

Logan's Floodplain, a Resource for All

By the Utah Silver Jackets Team

The City of Logan and Cache County recognize the incredible value of floodplains and are committed to taking actions to protect and preserve them for generations to come. Floodplains are an essential part of the thriving community and healthy ecosystem in the City of Logan, Utah. Floodplains provide a myriad of benefits for the environment. They provide vital aquatic and riparian habitat and recreation opportunities, and floodplains serve as a designated and safe place for flood waters to go.

Floodplains are some of the most biologically diverse habitats on Earth. These areas, which receive periodic *inundation*, or flooding, provide ideal habitat for spawning fish and migrating birds and waterfowl. In fact, the 460 acres of lagoons and 240 acres of wetlands polishing ponds in Logan are of vital importance to migratory birds. Floodplains may also improve water quality. When these areas are inundated, they act as wetlands, which filter excess sediment and nutrients thereby improving water quality.

Hilary Shughart, the President of the Bridgerland Audubon Society added, "Essential to retain meltwater, the Logan River floodplain is a Garden of Eden and a treasure trove for lucky bird lovers and nature explorers, who may glimpse special treats from threatened and imperiled plant and animal species, including the Ute Ladies'-tresses orchid, the iconic humwhistling yellow-bonnetted Bobolink, the elusive Yellow-billed Cuckoo, and the endearing patter of the rare Snowy Plover."

In addition to all these environmental benefits, open floodplain spaces can also provide benefits to nearby homeowners. First and foremost, preserving open space for floodplains can reduce flood risk, and potentially save lives and property. This flood risk reduction can also mean lower national flood insurance program (NFIP) insurance rates.

"Anyone living in a NFIP-participating community can get flood insurance. FEMA encourages everyone in the community (no matter your flood zone) to carry NFIP flood insurance, as more structures are getting flooded outside the high-risk flood areas. In the State of Utah, 40% of all claims are currently filed outside the high-risk Special Flood Hazard Area," Heidi Carlin, Emergency Management Specialist with FEMA region 8, stated.

By allowing floodwaters to spill into open floodplains, the upstream and downstream flood risks are lessened. Homes built along the river are at risk for flooding, especially during high water events. When the amount of water entering the river exceeds the channel's capacity, such as during heavy rainstorms, water may spill over and flood properties along the river. However, by allowing water to safely spill out from the channel, the river's capacity increases, and flood risk to adjacent communities is lessened.

Additionally, the open space provides recreation opportunities and visual appeal, which can increase the value of a home and provide nonmonetary benefits. Logan hosts many visitors each year who come looking for the bountiful outdoor recreation opportunities the area offers - fishing, camping, hiking, bird watching, and climbing. Many of these would not be possible without floodplain space.

Jes Braun, a graduate student studying watershed science at Utah State University noted, "The Logan River offers a multitude of benefits to our city. Whether it's walking along the river, paddling, bird

watching, or cooling off with a dip in the quiet bend in Rendezvous Park, the Logan River is a valuable natural resource to our community."

The bottom line is floodplains are beneficial for everybody - from the bugs to the birds to the people living along rivers. It is important to preserve floodplains for the benefit of communities and ecosystems.

The City of Logan is taking progressive steps to retain its remaining floodplain and preserve it for years to come. A great example is the Logan River Golf Course. The golf course provides recreation opportunities for the community as well as functioning as a healthy floodplain. During flood events, excess water can spill out from the river channel into these open spaces, which reduces the flood risk of the overall system and provides ecosystem benefits for migratory birds and other species reliant on this inundation. Providing this habitat also increases local biodiversity. In the early 2000's, the Logan River flooded and broke out of the bank. Luckily, the golf course could take the excess floodwaters, which reduced flood risk for communities along the river, who may have instead been flooded.



Figure 1: The Logan River Golf Course (upper right) and Rendezvous Park flooded during a storm in 2011. The park and the golf course provided open space for the river to overflow, which reduced the flood risk to neighboring communities. Photo courtesy of Civil Air Patrol

Additionally, Logan is working to improve the connectedness of the floodplain, providing additional habitat for migratory birds, and improving flood risk management. In 2019, the Logan River Task Force, the City of Logan, along with State and Family Grants partnered to realign the section of the Logan River that flows between the golf course and Highway 89. This project can be seen by the distinct curve in the river at this spot, a sign the river has a natural flow path and improved floodplain conditions. The Logan

City Parks Department manages Rendezvous Park, which serves as a natural floodplain and is adjacent to the realigned section of the Logan River. The park has walking trails and interpretive signs, which were underwater during the 2017 floods. Furthermore, the Riverwoods development included an agreement to include building trails alongside the river in addition to the construction. This has allowed for a more complete trail system along the river, offering more open space for floodplains and recreation opportunities for Logan's residents.

The City of Logan and Cache County are committed to preserving open space for floodplains and protecting these important floodplain benefits for generations to come. The County recently passed the Open Space Bond measure and is in the process of updating local ordinances to preserve open space for the beneficial functions and use of floodplains. Cache County and the City of Logan are currently conducting a large-scale mapping update to better understand where the floodplain is located, so actions can be taken to better preserve these important areas. Cache County will complete their study in May. The City of Logan is conducting additional research in more densely populated areas of the city, such as the Woodruff Neighborhood.

Darren Farar, the city engineer for Logan stated, "Logan City, with its majestic mountains surrounding a garden valley, robust wildlife, and most importantly, its abundance of scenic rivers and natural waterways is considered by many to be the Jewel of Utah. As Logan's population increases, the City is committed to educating and informing our community members on ways in which our rivers and waterways provide significant benefits beyond beauty and environmental appeal. From high quality drinking water, to great recreation, to providing a corridor to manage flooding events, our rivers and waterways promote safe and enjoyable living."