OVERVIEW

The stormwater treatment garden is an approximately 4 acre park located at the southern edge of Eastside Park and adjacent to the future Sports Park. This centralized treatment area collects and cleans runoff from the impervious areas throughout Sub-Phase 3, and its size provides an opportunity to showcase a large-scale, productive landscape. Unlike the sinuous curves and naturalistic plant layout designed for the treatment areas in Sub-Phases 1 and 2, the design of this treatment area is inspired by the patterning of agricultural landscapes and forms a linear patchwork of basins of various size and plant palettes.

A central concrete distribution channel acts as an architectural datum that continues through the length of the site. Treatment flows are lifted from the storm drain system and are released into a forebay, located at the head of each channel. The forebay slows the water before it flows over a weir into the main body of the channel. A series of check dams and weirs along the sides of the channel direct the appropriate amount of flow into each biotreatment cell.

The biotreatment areas are depressed basins with layers of drain rock, soil and planting consistent with SFPUC stormwater treatment design guidelines. Low berms topped with a band of crushed stone paving divide the treatment areas both physically and visually and provide maintenance access. The planting palettes create subtle variations in color between the basins with swaths of sturdy grasses in various shades of green. Intermixed with this backdrop, bands of flowering perennials create a patterning of seasonal interest and important pollinator habitat.

A sidewalk along Fourth Street and a parallel walkway to the north provide pedestrian access along the length of the stormwater treatment garden. At the terminus of each residential garden street, a pathway extends through the treatment area allowing pedestrians to walk through the site and connect directly to the planned Sports Park. Small boardwalks within the treatment areas lead visitors out to viewing decks to be immersed in and experience the scale of the landscape. The pathways, decks and furniture are universally accessible.

More information regarding the design of the stormwater treatment garden can be found in the Preliminary Stormwater Control Plan which is included as Appendix G.

SUB-PHASE UPDATES

Refined Sizing: Since the Major Phase Application, the scale of the treatment areas has increased based on the more detailed calculations of the treatment flows. An area to the east of this phase is reserved as the future treatment area for the Eastside Neighborhoods in Major Phase 2 and has been sized to accommodate the estimated flows from that phase.

The centralized treatment area in Eastside Park is designed to limit impact on the future Sports Park, which is planned as part of Major Phase 4.

To accommodate required civil infrastructure, a pump station/utility area has been located in a future phase of the farm. This enclosure will be carefully destined to be aesthetically pleasing, and the forthcoming design will be presented to the SFAC Civil Design Review Board in this phase of the project.
Centralized stormwater treatment gardens allow for ease of maintenance, monitoring and consistent treatment. The centralized treatment also allows other areas of the site to provide important program space and more generous pedestrian and bicycle facilities for the community. This large band of green-infrastructure will serve as a landmark that can teach residents and visitors about the water cycle within our cities and demonstrate a direct connection between treating the runoff from the development and the water quality in the San Francisco Bay.

Regionally appropriate planting limits the amount of maintenance required and the flowering perennial palette is selected to provide a refuge for declining pollinator populations. This treatment area is located near the adjacent future farm and a healthy population of pollinator species on the island will be critical to the success of the agriculture.

**SOILS**

Much of the park area is currently paved or includes existing structures, and topsoil from the existing lawn area will be stripped, stockpiled and reused. New landscape soils will be provided as required for each planting area and type. The soils are pre-blended and designed to reduce the need for future inputs or fertilizers. The soil within the biotreatment areas complies with SFPUC guidelines. Refer to the soils plan included with the park design documents for more information regarding soil types and depths.

**PLANTING**

Separate plant palettes have been developed for the upland areas outside of the treatment areas and the lowland areas within treatment basins. The upland palette contains drought-tolerant shrubs that are low maintenance and visually distinct from the patterned planting within the basins. A line of windrow trees frames the southern edge of the area and provides a windbreak to protect the Eastside Neighborhood.

The plants within the treatment basins must tolerate periodic inundation and the fast-draining, sandy soils of the treatment area. Several species of grasses dominate the palette and create slight variations in tone across the basins. Distinct bands of flowering perennials are woven into the site to create vibrant lines of color that play off the more subtle green background planting. The species of flowering perennials are carefully selected to provide important habitat to Bay Area pollinators and maintenance guidelines will limit the use of chemicals to create a safe space for these vulnerable species.

**STORMWATER**

Since most of this site is comprised of pervious biotreatment areas, the small amount of runoff that comes from the impervious pathways will be graded to flow directly into the basins to be treated with the treatment flows from the rest of the development area. No additional storm drains are required to collect runoff from this site.

**IRRIGATION**

A new irrigation system is provided throughout the park and is designed to use recycled water. The system utilizes centrally controlled water efficient technology including soil moisture sensors and smart controllers to reduce and manage water use.