

Creeks & Flood Risk

Before the Tri-Valley was developed, the region was dominated by vast open expanses of grasslands and seasonally flooded meadows. Livermore is located in the upper Alameda Creek Watershed. Today, in the City of Livermore, there are approximately 43 miles of stream. Several creeks and arroyos traverse the city including Altamont Creek, Arroyo Seco, Arroyo Mocho, Arroyo Las Positas, Collier Canyon Creek and Arroyo del Valle.

Most flooding within the City of Livermore is caused by heavy rainfall during the winter months that cannot be adequately conveyed by the existing storm drainage system combined with surface water bodies. Storm runoff is concentrated rapidly by the network of tributaries that discharge through the hills into the major streams. The tributaries have carved well-defined courses through the hills; but, upon reaching the flat Livermore Valley, the channels become shallow and inadequate for lower return-frequency flows. Constricting structures combined with development in some areas of the floodplain make the City of Livermore susceptible to damage when large rainstorms occur.

For more information on the historical ecology of the area, check out the [Alameda Creek Watershed Historical Ecology Study](#)

Creeks & Flood Risk (Continued)

The Stream Maintenance Program

The Stream Maintenance Program (SMP) is an active City program to keep natural creeks and engineered/modified flood control channels well-maintained. The Stream Maintenance Program outlines maintenance practices that minimize the impact on the environment. Permits for this program are renewed every 5 - 10 years with California Department of Fish and Wildlife, the Regional Water Quality Control Board, the US Army Corps of Engineers, and the US Fish and Wildlife Service. Maintaining streams is an important aspect of reducing flood risks in the city. The SMP guides the way the City conducts stream maintenance, focusing on minimizing the environmental impacts of stream maintenance as the City carries out this critical maintenance work. The Livermore Stream Maintenance Manual can be found [here](#).

Why maintain streams?

The City of Livermore and other regional agencies, including Zone 7 and LARPD, maintain streams in order to prevent flooding as much as possible. Stream maintenance can be done through a range of projects, from removing vegetation in the waterway to large-scale bank stabilizations or changes to the stream system. Through these projects, we can retain the water-carrying capacity of the channel and reduce the risk of flooding. Streams are also maintained for to protect water quality, improve habitat, increase groundwater recharge, to ensure public safety in park and along trails.

However, stream ecosystems can be very sensitive, especially in Livermore. Several endangered species, including red-legged frogs and California tiger salamanders live in Livermore's streams. We must carefully balance the benefits of each stream maintenance project with the potential impacts it might have on the riparian ecosystem, and make sure that each project minimizes these impacts as much as possible. As required under California law, the City also mitigates for the impacts of each project through restoration and conservation projects across the City, which you can find around many of our streams, from Robertson Park to Springtown. To learn more and get involved with local restoration efforts, check out volunteering opportunities with the [Living Arroyos Program](#).

Creeks & Flood Risk (Continued)

2020 Stream Maintenance Program

The following are locations of streams with proposed projects in 2020:

- Proposed Bank Stabilization and Trail/ Road Repair Projects:
 - Arroyo Mocho – Holmes Street Southeast Bank
 - Arroyo Mocho – Creek Road
 - Collier Canyon Creek – Collier Canyon Access Road
- Proposed Sediment Removal, Vegetation Management, and Debris Removal Projects
 - Arroyo Mocho – Gravel removal Holmes Street Bridge
 - Unnamed tributary Arroyo Las Positas – Golf Drive outfall maintenance
 - Arroyo Mocho – Sediment removal from north bank storm drain outfalls along Chateau Way
 - Arroyo Mocho – Stanley Bridge outfall maintenance
 - Unnamed Drainage Arroyo Las Positas- Storm drain outfall and culvert pipe maintenance at Livermore Airport
- Proposed Vegetation Management, Trash and Debris Removal Projects
 - Arroyo Mocho – Fire break vegetation management at Medeiros Parkway
 - Granada Channel – Vegetation management along eastern residential property boundaries
 - Arroyo Mocho – Fire fuels management by goat grazing along Robertson Park
 - Arroyo Las Positas – Trash and debris removal near Heather Lane Bridge
 - Collier Canyon Creek - Debris rack cleaning at Collier Canyon Road
 - Arroyo Las Positas – Trash/debris removal at Airway Blvd

For information about the Stream Maintenance Program or to request maintenance on one of our streams, please contact the City of Livermore's Floodplain Manager at (925) 960-4500