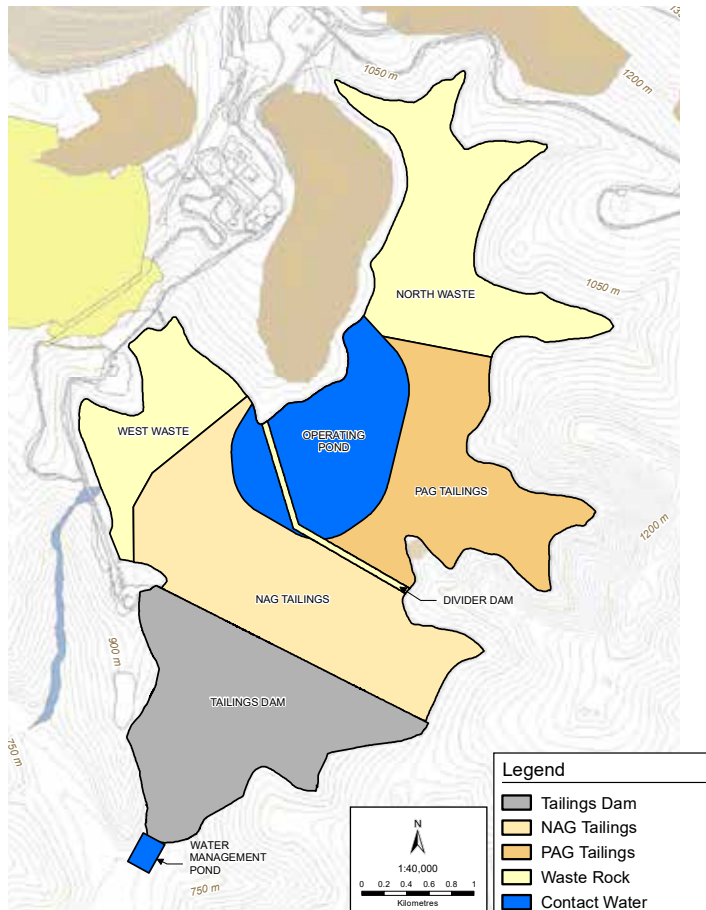


What is a Tailings Management Facility?

A Tailings Management Facility (TMF) is a structure that ensures the safe storage of mining by-products, so that nothing harmful that is produced through the mining process escapes into the surrounding environment. Each TMF is unique. The best type of TMF is the one that is designed for the environmental and physical characteristics of the mine site.

The Casino TMF has a surface area of about 1100 Ha (11 km²). It will store about 800 million tonnes of tailings and 600 million tonnes of waste rock and surface material that can't be saved and used during reclamation. A lot of work has gone into designing a TMF that is best suited for the Yukon and a changing climate (see "Making Casino's TMF Safer").

TMF Layout



Mining By-products

Mining for metals like those at Casino creates waste and by-products. These by-products are stored on-site at the mine, and mainly include tailings, waste rock, and overburden materials.

- **Tailings:** Tailings are a combination of mined materials, chemicals used in processing, and water. Two types of tailings include:
 - **Non-Acid Generating (NAG):** Tailings which will not produce acid over time. About 80% of Casino's tailings are predicted to be NAG. About half of this NAG material will be used to build the tailings dam. The other half of NAG tailings will be stored in the TMF.
 - **Potentially-Acid Generating (PAG):** Tailings which may produce acid over time. About 20% of tailings at Casino are predicted to be PAG. PAG will be stored in its own specific spot in the TMF behind extra barriers.
- **Waste Rock:** Rock which is removed from the open pit but does not contain the minerals that we are mining for.
- **Overburden Materials:** Rock or soil that lies above the mineral deposit and does not contain minerals of interest. As much overburden as possible will be saved for site reclamation.

Key Parts of Casino's TMF

Waste Rock

The waste rock areas provide dry and stable surfaces that help contain tailings. There are two waste rock areas: the North Waste and the West Waste.

Tailings Cells

NAG and PAG tailings are contained in two separate areas that are called tailings cells.

Divider Dam

A physical barrier, made of waste rock, that separates PAG and NAG tailings into two different tailings cells. The divider dam is a key part of designing a safer TMF. By placing the PAG tailings cell behind the NAG tailings cell, the divider dam acts as a second physical barrier to keep the PAG tailings safely stored.

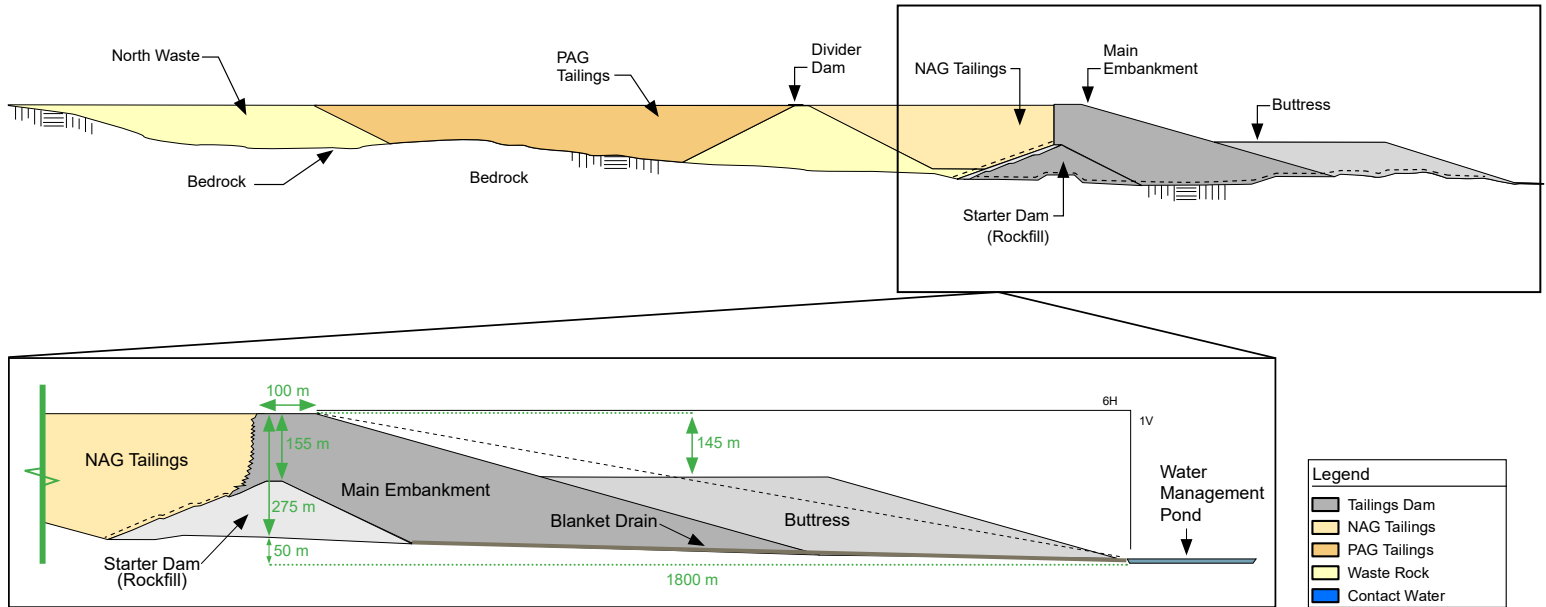
Tailings Dam

The tailings dam is a physical barrier that holds NAG and PAG tailings in place. Sand made from NAG tailings will be used to build the dam. The dam has an overall slope of 6:1. This includes the main embankment and the buttress. This means the slope of the dam is shallower, longer, and safer than previously designed.

Water Management Pond

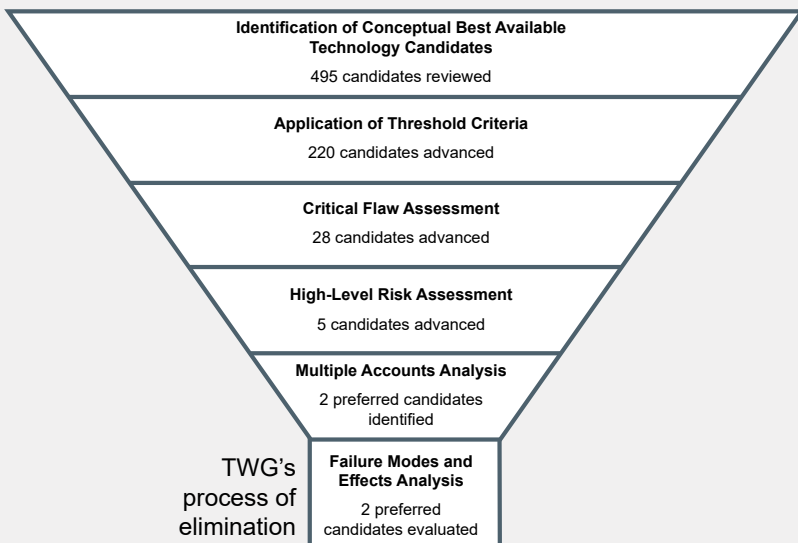
The water management pond collects water that drains from the TMF. Located downstream of the TMF, the water management pond receives water from drainage systems within the tailings dam, as well as from surface runoff. A pump station and piping will return water back to the TMF.

TMF Cross Section



Making Casino's TMF Safer

The TMF has been carefully designed and engineered over several years. In 2015, a Tailings Working Group (TWG) was formed to identify the best available tailings technology. First Nations, federal and territorial governments, as well as industry representatives were included in the group. The TWG began by creating a long list of options for storing tailings and waste at the Casino site. They started with 495 in total and through the process of elimination, ended with two design options.



In addition to the TWG collaborating on a safe and environmentally friendly design, Casino has:

- retained the advice of an Independent Engineering Review Panel who independently review the tailings design and provide advice and guidance on how to make it safer;
- used the Dam Safety Guidelines of the Canadian Dam Association to guide selection of key design criteria, such as designing for scenarios like floods and earthquakes;
- adherence to the Global Industry Standard on Tailings Management. These are international standards that establish the safer management of tailings. The goal is zero harm to people and the environment;
- joined the Mining Association of Canada and participates in the Towards Sustainable Mining initiative, which provides industry standards on a variety of topics, including the Tailings Management Protocol.