

on line *with* Nature



A message to residents of Gold Bar, Fulton Place, Highlands, Beverly Heights, and Capilano

We at the Gold Bar Wastewater Treatment Plant consider you to be good neighbours and key stakeholders who are directly affected by the work and the services we provide.

Each time you and your family bathe, shower, brush, flush, rinse, cook, clean and do laundry, you enjoy access to the one of the finest drainage and sanitary systems in Canada. Over 4,700 kilometres of pipes and service lines in Edmonton, valued at about \$8 billion, carry 100,000 million litres of dirty water to Gold Bar annually for your convenience.

Those of you who live close to us enjoy the parks, trees and nature trails that surround the plant and appreciate the quality maintenance these recreational facilities receive.

We want you to know what we do

Through regular plant tours for groups or individuals, regular meetings with community leagues and open houses, we endeavor to ensure you are partners in our environmental protection efforts. That is why we wish to keep you informed of major construction and Plant upgrade projects that will be undertaken over the next four to five years.

The Gold Bar Wastewater Treatment Plant is one of the top five facilities in Canada, using an intense natural treatment process rather than chemical treatment to better protect the North Saskatchewan River.

Much of the Gold Bar plant today dates to 1956, when the original plant was first built. To meet rising capacity and treatment demands, we are obligated to upgrade/replace aging facilities. At the same time we must respond to increasingly stringent environmental requirements, population growth and business expansion.

Gold Bar's Construction Master Plan

The Gold Bar Wastewater Treatment Plant Master Plan calls for substantial upgrades to our facilities over the next five years. Most of this activity, however, will go unnoticed by the general public and the rest should cause minimal inconvenience.

Two major projects have already begun – one on the east and another on the west side of the plant. On the eastern side, Bioreactor #11 is nearing the halfway mark in its construction and is expected to be completed at the end of 2005. Bioreactors are key to the natural treatment of wastewater known as "Biological Nutrient Removal", or BNR. Gold Bar is one of the few wastewater treatment centers that use an entirely natural treatment process. Bioreactor #11 will provide firm capacity for the plant to meet our Approval To Operate, which takes effect in June 2005 and will impose more stringent environmental standards.

The second project is larger in scope and is being undertaken at the west end of the Plant near 50th Street. The work is in support of the



city's commitment to the province to reduce the volume of raw wastewater entering the river from combined (sanitary & stormwater) sewers during wet weather periods. Its major components are the new Enhanced Primary Treatment (EPT) clarifiers and the new bypass channel and screens. Related work includes odour-control facilities and a new outfall structure.

When these facilities are completed in the summer of 2006, they, along with other sewer system upgrades, will result in substantial decreases in volumes of *untreated* wastewater entering the river.

We are fortunate that this project has been deemed important enough to receive significant funding support from the Infrastructure Canada-Alberta Program. Thanks to these grant monies the EPT project can be built much earlier than originally planned, providing significant environmental benefits sooner than expected.

If you haven't noticed anything yet, you likely won't

Residents in neighbouring areas may hear a little construction noise from time to time. You may also notice an increase in traffic. However, if you haven't already experienced these, you likely won't in the future. We expect to minimize the impact of our construction-related activities and keep them at, or below, the traffic and noise levels that currently exist.

Although City of Edmonton Noise Bylaw 7255 allows for construction noise between 7:00 AM and 10:00 PM, we have imposed a more restrictive time frame on our contractors for your benefit. For the most part, construction will be limited to business hours and there will be no evening or weekend work except in extraordinary circumstances.

Disruptions from increased construction traffic will be minimized, where possible, by accelerating that portion of the work where it is expected to be at its peak. Other mitigatory measures include enforcing strict speeding controls, sweeping 50th Street outside the Plant gate, and posting flag persons as required.

A staged construction period is a must

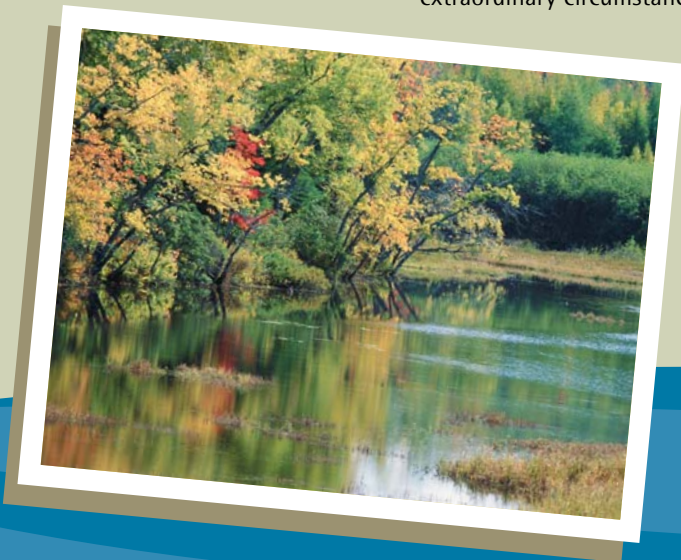
While it may seem a long time, the four-five year time frame for completing these major construction initiatives is necessary. Gold Bar is the only wastewater treatment plant serving Edmonton and therefore must continue operating even during construction. This won't be easy, since we will continually be obligated to meet all criteria stipulated in our Alberta Environment Approval to Operate, and perform in accordance with all environmental safety regulations. Consequently, staging the construction to accommodate plant improvements is not an option but a necessity.

Living in harmony with the river valley and surrounding communities

Neither the parks nor trails will be permanently affected. The boat launch along the riverside will remain open during boating season. Access to Gold Bar Park will be temporarily shared with the Plant, but the Park itself will not be closed.

Trees on Plant property that had to be removed have already been replanted in Gold Bar Park and in local schoolyards. Trees and shrubs that were uprooted will be replaced in greater number. The beautiful landscape in Gold Bar and along the river will most definitely be preserved.

Our approach for protecting and improving the environment — over the next five years and beyond — will encompass both liquid waste treatment and discharge to the river, and any activities we undertake within the river valley specifically related to River Valley By-law 7188. Working with Community Services, Parkland Services, we will endeavour to ensure that changes to the plant site complement the aesthetics of this beautiful river valley.



on line with Nature

Protecting Edmonton's environment is the core of our business

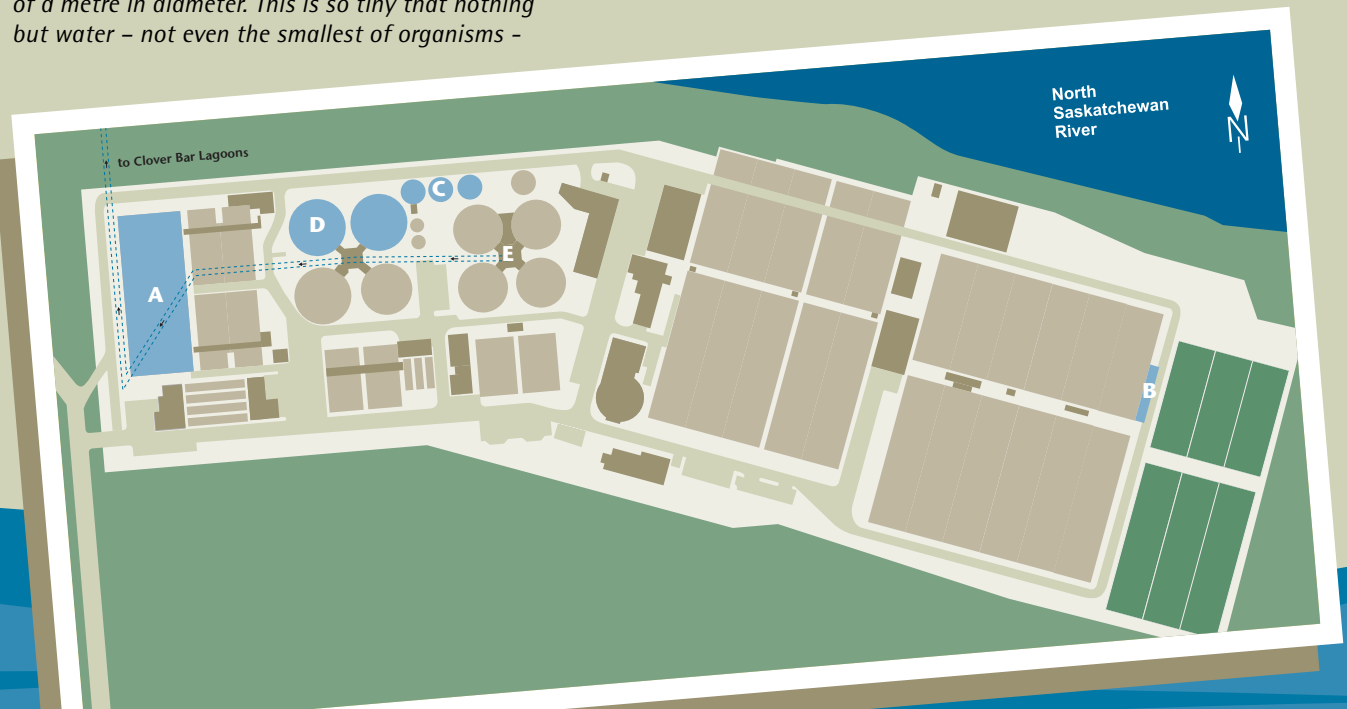
Protecting the environment of Edmonton for our citizens and neighbouring communities, providing the highest quality wastewater treatment, is the core of our business at Drainage Services. Over the next few years our major Gold Bar upgrades will include:



- A** **Enhanced Primary Treatment for Combined Sewer Overflow:** Like more than eleven hundred municipalities across North America, Edmonton faces the challenges of a combined sewer system. Approximately 15% of the city's developed area is serviced by a combined sewer system, carrying both sanitary and stormwater in a single pipe. During wet weather periods the system's capacity is often exceeded, resulting in untreated wastewater overflowing into the river. Valued at \$54 million, the enhanced primary treatment facility will provide high-rate removal of contaminants from wet weather flows. When completed along with other sewer system upgrades, the average amount of untreated wastewater that currently enters the river will be reduced from about 5300 ML*/yr to 1500 ML/yr – a 70% reduction. (*ML – million litres)
- B** **A New Membrane Filtration Facility:** Membrane filters are a series of minute membranes resembling drinking straws with pores along their length that are less than 1/20th of a micron, or 1 one-millionth of a metre in diameter. This is so tiny that nothing but water – not even the smallest of organisms –

can pass through. This facility will produce high-grade utility water for Petro-Canada's use and that of others along the pipeline route. When completed at the end of 2005, lakes in Gold Bar Park will also be maintained using this recycled water.

- C** **Construction of New Fermenters:** Fermenters are part of the Biological Nutrient Removal process. They produce certain acids necessary to sustain microorganisms that remove phosphorus from wastewater. Construction will take place in 2006-2007.
- D** **Construction of New Digesters:** With the increase in liquid treatment capacity there is an accompanying need to increase the treatment capacity of solids. What we call the "Digestion Process" reduces solids or "sludge" from wastewater, destroys disease-causing organisms and stabilizes the sludge – making it less odorous. Biogas is a valuable byproduct of sludge digestion and is used to heat the entire plant, reducing the City's overall heating costs by more than \$1 million annually. New digesters will be added in 2008-2009.
- E** **Sludge Line Twinning:** Disposal of treated sludge is a key process in wastewater treatment. Treated sludge is pumped to the Clover Bar Recycling Facility. In 2006 and 2007 we will be twinning the sludge line to handle increasing sludge volumes, while at the same time improving safety and providing system redundancy. The pipeline runs along 111 Avenue; so our neighbours in the Beverly Heights area will notice some construction during that time.





on line *with* Nature



Sludge Line Twinning Project Open Houses

Two open houses will be held at which residents, park users, and other interested persons may view displays, express concerns, and provide suggestions to minimize the impacts of construction. Suggestions will be taken into account in preparing the final design and in scheduling the construction.

The open houses will be held:

Tuesday, February 22, 4 pm – 8 pm
Beverly Heights Community League Hall
Floden Park
4209 – 111 Avenue

Wednesday, February 23, 4 pm – 8 pm
Homesteader Community League Hall
575 Hermitage Road

For more information on the public Open Houses, please contact Donna Cardinal, Public Information and Consultation

Tel: 434-2635

E-mail: cardinal@web.net

Keep in touch

We are excited about improving our facilities to protect the environment and improving our service to Edmontonians. However, if you have any questions, the fastest and most effective way of keeping informed is to contact us directly. You can also contact your community league. Through our Community Liaison Committee, we work with the five neighbouring community leagues. It meets semi-annually or as often as the members deem necessary to deal with community concerns.

If you wish more detailed information on the construction and upgrade schedules on any of our projects, we can send you an information kit that outlines our operations and the project.

Finally, we invite you to watch for Open House notices or to simply call us to take a tour of the plant, as do many individuals, groups and school classes every year.

Contact Information

Chris O'Brien
Gold Bar Wastewater Treatment Plant
496-8972
chris.o'brien@Edmonton.ca