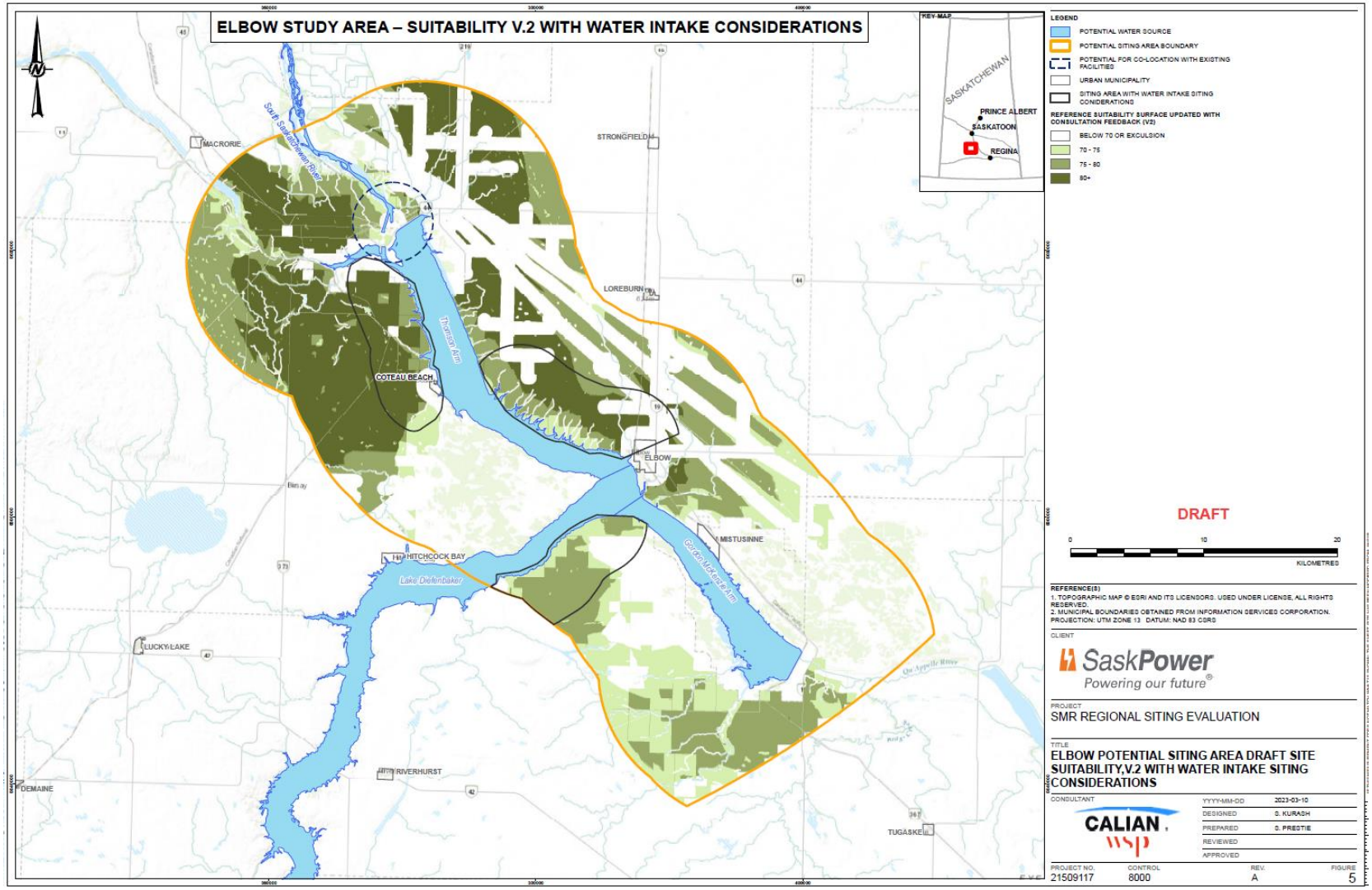


Figure 4-2: Elbow Study Area – Suitability Version 2 with Water Intake Considerations

4.1 SOCIAL AND TECHNICAL STUDIES TO SUPPORT SITE SELECTION - WATER VALUATION

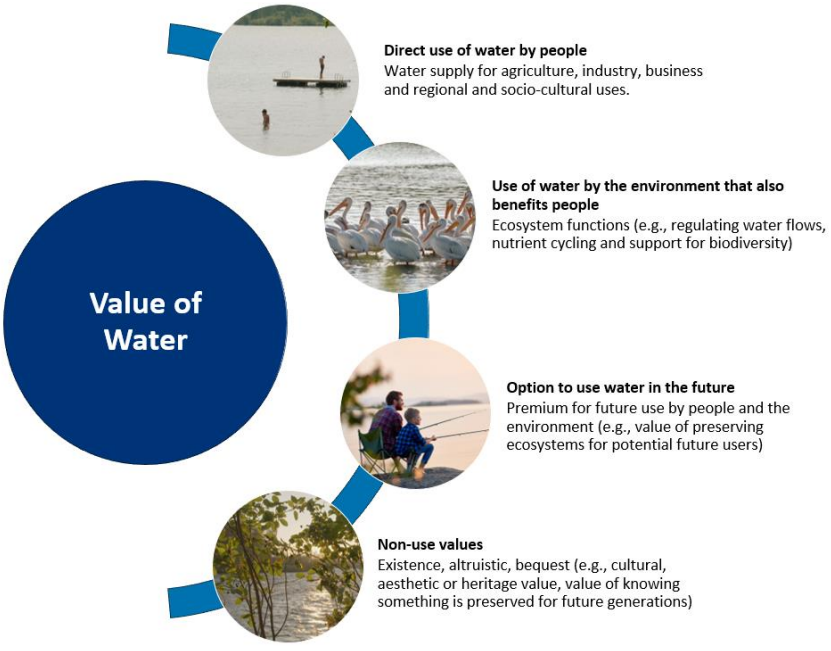
To further inform the selection of a suitable site, SaskPower is doing additional technical studies that will provide supplemental information on key aspects. This includes investigating the biodiversity and water resources that may be present within each study area.

Technical studies regarding water availability and thermal modelling are underway within the siting areas. Findings from these studies and others and how they impact our siting decisions will be shared with communities throughout the impact assessment process.

A water valuation study was developed which documents the environmental, economic, and socio-cultural values of water within each study area. This study seeks to understand and describe the different values that people place on water resources, and how these may be impacted by the project. Examples include the use of water for:

- Irrigation and agriculture
- Municipal and domestic water supply
- Industrial water use in the mining, oil and gas and power sectors
- Commercial recreation and tourism users
- Social, cultural and spiritual values of water by Indigenous peoples
- Ecosystem services supporting and regulating functions that in turn provide value to other water users by regulating water flows or purifying water.

These water values are illustrated below.



To support the analysis, this study collected information from many sources, including:

- Broad public and Indigenous engagement, including:
    - In-person events
    - Online engagement
    - Location mapping tools
    - Surveys
- Rightsholders within the Duty to Consult process
- The REP
- Other technical, physical and biological and socioeconomic studies for the project.

The water valuation study used an economic model to estimate the perceived value of water within the study areas, and how these could change in the future. This analysis will be refined as we gather anecdotal information, empirical data, and oral shared history about the value of water from our project stakeholders that will deepen our understanding of the importance of water resources in each area. Water valuation, in addition to other technical studies will be conducted to support site selection and to help make decisions on how the project uses or interacts with the waterbody.

Committee members took part in the water valuation survey during Workshop 2. The water valuation survey was open to the public immediately following workshop 2 December 13 to February 14, 2023. Proximate First Nations and Métis locals within the consultation process were invited to participate separately in the water valuation survey. During Workshop 3 each Committee was provided an update to the preliminary survey results, see **Regional Evaluation Process (saskpower.com)** for more information.

Full water valuation survey report will be posted to Planning for Nuclear Power (saskpower.com) in spring/summer 2023 once available

5. ABORIGINAL AND TREATY RIGHTS AND BROADER ENGAGEMENT

The early siting decisions for the project has the potential to adversely impact Treaty and Aboriginal rights, and accordingly, SaskPower has a duty to consult and accommodate potentially impacted First Nations and Métis communities. This consultation will focus on how rights are exercised in the study areas so that project siting decisions can avoid or mitigate any potential adverse impacts. We have contacted First Nations and Métis locals who are located near or are known to exercise rights in and around the study areas. Additional communities could be scoped in moving forward, if their Aboriginal or Treaty rights could be adversely impacted by the siting decision associated with this project.

Outside of the consultation process, SaskPower is also focused on broader engagement with Indigenous communities and organizations within the province. SaskPower has been collaborating on the design and delivery of the future of power and SMR project engagement opportunities with First Nations and Metis organizations and governments. We have also been working with individual Tribal Councils to identify and plan for engagement opportunities with their respective communities.

What we heard through the early Indigenous engagement is shared on **saskpower.com**/nuclear.

During Workshops 2 and 3 we received information regarding areas of importance within the study areas. The following topics were discussed with the REP:

- Water
- Historical use surrounding waterbodies including rivers
- Archaeological resources
- Environmental features such as wetlands and wildlife which are used for hunting, fishing and gathering, and
- Historical Sites information such as the Fort Walsh-Fort Qu'Appelle Trail, Fur Trade Era Cart Trails, red river cart trails and Mistaseni[1] Rock.

Through Indigenous engagement and consultation, SaskPower is currently assessing the potential for adverse impacts on the study area to both Aboriginal and Treaty rights and other identified interests. This information will be used to inform a potential final siting decision.

For more information, visit our Duty to Consult and Accommodate webpage.

[1] It is noted that this word can be spelled multiple ways

6. REGIONAL IDENTITY AND VISION

Through the REP, SaskPower has refined our understanding of the regional identity in each study area. This includes key attributes, interests and priorities held by committee members, now and for future development planning. The information presented in this section in REP Report Draft 1 was provided to confirm our understanding, and to seek additional information to address gaps or to update data for each region.

Once a baseline understanding of each regional setting was established, this information was used to support Regional Visioning exercises in Workshops 2 and 3. Setting a Regional Vision was important to align on common aspirations of committee members for what the future of each regional area could be, and also for SaskPower to understand how nuclear power could fit in or support that vision. The selected regional vision and baseline regional identify information is presented for each study area below.

6.1 ESTEVAN STUDY AREA

6.1.1 REGIONAL VISION

In arriving at a Regional Vision, committee members came together in groups to discuss concepts around ‘what the region is known for’, and ‘who lives, works and visits the region’. In Estevan, common themes around resilience, honouring traditions, diversity, environmental protection and sustainability, as well as ensuring prosperity and a high quality of life were expressed as important foundational elements.

The selected Regional Vision Statement for Estevan is shown below.

Together, we will build a centre of excellence for clean energy production in western Canada; honouring our legacy of resilience and embracing environmental stewardship, innovation, diversity and sustainable economic growth.

6.1.2 MUNICIPAL SETTING

The following information was compiled from publicly available data sources and supplemented by the information and input provided by the Committees.

The Estevan Study Area, located near the City of Estevan, includes 19 rural municipalities, 24 urban municipalities (Table 6-1), and two planning districts (Weyburn Planning District and Enniskillen and Oxbow Planning District) in southeastern Saskatchewan (Figure 6-1).

According to Stats Canada's 2021 census data, the City of Estevan (City) has a population of 10,851, experiencing a 5.5% decline since 2016. The City is approximately 200 km southeast of Regina and is surrounded by the Rural Municipality (RM) of Estevan No. 5. Together, the City and RM of Estevan No. 5 have a population of 12,798. The largest urban centre in the Estevan Study Area is the City of Weyburn, with a population of 11,019 (Statistics Canada), located approximately 86 km northwest of Estevan (Figure 6-1).

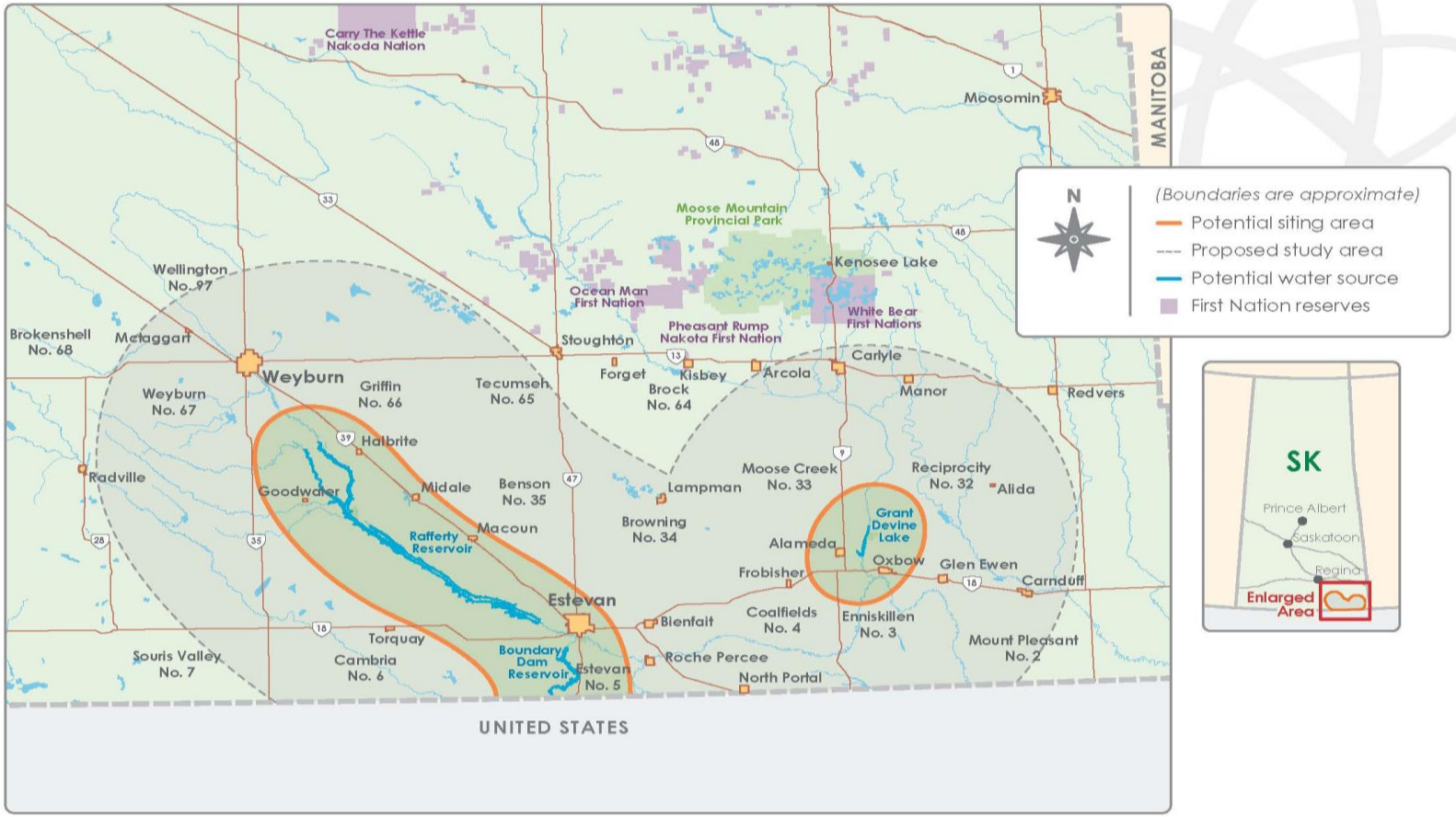


Figure 6-1: Estevan Study Area

Table 6-1: Estevan Study Area Urban and Rural Municipal Setting

Rural Municipalities – Combined Population ~8,799		
Weyburn No. 67	Tecumseh No. 65	Souris Valley No. 7
Brokenshell No. 68	Brock No. 64	Estevan No. 5
Wellington No. 97	Browning No. 34	Griffin No. 66
Lomond No. 37	Coalfields No. 4	Enniskillen No. 3
Cymri No. 36	Moose Mountain No. 63	Reciprocity No. 32
Benson No. 35	Moose Creek No. 33	Mount Pleasant No. 2
Cambria No. 6		
Urban Municipalities– Combined Population ~31,285		
City of Estevan	Town of Arcola	Town of Oxbow
City of Weyburn	Town of Carlyle	Town of Alameda
Town of Midale	Village of Goodwater	Town of Carnduff
Village of Torquay	Village of Macoun	Village of Frobisher
Town of Stoughton	Village of Halbrite	Village of Alida
The Village of Kisbey	Village of North Portal	Village of Manor
Town of Lampman	Village of McTaggart	Village of Roche Percee
Town of Bienfait	Village of Glen Ewen	

*Excludes unincorporated hamlets

6.1.3 ECONOMY

Estevan's location 159 km north of North Dakota, USA, has made the city and RM a network hub. It includes an intersection of three major highways, the Canadian Pacific Railway (CPR) and the Soo Line Railroad (SOO) to support the cross-border shipment of grains and petroleum products.

The Estevan region is a major energy hub for Saskatchewan, currently considered the "Energy Capital" of Saskatchewan. Over 20 per cent of the electrical energy produced in Saskatchewan is generated by two coal-fired generating stations located in this region. Two coal mines supply these facilities. A carbon capture and storage (CCS) development at the Boundary Dam Power Plant was constructed by SaskPower in 2014. Other major industries in the area include the petroleum industry and agri-business.

The Estevan energy hub makes this area an attractive prospect for further industrial development that could leverage and diversify existing businesses and economic activity with the addition of potential SMR technology presenting an opportunity to position Estevan as a "Clean Energy Capital".

The transition of the current energy work force to the nuclear industry and opportunities to retrofit existing coal power plants for SMR development were identified as key topics of interest by the Estevan REP Committee. These interests will be carried forward for future consideration.

Future planning initiatives identified by the City of Estevan's 2019 Official Community Plan (OCP) have identified several economic challenges, including uncertainty in the resource sector and reduced energy production at Boundary Dam. These have adversely affected investment and economic development in the area (City of Estevan, 2019).

The city prioritizes ensuring industrial land is available and supports the development of renewable energy infrastructure such as solar energy and biomass. Development in this regional area will need to be mindful of balancing industrial development while preserving significant environmental features (e.g., Pleasantdale Valley and the Souris River Valley). Considering regional climate change adaptation and resilience strategies, and maintaining recreational opportunities for residents through open spaces and parks (City of Estevan, 2019) must also be top of mind.

The Town of Oxbow is deeply rooted in oil extraction and is surrounded by light crude fields due to its rich deposits; as a result one of its main industries is oilfield services. Furthermore, manufacturing, agriculture, retail and financial services are part of Oxbow's economy. The town's growth can be observed through its new infrastructure developments encompassing recreational, social services (new school, medical centre, social and emergency projects) and housing[2]. The town supports sustainable development endeavors that maintain the quality of life associated with small town living. Accordingly, Oxbow is making steps towards supporting growth as the wastewater treatment system, previously causing development bottlenecks, has received provincial and federal funding for environmentally friendly lagoon upgrades, augmenting system capacity.

Attracting and retaining newcommers to the study area can strengthen communities, address labour shortages and improve economic sustainability and growth. The Saskatchewan Urban Municipalities Association (SUMA) have created a Municipal Immigration Network document to assist towns interested in fostering immigration to their community and sharing best practices for attracting, welcoming, retaining and integrating immigrants.

6.1.4 EMPLOYMENT

Employment statistics reflect the economic drivers in this region. As of 2021, (including census data from Coalfields RM, Estevan, Estevan RM, and Roche Percee), employment is dominated (15 per cent) by the natural resource extractive sector (Mining, Quarrying and Gas). This is

[2] https://www.oxbow.ca/

closely followed by the Retail Trade sector (13 per cent), Healthcare and Social Assistance (10 per cent), Construction (9 per cent), and Accommodation and Food Services (7 per cent). In Oxbow, as of 2021, employment similarly was predominant in the natural resource extraction sector (22 per cent), followed by Educational Services (13 per cent), Health Care and Social Assistance (13 per cent) and Construction (8 per cent) (Statistics Canada).

The strong oil and gas sector, agriculture and social services industry trends aid when planning future growth and development for Estevan and Oxbow. Understanding the existing labour workforce and capacity coupled with planning for future development scenarios will be key to identifying the investment needed to create the necessary education pathways and skills training programs to support regional growth.

Input from the Estevan REP Committee highlighted an interest in exploring dual purpose economic development activities that could be established once a reliable source of power is available.

6.2 ELBOW STUDY AREA

6.2.1 REGIONAL VISION

In arriving at a Regional Vision, Committee members came together in groups to discuss concepts around 'what the region is known for', and 'who lives, works and visits the region'. In Elbow, common themes around recreation, agriculture, Indigenous use of lands and resources, opportunity, and environmental stewardship (especially with respect to water) were expressed as important foundational elements.

The selected Regional Vision Statement for Elbow is shown below.

Our region is a top destination in Saskatchewan for recreational activity, with a rich cultural history and legacy of environmental stewardship. Together, we will foster sustainability and economic growth that compliments our existing community, industry, and leads to prosperity for generations.

6.2.2 MUNICIPAL SETTING

The Elbow Study Area is located near the Lake Diefenbaker Reservoir in central Saskatchewan (Figure 6-2) and includes 19 rural municipalities, 18 urban municipalities (see Table 6-2) and the WaterWolf Planning District.

The Town of Outlook is the largest urban centre in the Elbow Study Area, with a population of 2,336. The Town is approximately 110 km south of Saskatoon and is located within the RM of Rudy No. 284. The second largest urban center in the Elbow Study area is the Town of Central Butte (Figure 6-2) with a population of 416, located approximately 97 km northwest of Moose Jaw, SK. Furthermore, the Town of Davidson approximately 60km from Elbow, with a population of 1,044 (Statistics Canada), is utilized by a number of residents from the Elbow Study Area.

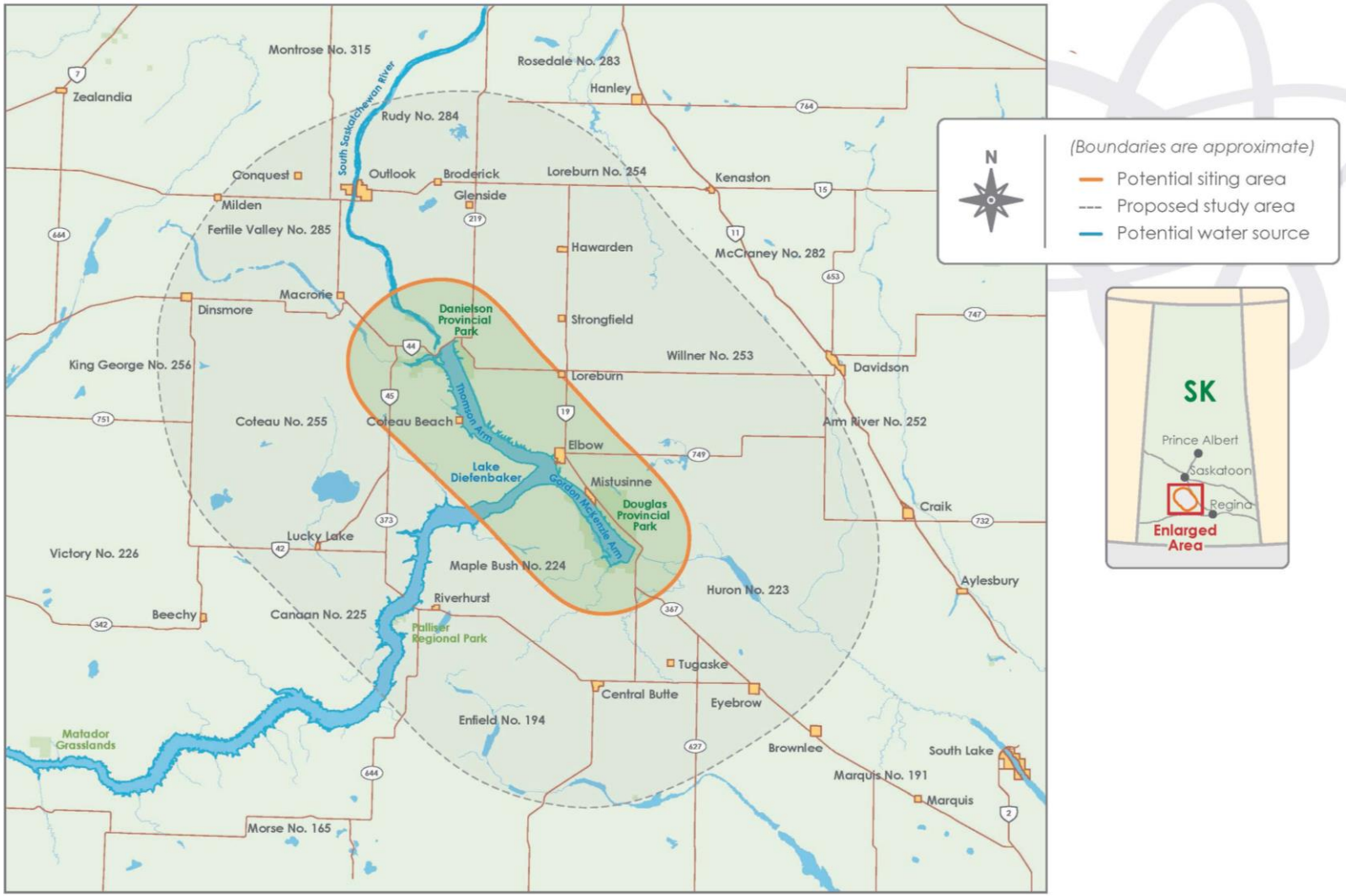


Figure 6-2: Elbow Study Area

Table 6-2: Elbow Study Area Urban and Rural Municipal Setting*

Rural Municipalities – Combined Population ~6,727		
Rosedale No. 283	Willner No. 253	Eyebrow No. 193
Huron No. 223	Rudy No. 284	Enfield No. 194
Canaan No. 225	Milden No. 286	Arm River No. 252
Maple Bush No. 224	McCraney No. 282	Craik No. 222
Loreburn No. 254	Montrose No. 315	Marquis No. 191
Coteau No. 255	King George No. 256	Morse No. 165
Fertile Valley No. 285	Victory No. 226	
Urban Municipalities- Combined Population ~5,382		
Town of Outlook	Village of Dinsmore	Village of Tugaske
Town of Central Butte	Village of Conquest	Village of Eyebrow
Town of Davidson	Village of Macrorie	Village of Riverhurst
Village of Elbow	Village of Broderick	Village of Brownlee
Village of Loreburn	Village of Glenside	Resort Village of Mistusinne
Village of Strongfield	Village of Lucky Lake	Resort Village of Coteau Beach
Village of Hawarden		

*does not include unincorporated hamlets

6.2.3 ECONOMY

The WaterWolf Planning District (WWPD), inclusive of the Town of Outlook and Village of Elbow, developed a Growth Management Plan 2025. Outlook and Elbow have since developed their own official community plan (OCPs) that are consistent with the plan. The general interests in economic growth include promoting a range of different opportunities like tourism, recreation and commercial, agricultural, industrial and institutional developments (WaterWolf Planning District, 2013).

Industrial developments near the area include the Gardiner Dam located 25 km downstream of Elbow and a lagoon facility to treat local sewage and wastewater owned by the village.

Due to Outlook and Elbows' proximity to Lake Diefenbaker and the various provincial and regional parks, tourism is a major economic sector. According to the Lake Diefenbaker Tourism Destination Area Plan (2008), air and water quality are critical aspects supporting tourism. The Saskatchewan Ministry of Parks, Culture, and Sport have expressed their interest in continuing to expand future recreational planning (e.g., water sports, camping sites, tourism, cottage sub-divisions) (Ministry of Parks, Culture and Sport, 2012). Currently, the primary recreational water-based activities in Lake Diefenbaker are:

- Fishing (recreational and sport)
- Boating
- Sailing
- Swimming
- Beach access

- Non-motorized water sports (e.g., canoe, kayak, wind surfing) (Ministry of Parks, Culture and Sport, 2012).

One of the major industries in the Outlook and Elbow study areas is agriculture. The area is well placed for continual agricultural growth having a large agricultural presence surrounding the lake, an availability of large lots of agricultural lands as well as associated agricultural industry. As stated in Outlooks Official Community Plan, stakeholders have identified the desire to ensure protection of prime agricultural land and irrigation resources located adjacent to and in close proximity to the Town. Outlook is home to the largest irrigation project in the province (Lake Diefenbaker Irrigation Project; Figure 6-2) and is often referred to as the "Irrigation Capital of Saskatchewan" (Town of Outlook, 2021). It is part of the South Saskatchewan River Irrigation District (SSRID) No. 1, containing 44,327 irrigated acres that are supplied from Lake Diefenbaker (South Saskatchewan River Irrigation District, 2021) which would grow by 20x the size according to the project's expansion plans, in turn adding an enormous power demand.

The OCP of Elbow outlines they are in consultation with the Ministry of Highways and Infrastructure for a review of traffic, safety and emergency services improvements and future development options as infrastructure is anticipated to be enhanced as part of the Villages' future projects. Historically, industrial developments in or near Outlook have often been irrigation, agriculture-related, recycling or construction businesses. However, in planning for Outlook's future, the town has expressed an interest in expanding their technology sector with regard to irrigation and agriculture, to champion community development through in-town government services, make Outlook a tourism destination, and diversify its economy in a sustainable manner (Town of Outlook, 2021)[3].

Feedback from the Elbow REP Committee during economic development discussions in Workshop 3 identified an interest in exploring waste heat and irrigation projects from the SMR facility to support adjacent agricultural activities.

6.2.4: EMPLOYMENT

In Elbow, as of 2021, employment was predominantly in the Arts, Entertainment and Recreation sectors (23 per cent) followed by Retail Trade (14 per cent), Agriculture (9 per cent), Healthcare and Social Assistance (9 per cent), and Manufacturing (9 per cent) (Statistics Canada). In Outlook, employment was predominantly in the Healthcare and Social Assistance Sectors (15 per cent), followed by Retail Trade (14 per cent), Agriculture (13 per cent) and Construction (11 per cent) (Statistics Canada).

[3] Draft_Strategic_Plan_2022.pdf (townofoutlook.ca)

7. ENVIRONMENT

Over the course of the REP many of the discussions, comments and feedback received related to environmental topics of interest. These are described for each region in the following sections.

7.1. ESTEVAN

Topics discussed ranged from the risk of extreme weather events on development activities, potential effects on water quality and water scarcity, availability for downstream users, and the wildlife and fisheries resources present in the area.

These focus areas are reflected in the City of Estevan's Official Community Plan (OCP), which identifies natural features within the city that are environmentally sensitive, including:

- The Souris River floodplain
- An unnamed watercourse that flows through Pleasantdale Valley and into the Souris River
- Significant slope areas along the Souris River Valley, Pleasantdale Valley, the ravine south of Highway 39 and west of Alice Road
- Six abandoned coal mines (City of Estevan, 2019)

Commercial development in the above listed areas is limited; policies regarding floodplains, slope management, contamination, and abandonment are established to protect environmentally sensitive areas. The City's OCP highlights residents' perception and high-value placed on parks, recreation and protection of the environment for enjoyment and quality of life when planning long-term growth. The City also notes key environmental hazards including wildfires, extreme heat and cold, droughts and flooding which is a key risk within the Souris River Basin as a result of climate change (Saskatchewan Research Council, 2016) (International Institute for Sustainable Development., 2016).

Two provincial parks are located within or near the Study Area. Moose Mountain, a Natural Environment Park is intended for use as an outdoor recreational area, consistent with the protection of natural landscapes. Cannington Manor is a historic park, designated to preserve prehistoric and historic resources.

There are also four regional parks:

- Woodlawn Regional Park – Boundary Dam
- Nickle Lake Regional Park
- Mainprize Regional Park
- Moose Creek Regional Park

Prairie National Wildlife Area (Unit Number 27) is also a Protected Area within the Estevan Study Area at Corning, Saskatchewan.

SaskPower will consider this regional context and use this input when selecting valued components (VCs) for analysis in our upcoming federal and provincial impact assessment process. Preliminary VCs we have identified as a result of the Estevan REP Committee comments are summarized in Table 7-1.

Table 7-1: Valued Components Identified by the Estevan REP Committee*

Assessment Factor	Valued Component	Valued Sub-Component
Atmospheric Environment	Air quality	N/A
	Climate change	Greenhouse Gas (GHG) Emissions
		Extreme Events
Water Resources	Lakes, Rivers, Waterbodies and Waterways	Surface Water Quality
		Surface Water Quantity
	Groundwater	N/A
	Wetlands	Landscape Connectivity
		Wetland Function
		Extreme Events
Aquatic Resources	Fish And Fish Habitat	Tourism/Recreation Fish Species - Largemouth bass - Yellow perch - Walleye - Northern pike
Terrestrial Environment	Terrain	Landform
	Soil	Productivity (Agricultural)
	Biodiversity	Conservation
		Ecosystems (Including Aquatic)
	Vegetation	- Bluebells - Buffalograss - Sweet pea - Tiger lily - Asparagus
	Grassland Habitat	N/A
	Wildlife Lands	N/A
	Critical Wildlife Habitat	N/A
	Species At Risk	- Whooping Crane - Burrowing Owl - Plains Bison - Buffalograss

Assessment Factor	Valued Component	Valued Sub-Component
		- Bees (Yellow-banded Bumble Bee; Western Bumble Bee; Suckley's Cuckoo Bumble Bee) - Monarch Butterfly - Frogs (TBD) - Plants (TBD) - Aquatic Plants (TBD)
	Animals	- Plains Bison
	Birds	Species at Risk - Burrowing Owl - Whooping Crane - Yellow Rail
		Migratory Birds - Yellow rail - hummingbirds
		Birds - Pheasants
		Waterfowl - ruddy duck - Mallard duck - American White Pelican - Canada geese - ducks
Social Environment	Infrastructure & Services	Emergency Services (e.g., Hospital, EMS, Fire, Police)
		Demographics
		Housing
	Community Well-Being	Community Services
		Community Cohesion
		Nature and Scenery
	Culture And Heritage	N/A
	Energy Security	Cost of Electricity
Land and Resource Use	Agriculture	N/A
		PFRA/Patron Operated Pastures
	Reclaimed Mines	N/A
	Land Management	N/A
	Mitigation Lands/Habitat Trust Lands/Conservation Easements	N/A

Assessment Factor	Valued Component	Valued Sub-Component
	Parks and Protected Areas	Regional Parks; Ecological Conservation Areas; Ecological Reserves
	Tourism	Fishing and Hunting
		Cottagers
	Hydro-electric Power (Dam Reservoir)	N/A
	Traffic and Transportation	N/A
	Recreation	Recreational Opportunities (Camping, Hiking, Hunting, Fishing, Swimming, Boating/Kayaking, Photography, Beaches, Quadding/ATVs)
Economic Environment	Property Values	Vacation/Lakefront Properties
	Workforce	Local Jobs
		Education
		Training
	Economic Development Opportunities	Community Infrastructure and Services
		Supply Chain
		Direct Investment
		Indirect Investment/Spin-Off Opportunities
Indigenous Peoples and Organizations	Environment	N/A
	Cultural Heritage	Cultural Sites
		Culturally Sensitive Landscapes
	Workforce	Local Jobs
		Education
Human Health	Safety	Communities
		Workers
Accidents and Malfunctions	Nuclear Incidents	Spills / Explosions

*Note – this list reflects engagement feedback through the REP only and will be considered when selecting the VCs for the project.

7.2. ELBOW

Lake Diefenbaker Reservoir (Lake Diefenbaker) is part of the South Saskatchewan River system and is the largest waterbody in southern Saskatchewan. It is a critical water resource that provides water services (e.g., drinking water, irrigation, industrial use) and holds recreational and aesthetic value. Accordingly, Elbow is considered seasonal community with focal emphasis on lake recreational activities.

According to the Village of Elbow's OCP Land Use Concept Map (2008), future residential development in Elbow has been zoned near the lakefront and future commercial and industrial development has been zoned to maximize the separation from residential areas and environmentally sensitive areas (e.g., Lake Diefenbaker shoreline) (Village of Elbow, 2008).

Within or near the study area there are two provincial parks, Danielson Provincial Park and Douglas Provincial Park. There are also six regional parks:

- Outlook and District Regional Park
- Palliser Regional Park
- Prairie Lake Regional Park
- Herbert Ferry Regional Park
- Cabri Regional Park

A multi-use recreational facility has been constructed in the Village of Elbow to accommodate the growing population. Residents place a high value on recreational activities at Lake Diefenbaker, Douglas Provincial Park and Elbow Harbour Provincial Recreation Site.

SaskPower will consider this regional context and use this input when selecting VCs for analysis in our upcoming federal and provincial impact assessment process. Preliminary VCs we have identified as a result of the comments from the Elbow REP Committee are summarized in Table 7-2.

Table 7-2: Valued Components Identified by the Elbow REP Committee*

Assessment Subject	Valued Component	Valued Sub-Component
Atmospheric Environment	Air Quality	Emissions (NO_2, SO_2, $PM_{2.5}$)
	Climate Change	Precipitation
		GHG Emissions
Water Resources	Groundwater	N/A
	Lakes, Rivers, Waterbodies and Waterways	Surface Water Quantity/Flow
		Surface Water Quality
	Wetlands	N/A
Aquatic Resources	Benthic Invertebrates	
	Periphyton	N/A
	Fish And Fish Habitat	- Walleye - Lake Sturgeon - Trout - Rainbow Trout - Yellow Perch - Northern Pike

Assessment Subject	Valued Component	Valued Sub-Component
		- Sunfish - Lake trout - Temperature sensitive insects
	Invasive Species	Zebra Mussels
Terrestrial Environment	Biodiversity	N/A
	Soil	Stability
	Wildlife	Frogs
		Birds (Piping Plover, Cliff Swallow)
		Mammals (Moose)
	Wildlife Habitat	N/A
	Upland Habitat	N/A
	Species At Risk	Northern Leopard Frog Piping Plover
	Insects	Temperature sensitive insects
	Critical Wildlife Habitat	N/A
	Grassland Habitat	N/A
	Vegetation	Crops
	Native Plants	N/A
	Species At Risk	Vegetation
Social Environment	Community Well-being	Community Cohesion
		Rural Lifestyle
	Infrastructure And Services	Demographics
		Housing
		Community Services
	Cultural Heritage	Sites / Sacred Places (Buffalo Hunt Area)
	Harvesting	Plants, Berries, Natural Resources for Food and Medicinal Purposes
	Cultural Heritage	Customs/Spiritual Practices
Land and Resource Use	Hydro-Electric Power	N/A
	Aquaculture	N/A
	Tourism	Cottagers and Lake-Side Resorts
	Parks And Protected Areas	N/A
	Agriculture	Livestock Operations/Ranching
		Irrigation
		Hay Processing
	Traffic and Transportation	N/A
	Mining	Potash

Assessment Subject	Valued Component	Valued Sub-Component
	Commercial Hunting	N/A
	Real Estate Development	Residential
	Recreation	Recreation (Fishing, Hunting, Boating, Canoeing, Sport Fishing, Swimming, Hiking (TransCanada Trail), Hockey, Curling, Theater Group)
Economic Environment	Property Values	Irrigated Land
	Seasonal Migrant Workers	N/A
	Economic Development Opportunities	Community Infrastructure and Services
		Direct Investment
		Indirect Investment/Spin-Off Opportunities
		Supply Chain
	Workforce	Local Jobs
		Education
		Training
Indigenous Peoples and Organizations	Social Environment	N/A
	Economic Benefits	N/A
	Métis	Traditional Land Use
	Land and Property Rights	Indian Reserves
	Cultural Heritage	Customs/Spiritual Practices
	Métis	Hunting, Fishing, Gathering Rights
	Treaty Rights	N/A
	Cultural Heritage	Sites/Sacred Places
Human Health	Safety	Workers
	Health and Wellness	Well-Being
		Diseases
		Radiation Risk
		Drinking Water
Accidents And Malfunctions	Nuclear Incidents	Malfunctions
		Explosions
		Transportation

*Note – this list reflects engagement feedback through the REP only and will be considered when selecting the VCs for the project.

8. PUBLIC PARTICIPATION ACTIVITIES

In addition to the REP, SaskPower created several other engagement opportunities to share information with the public and gather input to inform the siting information. Our early engagement highlighted that different platforms were preferred for engaging and enabling community members to share with SaskPower. Since announcing that the Estevan and Elbow areas would be considered to potentially host a small modular reactor, SaskPower launched an online engagement hub saskpower.com/engage, participated in in-person events, and hosted many events including:

- Virtual project briefings
- Municipal Information sessions
- A virtual open house
- Online learning events
- And participated in In-Person community events.

What we heard through public engagement is shared on saskpower.com/nuclear.

Nuclear is one supply option SaskPower is evaluating to continue to provide sustainable, reliable and cost-effective power beyond 2030. To advance the Future Supply Plan, SaskPower is hosting a variety of engagement activities in parallel to the SMR project specific events. Learn more about the Future Supply Plan – 2030 and Beyond (saskpower.com).

Members of the REP were continually updated with Public Participation activities and events that were available and coming up. Committee members were provided with posters to share with their organizations, membership, and communities.

One of the principles of the Committee members, identified and agreed to by the Committee to uphold is to ***be transparent and share information learned in the REP***.

When polled in Workshop 3 and 4, 100% of the committee members confirmed that they have or plan to share what they learned in the REP Workshop with others.

SaskPower will continue to provide engagement opportunities and activities as the project continues. Under both provincial and federal processes meaningful opportunities for Indigenous engagement and public participation are required and will be initiated to ensure traditional knowledge and community inputs guide the IA planning process and decision-

making. Indigenous groups, organizations and stakeholders' inputs help to ensure IA documents focus on the issues of most importance to local communities and Indigenous groups.

In addition to SaskPower's engagement plans the upcoming federal and provincial impact assessment process will provide multiple additional opportunities for further participation and engagement throughout the entire process and through formal public consultation periods and hearings on key documents.

9. MOVING FORWARD

Based on the presentation of information, discussion on the topics of interest and collaborative engagement activities undertaken during the REP, the majority of input received related to environmental and social factors or components that each community expressed concern or interest in. Many of these themes centre on positioning the regions to maximize economic benefits, while preserving their respective regional identity. These key themes included:

- Consideration for spin-off, induced dual purpose and co-benefit across industries to maximize return on investment and support industries that can take advantage of reliable power which are not yet established. Examples could include use of waste heat, irrigation water, clean energy transition, training center, innovation hub, infrastructure investment (roads, rail, power etc.).
- Proactive, collaborative planning for ancillary facilities such as domestic water supply and road construction/upgrades.
- Maximizing uranium supply chain opportunities within Saskatchewan.
- Exploration of opportunities for agri-business, improved food security and the innovative use of nuclear technology in the agriculture sector.
- Development of programs to re-skill workers (e.g., from coal to nuclear), including identifying training and certification requirements to work in the nuclear industry.
- Positioning of students in high school, university or college for future job opportunities, including international educational opportunities and exchange programs.
- Support for existing business and enterprise that could support the nuclear sector (e.g., manufacturing, concrete etc.).

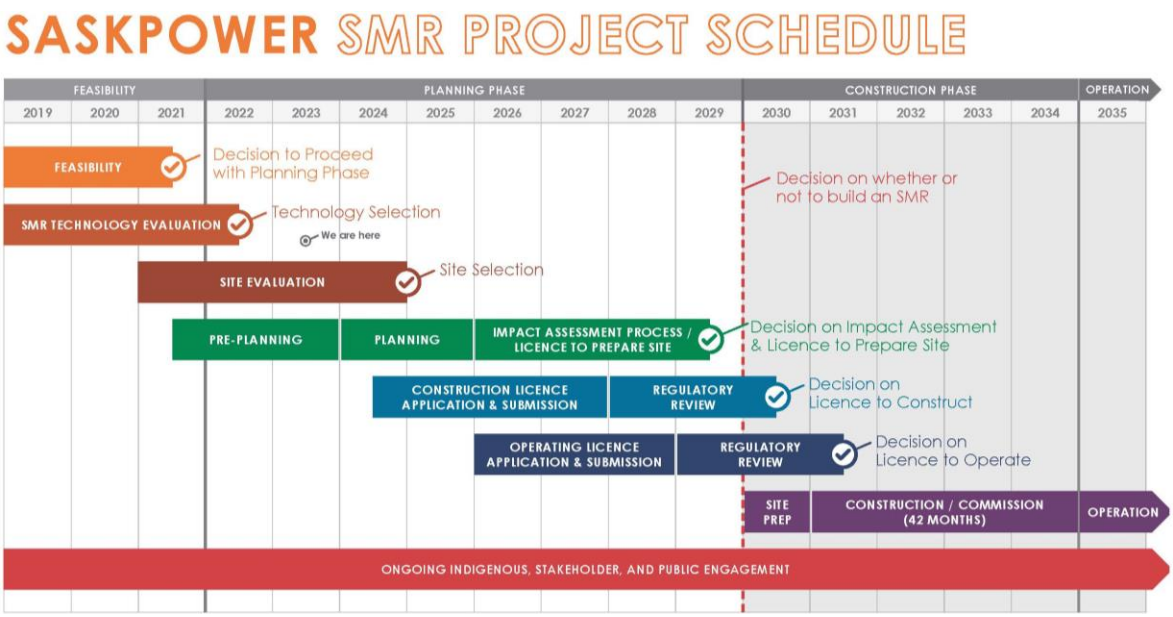


Figure 9-1: The proposed project development schedule as of the date of this report

As SaskPower moves forward through the decision to select a site (see figure 10-1), the themes identified through the REP workshops and information found within this report will be carried forward to inform future engagement and consultation activities and to develop impact assessment initiatives. In addition, this information will be used as a foundation to help ensure that the design and construction/operation of a potential major energy project takes into consideration the values and objectives of local stakeholders. During Workshop 4 REP Committee members were asked to sign up for newsletters to continue to receive information and remain informed of project updates. Anyone can sign up to stay informed about the project at NUCLEAR POWER FROM SMRS (SASKPOWER.COM).

10. GLOSSARY OF TERMS

Term	Definition
Aboriginal rights (engaged in Consultation)	Aboriginal rights encompass the customs, practices and traditions that were an integral part of the distinctive cultures of Indigenous peoples and communities. Métis peoples also possess Aboriginal rights. These rights are determined by examining the customs, practices and traditions that were an integral part of the distinctive culture of Métis communities at the date when a European or Canadian government asserted effective control over the area and which continue to have this significance in the culture today. Métis Aboriginal rights to hunt, fish and trap for food exist in some parts of the Province, such as in Northern Saskatchewan.
Duty to Consult	The provincial and federal Crown has a duty to consult, and where appropriate, accommodate Aboriginal peoples when it considers conduct that might adversely impact potential or established Aboriginal or treaty rights.
GoldSET Decision-Support Tool	Software that allows multiple spatial indicators to be overlaid within regional maps to analyze a region. A suite of Geographical Information System (GIS) and web-based tools that integrates a rigorous, multi-criteria analysis approach, geospatial information management and the ability to evaluate project performance (e.g., SMR siting) based on key sustainability considerations (e.g., environmental, social and cultural, and technical).
Greenhouse gases (GHG)	Gases that have the property of absorbing infrared radiation emitted from the earth. This includes emissions resulting from the combustion of hydrocarbons, such as coal, natural gas and oil. GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride and nitrogen trifluoride which are frequently reported as carbon dioxide equivalents (CO_2e).

Term	Definition
Indicator workbook	A collection of the spatial indicators and their associated influence on the siting areas. Indicator workbooks were presented for comment by the REP Committees and used to inform the siting analysis/suitability mapping.
Indigenous Rightsholders	Holders of established or credibly claimed Aboriginal Rights and Treaty Rights.
Nuclear fission	The splitting of atoms into two or more parts to release energy. The heat from nuclear fission is used to turn water into steam. The steam is then used to spin a turbine and generator to produce electricity.
Regional Evaluation Process	A community participation activity that uses a committee format to share project information and invites regional stakeholders to provide input to the siting phase of the development planning process by identifying information and interests to be considered.
Reactor core	The central portion of a nuclear reactor, where fission takes place.
Siting Criteria	Defines whether a spatial indicator will be used as an exclusion (i.e., no-go) area where SMR development is prevented, or if it will be viewed as having some level of suitability (or constraint) for SMR development.
Siting Process	The process of recommending a site for development. Ensures robust analysis for potential impacts through field, desktop data and other investigations. Sites recommended through the Siting Process must meet the design and licensing requirements for the project.
Spatial Indicator	Spatial indicators represent how siting criteria are represented on a map and used by the GoldSET© decision-support tool.

Term	Definition
Small Modular Reactor (SMR)	A new class of nuclear reactors that are considerably smaller in size and power output than conventional nuclear power reactors, with enhanced safety features. They are scalable and use nuclear fission to produce heat for electricity.
Treaty Rights (engaged in Consultation)	The Treaty right that is most often engaged in connection with the duty to consult is the Treaty right to hunt, fish and trap for food. These rights may be exercised on unoccupied Crown lands and other lands to which First Nations have a right of access for hunting, fishing and trapping throughout the Province. The duty to consult requires consultations with those First Nations whose traditional territories are potentially impacted by a proposed decision.
Uranium	Uranium is a dense, hard metallic element that is silvery white in colour and slightly radioactive. It is used as a fuel in nuclear reactors. Canada is the second largest producer of uranium globally, with northern Saskatchewan having the largest high-grade uranium deposits in the world.
Used nuclear fuel	The nuclear fuel that is removed from nuclear reactors after it has produced energy and has lost sufficient potency to sustain a high rate of fission.
Valued Component	From a federal perspective valued components are environmental, health, social, economic or additional elements or conditions of the natural and human environment that may be impacted by a proposed project and are of concern or value to the public, Indigenous peoples, federal authorities and interested parties. Valued components may be identified as having scientific, biological, social, health, cultural, traditional, economic, historical, archaeological and/or aesthetic importance From the Province of Saskatchewan's perspective valued components are environmental attributes identified as having legal, scientific, cultural, economic, or aesthetic value.

11. ACRONYMS

CCS	Carbon capture and storage
CNSC	Canadian Nuclear Safety Commission
CPCAD	The Canadian Protected and Conserved Areas Database
CPR	Canadian Pacific Railway
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
GHG	Greenhouse Gases
ISC	Information Services Corporation
MW	Megawatt
NRCAN	Natural Resources Canada
OCP	Official Community Plan
REP	Regional Evaluation Process
RM	Rural Municipality
SKCDC	Saskatchewan Conservation Data Centre
SMR	Small Modular Reactor
SOO	Soo Line Railroad
SPSA	Saskatchewan Public Safety Agency
SSRID	South Saskatchewan River Irrigation District
USWA	Upper Souris Watershed Association
WSA	Water Security Agency

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