

July 11, 2024

Natural Resources Conservation Board
Sterling Place, 9940 106 St 4th floor
Edmonton, AB T5K 2N2

Laura Friend
Manager, Board Reviews

Dear Ms. Friend:

The St. Mary River Irrigation District (SMRID) is please to submit an application for review under the *Natural Resources Conservation Board Act* (R.S.A. 2000, c. N-3). The SMRID seeks the Board's decision whether the project is in the best interest of Albertans. Please find below the information requested by the Board for this application.

Proposed Project

Chin Reservoir is an off-stream storage reservoir that is located roughly in the middle of the St. Mary River Irrigation District (SMRID) system approximately 10km Southeast of the Town of Coaldale. The location of Chin Reservoir is the largest off-stream reservoir within the SMRID and has a current storage volume of 217, 679 dam³ (176,475ac-ft) and live volume of 190,350 dam³ (154,320 ac-ft) at an operating Full Supply Level (FSL) of 861.36 m. Chin Reservoir is currently impounded by two dams, Chin West Dam and the existing Chin East Dam. The dams were completed in 1955 and no major modifications have been completed since construction. Water enters Chin Reservoir from the main canal through the Chin Hydro Plant and/or Chin Chute. The only outlet on the reservoir is the irrigation outlet structure on West Dam which discharges into Stafford Reservoir. SMRID is proposing to expand the reservoir by moving the Existing East Dam approximately 10 km downstream and raise the design FSL to 864.00. With the dam relocation and the rise in FSL, the total estimated storage will increase to 257,820 ac-ft and add 1000 acres to the reservoir's footprint.

The construction of the project will occur in three phases: construction of the New East Dam, reservoir filling, and then decommissioning of the Existing East Dam (the Project). Following the decommissioning of the Existing East Dam, the water level will be raised to a new FSL of 864.0 m. It should be noted that the New East Dam will include a structure for flood management. Also key to the Project, the expansion area is located on privately owned land.

Given the potential for the enhancement of regional drought resiliency and flood mitigation, the SMRID believes the Project is in the public interest and seeks Project Approval under the *Environmental Protection and Enhancement Act* (EPEA) (R.S.A. 2000, c. E-12) and the *Natural Resources Conservation Board Act* (R.S.A. 2000, c. N-3).

Project Proponent

The St. Mary River Irrigation District (SMRID) is the proponent of the expansion of Chin Reservoir (the Project). Head office is located:

St. Mary River Irrigation District (SMRID)
525 40th St. S
Lethbridge, Alberta T1J 4M1

Project Rationale for Approval

Key benefits of additional storage to southern Alberta irrigation include:

- Increased storage of water during high river flows would assist with water supply when river flows are low. The additional stored water will enable water managers to more effectively and efficiently allocate water throughout the irrigation season, benefiting both irrigators and other users.
- Storing additional water during prolonged periods of low water supply may decrease the need for an irrigation district to prioritize its license or mandate water rationing among district irrigators.
- Currently, a significant number of irrigated acres across multiple districts lack support from a storage reservoir. This lack of storage means that water security for these acres is compromised during periods of low supply. Expanded storage would support for these acres, and enhance water security for producers, industry, and municipalities.
- The increased storage capacity will make the SSRB more resilient to drought and flood events. Such events incur costs for residents, businesses, and governments at all levels. Additional storage may lessen the risk of these events and subsequently lower response and recovery costs.

In 2020, a historic modernization plan was announced by the GoC, the Province of Alberta, along with 10 of the irrigation districts. A financial investment of \$933 million from all three levels has been provided towards infrastructure rehabilitation projects and the construction or enlargement of up to four off-stream irrigation storage reservoirs.

The rehabilitation projects, managed by the irrigation districts, aim to increase water conveyance efficiency and enable more acres to be irrigated with the same water allocation.

Modernizing and building new irrigation infrastructure is intended to:

- increase irrigated acreage;
- increase primary crop production;
- improve water use efficiency;
- increase water storage capacity;
- enhance water security;
- provide flood protection; and
- support long-term value-added processing activity.

The expansion of the Chin Reservoir is one of the strategies proposed by the SMRID to contribute towards a regional increase in storage capacity. The intent of the SMRID Chin Expansion (in

addition to other strategies) is to boost the level of resilience of the agricultural sector, municipal water supply, and the environment against the effects of climate change and extreme drought events. Based on the above, the SMRID believes an approval for the expansion is justified.

Environmental Impact Assessment

On **July 12, 2024**, an EIA containing a description and evaluation of the social, economic and environmental effects was submitted to Alberta Environment and Protected Areas, along with the Natural Resources Conservation Board.

SMRID Representing Agent

ATTN: Dustin Bailey
Klohn Crippen Berger
109, 4208-97 St NW
Edmonton Alberta T6E 5Z9

Regulatory Framework

In addition to abiding by the *Environmental Protection and Enhancement Act* (EPEA) (R.S.A. 2000, c. E-12) and the *Natural Resources Conservation Board Act* (R.S.A. 2000, c. N-3), the SMRID is aware of the regulatory framework of Alberta and Canada.

Alberta Regulatory Framework:

- *Water Act*: Regulates the allocation, protection, and conservation of water and applies to the proposed construction, operation, and maintenance of the reservoirs, dam facilities, canals, alteration of wetland habitat, and any loss or alteration of fish habitat (R.S.A 2000, c. W-3). The *Act* regulates activities conducted in water bodies, as defined by the *Act*, that may: alter flow, level, or location of water; cause erosion of the bed and banks or mobilization and transport of sediment; or cause an effect on water quality of the aquatic environment. A key purpose of the *Act* is to ensure the management and conservation of water resources to ensure a healthy environment. Adverse effects on the aquatic environment associated with work within reservoirs that form a component of an irrigation system has historically not been considered subject to review or approval under the *Water Act*. However, review requirements related to dam safety considerations would apply and are discussed separately.
- *Public Lands Act (PLA)*: Prohibits the disturbance of the bed and shore of water bodies and other public lands administered by the Minister of Alberta Environment and Protected Areas (AEPA) (R.S.A. 2000, P-40). Components of the Project will require a formal application and written authorization from the Minister prior to construction.
- *Wildlife Act*: Prohibits the disturbance of wildlife and wildlife habitat as administered by the Fish and Wildlife Branch of AEPA (R.S.A. 2000, c. W-10).
- *Soil Conservation Act*: Imposes a duty to take appropriate measures to prevent soil loss or deterioration from taking place (R.S.A. 2000, c. S-15).
- *Weed Control Act*: Specifies measures to prevent the spread of invasive and noxious weed seeds and propagules (S.A. 2008, c. W-5.1).

- *Historical Resources Act (HRA)*: Enacted to preserve, protect, and present historical and archaeological resources of provincial, national, and international significance (R.S.A. 2000, c. H-9). A component of the EIA for the Project will be a Historical Resources Impact Assessment (HRIA) as required by Alberta Arts, Culture and Status of Women (Alberta Culture).
- *Alberta Land Stewardship Act (ALSA)*: Authorizes the provincial Cabinet to establish planning regions and adopt a statutory plan for each region. The South Saskatchewan River Regional Plan was a result of the *ALSA* (S.A. 2009, c. A-26.8).

Federal Regulatory Framework:

- *Species at Risk Act (SARA)*: States that it is prohibited to kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species (S.C. 2002, c. 29). In addition, no person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.
- *Migratory Birds Convention Act (MBCA)*: States that it is prohibited to disturb, destroy or take a nest, egg or nest shelter of a migratory bird or deposit or permit to be deposited oil, oil wastes or any other substances harmful to migratory birds in any waters or any area frequented by migratory birds (S.C. 1994, c. 22).
- *Canadian Environmental Protection Act, 1999 (CEPA)*: An Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development (S.C. 1999, c. 33). Although the *Fisheries Act* is administered by Fisheries and Oceans Canada, CEPA covers the sections of the Act that deal with water pollution.
- *Canadian Navigable Waters Act* (R.S.C. 1985, c. N-22) regulates activities that may cause the restriction of the public right to navigation on Scheduled Waters.

The SMRID awaits your response to move the Project forward. If you require additional information, please contact the undersigned.

Yours truly,

St. Mary River Irrigation District



David Westwood, CPA
 General Manager
 St. Mary River Irrigation District