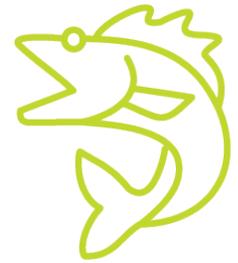


# Elbow River Spawning Habitat Restoration Pilot Project



## Purpose

The Elbow River has historically played a significant role in the success of the Elbow and Bow River fisheries by providing spawning habitat to Rainbow and Brown Trout. These fisheries provide an excellent economic benefit to the City and Province through travel, fishing licences and gear purchasing.

The construction and maintenance of the Glenmore Dam as well as the 2013 flood have changed the fish habitat conditions in the river. Redd counts (spawning site counts) have been conducted annually by volunteers on the Elbow River since 1980 and a significant drop has been recorded in the years following the 2013 flood.

The Elbow River lacks suitable spawning gravels in multiple locations as the river bottom is predominately large substrates and bedrock. The purpose of the pilot project is to restore spawning habitat by adding appropriately sized gravels in particular locations below the Glenmore Dam and near Sandy Beach Park.



## Selection of sites

The Southern Alberta Fisheries Habitat Enhancement and Sustainability (FISHES) Program was developed to mitigate the risks to the aquatic environment, authorized by the department of Environment and Parks (AEP), under the Expedited Authorization Process for Flood Recovery (EAPFR).

Program efforts are directed at identifying areas of highest disturbance that are critical to maintaining aquatic productivity and fish populations at a watershed level. The Elbow River Spawning Habitat Restoration Pilot project was ranked as the FISHES Program number four priority project by a technical group of fisheries habitat experts. This ranking was based on a number of biological, social, economic and project specific criteria. For more information on FISHES program visit [www.alberta.ca/southern-alberta-fishes-program-overview.aspx](http://www.alberta.ca/southern-alberta-fishes-program-overview.aspx).

## Measuring success

Success of the pilot project will be measured by volunteers through annual Redd Counts. The City has agreed to conduct monitoring and maintenance works post construction to assess the success of gravel replenishment through:

- Replenishment of suitable spawning substrates;
- Bank stabilization;
- Gravel mobilization along the Elbow River downstream of Glenmore Dam; and
- Potential future gravel replenishment events to maintain Elbow River spawning habitat.

Questions? Contact [AEP.FISHES@gov.ab.ca](mailto:AEP.FISHES@gov.ab.ca)

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## Construction process

The gravels being released into the river range from approximately the size of a pea to that of a baseball. Given the size and minimal level of turbidity from the cleaned gravels, the planned method of releasing without isolation reduces risk to the aquatic life in the river.

## Impacts to nearby green space

Portions of Sandy Beach Park parking and day use will be a staging area and will be fenced off for safety with no public access to these areas. Information regarding impacts to river users will be posted on the Calgary River Access Map at [www.maps.calgary.ca/RiverAccess](http://www.maps.calgary.ca/RiverAccess) and along the river where drift boats, canoes, kayaks or rafts may be required to make adjustments to travel in the section of river downstream from Sandy Beach Park.

City of Calgary Glenmore Dam infrastructure improvements in affect may impact access to public pathways. To learn more visit [www.calgary.ca/UEP/Water/Pages/construction-projects/Construction-projects-and-upgrades/Glenmore-Dam-infrastructure-improvements.aspx](http://www.calgary.ca/UEP/Water/Pages/construction-projects/Construction-projects-and-upgrades/Glenmore-Dam-infrastructure-improvements.aspx).

## Flood impact

The gravels added to enhance fish habitat will displace water in the river. Matrix was hired to assess how the change in water level prior to and post construction would react in flood scenarios. In the flood scenarios modelled there was no significant difference between how flood waters impacted surrounding lands prior to and post construction.

## Protecting historical resources

Historical resources, remains of an old campsite and fossils, were identified on the north bank at the Glenmore Dam site. The *Historical Resources Act* approval indicates that construction cannot adversely impact noted onsite historic resources. Rocks that contain fossils may be used for anchors in bank stabilization structures, as long as the exposed fossils are facing up and left accessible.

