

IRP OUTCOMES

EPCOR Water Services Inc. (EWSI) utilizes a continuous approach to long range planning called Integrated Resource Planning (IRP). In addition to the traditional factors of forecasted demand and treatment capacity, external factors such as changing regulatory requirements, climate change, corporate goals, community values, and new technologies are also examined.

To guide the development of the IRP for Gold Bar WWTP, EPCOR has developed five Shared Outcome Statements. These statements reflect stakeholder values as identified through engagement with a Community Planning Committee, EPCOR's values including its Health, Safety and Environment Policy, and the expectations or requirements of regulators and ratepayers. The achievement of the following five Shared Outcomes is the objective of the IRP:

Quality of Life

The Gold Bar WWTP is updated, maintained and operated in a way that reduces impacts to stakeholders and improves quality of life, including odour, noise and enjoyment of parks and recreation today and into the future.

Safety

Community, public and worker safety and health are protected.

Relationship

An honest, transparent, trusting and respectful long-term relationship is developed between EPCOR and Gold Bar WWTP stakeholders.

Environment

Pollution is prevented. The impact of the Gold Bar WWTP on air, land, water, climate and ecosystems is reduced.

Reliable, Responsible and Sustainable

The Gold Bar WWTP is designed, maintained and operated in a prudent and responsible manner.



PRIORITY ACTIONS IDENTIFIED THROUGH PUBLIC ENGAGEMENT

Through engagement with a Community Planning Committee, and taking into account public input from engagement processes in 2017 and 2018, EPCOR has also identified a series of Priority Actions to be achieved in the near-term (either within the next year, or during the next five-year PBR period). The priority actions implemented through this IRP, or earlier, are:

Quality of Life

- Share quality of life measures online.
- Prioritize mitigating quality of life impacts (including temporary work beyond the fenceline that could result in tree removal and impacts to path and trail access, noise, visual, wildlife, flares, traffic or odour) in the design, construction and operations of Gold Bar.
- Enhance the collection of customer odour reports and other impacts from community. Follow up, investigate the issue, and close the issue with the community member.
- Educate the community on odour types and conditions to help improve the odour reporting EPCOR receives.
- Continue to work with the City recreation team and heavy user recreational groups (e.g. Nordic Ski Club) to schedule operational activities like maintenance and construction to complement scheduled recreational events in the area where possible.

Safety

- Ensure treatment processes and work at the site meet or exceed applicable industry safety standards and regulations.
- Continue to educate the community on public safety at the site and for the surrounding area associated with projects or ongoing operations. Including alarms, safe exposure & aesthetic targets.
- Ensure staff and traffic (vehicles and equipment) can manoeuvre safely onsite, and through the community.
- Improve public safety on Gold Bar Park Road.
- Limit health risks for employees in direct contact with wastewater who move between wastewater and non-processing wastewater areas at the plant.

Relationship

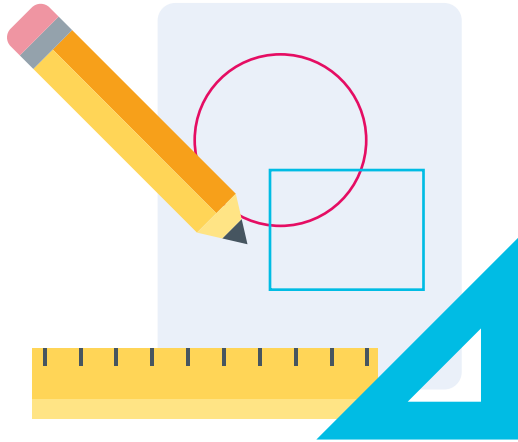
- EPCOR and Gold Bar WWTP stakeholders will develop an Engagement Framework that defines expectations for communication, consultation, and ongoing operations.
- The design, construction, and operations of Gold Bar will follow the communication and engagement process that has been collaboratively developed with the community.
- Communications are open, honest and timely (in all directions).
- Transparent decision making is supported by sharing criteria and options evaluation for significant projects.
- Define the function of utility and the revenue model.

Environment

- Meet or exceed all applicable regulatory requirements and industry standards.
- Minimize the environmental impact of treatment processes on the air, land and water.
- Adopt new technologies to minimize Gold Bar's physical and environmental footprint.
- Improve sustainability and enhance recovery of renewable resources.
- Make improvements per regulatory requirements to treat emerging contaminants of concern (longer term).
- Reduce direct and indirect greenhouse gas emissions from Gold Bar WWTP's operations.
- Explore public education opportunities related to environment including the plant's role.

Reliable, Responsible and Sustainable

- Gold Bar WWTP will meet or exceed regulated performance requirements, now and in the future.
- Gold Bar WWTP will be maintained in good working order, and demonstrate sustainable (from economic, environmental and social perspectives) and reliable operation.
- Capital and operating costs will be prudent, giving consideration to the impact on ratepayers.
- Gold Bar WWTP will be designed, maintained and operated in a way that mitigates its impact on the community, park and river valley.
- Open up Gold Bar WWTP to the public and share issues, considerations associated with maintenance & operations.



DESIGN PRINCIPLES

For the 2017 – 2021 period, City Council approved \$235 million in funding for capital projects at the Gold Bar WWTP. At present, about \$50 million in capital projects are undertaken each year for maintenance and rehabilitation. The IRP aligns current and future work to support the achievement of the five Outcomes.

The IRP and its projects are implemented by many teams working over multiple decades. In planning for the future, and in implementing individual projects, EPCOR has identified twenty Design Principles that will guide the ongoing work of staff and contractors. These Design Principles define how EPCOR will achieve the goals and priority actions described in the five Outcome Statements, and provide a framework to guide the evolution of the site. The objective of planners and project managers will be to deliver all process and non-process work at the site within these Design Principles, and to engage with stakeholders and regulators to explore options and trade-offs.

EPCOR seeks to implement high quality public engagement programs that result in critical infrastructure being permitted, built, and operated in a way that is aligned with the interests and priorities of the community and meets the needs of the broader society. The Design Principles document EPCOR's commitments to stakeholders, clarify expectations for EPCOR's teams now and in the future, and provide stakeholders and EPCOR with criteria against which individual projects and design decisions can be tested.

Quality of Life

Gold Bar WWTP is operated, maintained and updated, in a way that reduces impacts to stakeholders and improves quality of life, including odour, noise and enjoyment of parks and recreation today and into the future.

Design Principles

In its long-term plans, individual projects, and ongoing operations at Gold Bar WWTP, EPCOR will:

1. Accelerate odour reduction. Identify and accelerate capital and operating initiatives that reduce odour from existing operations, and meet current and future odour performance standards.
2. Remain within the existing fenceline. Design Gold Bar WWTP to eliminate, offset, mitigate or reduce impacts to adjacent parkland (in that order of preference).

The design of all process and non-process facilities at Gold Bar WWTP will be undertaken with the objective of keeping the facility within its existing fenceline.

3. Prevent increases to odour and noise. Design the facility to be able to handle future volume changes without increases in odour or noise.
4. Restore disturbed vegetation. Develop and implement a policy to re-naturalize or replace trees and vegetation that are disrupted by utility work.
5. Mitigate temporary impacts. Minimize or mitigate temporary impacts from construction and maintenance activities, including any temporary impacts that occur from work outside the fenceline.

Safety

Community, public and worker safety and health are protected.

Design Principles

In its long-term plans, individual projects, and ongoing operations at the Gold Bar WWTP, EPCOR will:

6. Continuously improve safety. Assess current safety performance, evolving standards and emerging risks, and propose initiatives that maintain regulatory compliance, improve safety, and provide information to the community.
7. Ensure safe movement on-site. Develop a plan for on-site vehicle, people movement, and parking, that improves worker and visitor safety.

8. Improve worker hygiene and safety. Develop a plan for the location of non-process buildings and hygiene facilities that improves worker safety and limits health risks

The design of all process and non-process facilities at Gold Bar WWTP will be undertaken with the objective of keeping the facility within its existing fenceline. EPCOR will minimize or mitigate temporary impacts from construction.

9. Protect public safety from site-related traffic. Consider the individual and cumulative transportation impacts from construction and maintenance activities, and develop plans to protect public safety on Gold Bar Park Road and 50th Street

Relationship

An honest, transparent, trusting and respectful long-term relationship is developed between EPCOR and Gold Bar WWTP stakeholders.

Design Principles

In its long-term plans, individual projects, and ongoing operations at the Gold Bar WWTP, EPCOR will:

10. Communicate openly. Make timely, open, complete and transparent communication about planning and development at Gold Bar WWTP.

11. Align operating protocols. Update internal operating procedures at Gold Bar WWTP to implement the communication protocols agreed to with the community.

12. Engage regularly. Periodically engage with stakeholders to review and refresh the communication protocols and products used to share operations and project information with stakeholders (including employees), and the channels that stakeholders use to provide information to Gold Bar WWTP.

13. Share options and optimize designs. Share design criteria and options for significant projects, and for projects that could impact quality of life for stakeholders, and use stakeholder input to improve and finalize project design and option selection.

Reliable, Responsible and Sustainable

The Gold Bar WWTP is designed, maintained and operated in a prudent and responsible manner.

Design Principles

In its long-term plans, individual projects, and ongoing operations at the Gold Bar WWTP, EPCOR will:

14. Continuously improve environmental performance. Assess current environmental performance, evolving standards and emerging risks, and propose initiatives that maintain regulatory compliance and improve environmental performance

15. Reduce environmental impacts. Prioritize investments and operating practice changes that reduce the Gold Bar WWTP's environmental impact, with a focus on contributing to the reduction of global greenhouse gas emissions, the protection of water quality, the protection of parkland, and the recovery of resources.

16. Increase resiliency. Protect the community from the impacts of extreme weather and climate change by implementing measures to make the Gold Bar WWTP more resilient against overland and river flooding.

17. Engage employees and stakeholders. Involve and encourage the participation of employees and stakeholders in the improvement of our health, safety and environmental performance.

Environment

Pollution is prevented. The impact of the Gold Bar WWTP on air, land, water, climate and ecosystems is reduced.

Design Principles

In its long-term plans, individual projects, and ongoing operations at Gold Bar WWTP, EPCOR will:

18. Continuously maintain reliable operations. Incorporate condition assessments of current facilities, and identify the work required to rehabilitate or maintain infrastructure.

19. Plan for a range of scenarios. Conduct scenario planning to identify the range of work that would be required to serve future populations under changing regulatory and climate conditions.

20. Prudently manage impacts to ratepayers. Develop options that result in reasonable costs for ratepayers, and which spread the rate impacts of investment over time.