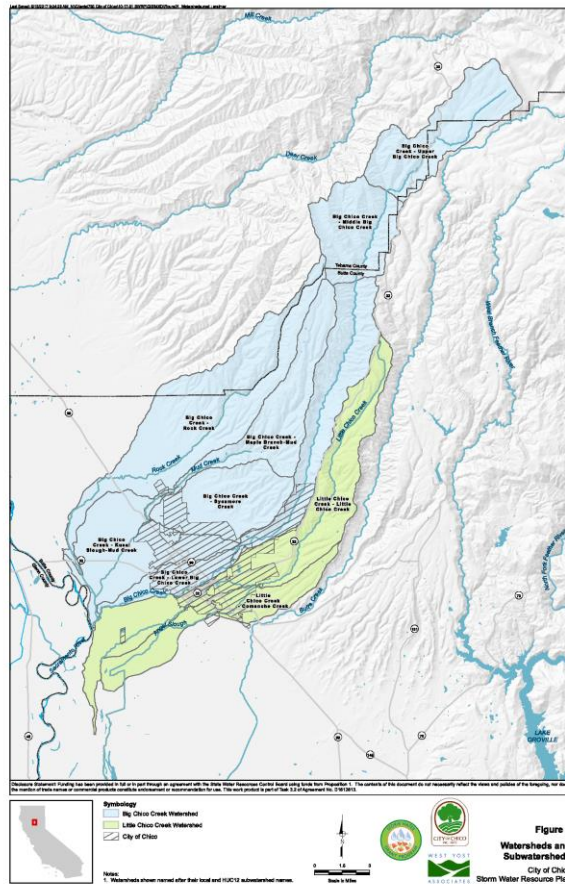


CHANNEL STABILIZATION/ CREATE HYDROLOGIC FLOODPLAINS ON STREAMS (SWRP PROJECT 16 / 68)

General Project Information

This project includes a plan to manage erosion, stabilization, and hydrologic floodplain creation in the Chico area waterways including:

- **Erosion Control:** Assess existing erosion by surveying the channels in the Big Chico Creek watershed and mapping areas of concern, identify the causes of the erosion by using computer based hydraulic modeling, and prioritize the severity of erosion problems to identify the order in which solutions should be implemented. Develop solutions to reduce or eliminate the erosion at outfalls, bridges, major bends in waterways, and other identified areas of concern. Some solutions include options for revegetation with native species, property acquisition, floodplain creation, and structural control methods only where necessary. In addition to reducing erosion, the plan will also include a comprehensive sediment management evaluation. The potential for Low Impact Development (LID) techniques to help reduce sediment in streams will also be evaluated.
- **Waterway Analysis:** As part of this study, the potential for improving or expanding hydrologic floodplains will also be evaluated. The U.S. Environmental Protection Agency (EPA) defines hydrologic floodplains as the land adjacent to the baseflow channel residing at or below bankfull elevation. It is inundated about two years out of three. Not every stream corridor has a hydrologic floodplain. Improving hydrologic floodplains will help improve habitat, provide some attenuation for flood flows, and will help restore natural hydrologic processes. The hydrologic floodplains will also be designed to provide infiltration.
- **Regulatory Consideration:** There are many agencies that exercise jurisdiction over various components of waterways. The waterways within City of Chico boundaries may fall under the jurisdiction of the following agencies: U.S. Army Corps of Engineers, CA Regional Water Quality Control Board, CA Dept. of Fish and Wildlife, and the Central Valley Flood Protection Board. Because acquisition of these permits can add significant time and cost to a project, part of the site analysis will include looking at where potential work will occur relative to the various jurisdictional boundaries of the aforementioned agencies. Also, many of these agencies allow exemptions for restoration work, so attention will also be paid to opportunities for restorative activities at each site.
- **Education and Outreach:** Where applicable, existing storm water programs and projects will be integrated in the projects, and where appropriate grant program local match funding requirements can be met by volunteer hours. This plan will involve preparing an education and outreach plan and budget that includes: 1) opportunities to collaborate with existing watershed protection groups, such



as Butte Environmental Council, Stream Team, Friends of Bidwell Park, *etc.* 2) evaluates and monitors the efficacy of the projects for reducing erosion, improving the hydrologic floodplain, and improving water quality, and 3) provides public education and outreach events.

- **Employment Opportunities:** The plan will evaluate employment opportunities for Disadvantaged Communities (DACs) and tribes by providing LID and green infrastructure job training and certification workshops. In addition, the plan will also evaluate ways to involve the California Conservation Corps to reduce project costs.
- **Location:** The proposed project sites are the streams, creeks, tributaries, and riparian habitats that are located in the City of Chico.
- **Watershed Area:** 21,268 acres (City extents)

Benefits Resulting from this Project

When the Channel Stabilization and Creation of Hydrologic Floodplain Plan is fully implemented the following benefits are expected to occur.

- **Water Quality:** Water quality is expected to be improved because the reduction of erosion and management of sediment will improve the water quality of streams.
- **Water Supply:** Water supply is expected to be improved because implementing infiltration areas will allow some flows to recharge groundwater.
- **Flood Management:** Flood management is expected to be moderately improved because hydrologic floodplains identified in this plan will help attenuate flooding flows.
- **Environmental:** The environment is expected to be improved because implementing this plan will help manage sediment and erosion and will improve receiving waters. Additionally, the creation of hydrologic floodplains will create habitat for a wide variety of species.
- **Community:** The community is expected to be improved because the plan includes opportunities for job creation, especially in DACs.

Project Costs

- **Estimated Plan Preparation Cost:** The estimated cost of preparing this plan is to be determined (TBD). This cost does not include the costs of designing and constructing the improvements that will be identified in the plan.

Project Photographs:

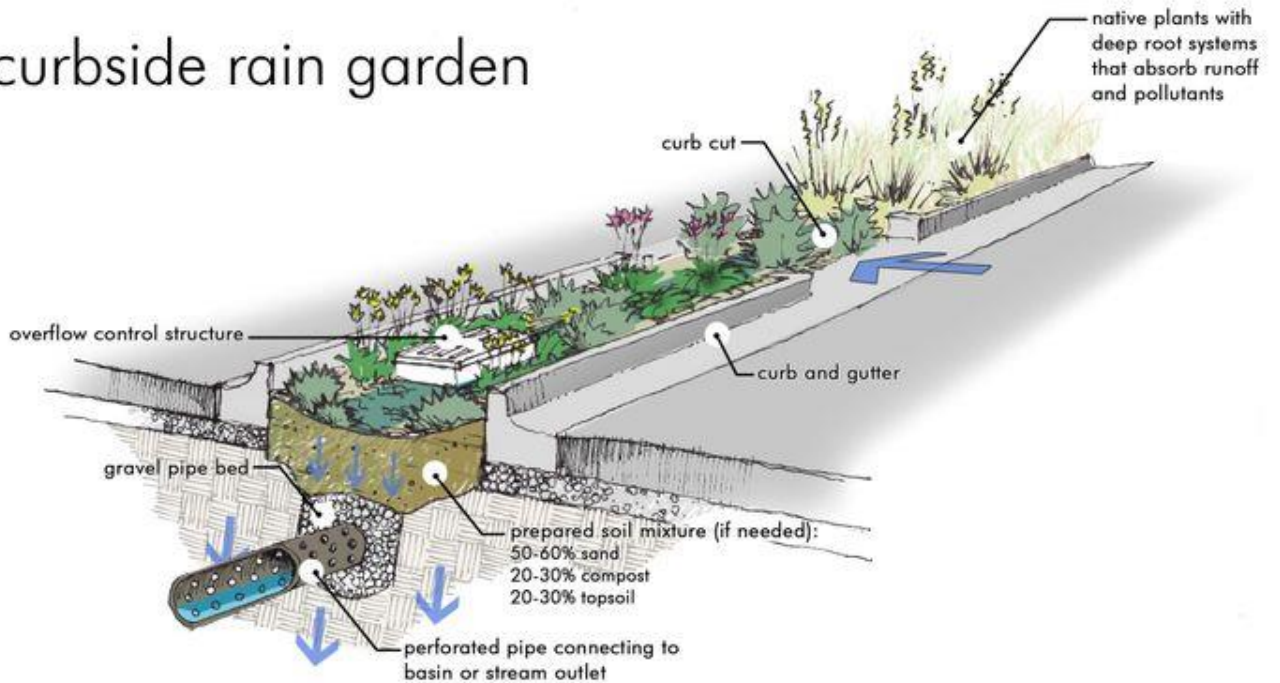


Photograph 1. Example of a Bioswale in a parking lot located in Oregon.



Photograph 1. Open space facing east towards Mangrove Avenue from East Lindo

curbside rain garden



**Diagram of the composition of a rain garden.
MJLARSONSITE 2014. Portland's Bioswales Give a
New Look to Water Management Practices**

Initial Projects Included

No other initial projects were included in this plan