

COTTONWOOD GROVE ECOSYSTEM RESTORATION PLAN



Cottonwood Grove is a semi-arid upland site located near 55th Street and Pearl Parkway, adjacent to several recent projects, including the Army Corps of Engineers wetland restoration along Goose Creek, and several private land upgrades along Pearl Parkway. At this time, neither of these areas possesses great value as habitat for most wildlife, largely due to the over-abundance of non-native species and the associated lack of biological diversity. However, the proposed restoration site is adjacent to a recently restructured and renovated wetland habitat. While it is still in the initial stages of development, the native species that have been planted and are establishing at the site will provide wildlife with an excellent habitat for food, water, and shelter. In an effort to promote and preserve this redeveloped wetland, management of the proposed adjacent semi-arid site is critical.

Previous restoration attempts have not been successful due largely to a lack of continued site management and monitoring. Therefore, an important component of this restoration plan is continued monitoring and maintenance, which will decrease over time as the area transitions into a more resilient, self-sustaining ecosystem. This restoration plan will assume a four-phase approach that will include an integrated noxious weed management plan, native vegetation establishment, and continued ecosystem management. The most significant restoration needs and actions include:

- Removal of existing noxious and invasive species from the site through a combination of methods, as well as continued management of invasive plants in the future.
- Appropriate preparation of the site conditions to support successful establishment of native vegetation, with subsequent seeding and planting efforts to introduce native vegetation to the site.
- Added improvements to the site to increase the aesthetic appeal and utility of the area for visitors of Boulder Creek multiuse path and Pearl Parkway.

The presence of noxious weeds such as curly dock, common teasel, burdock, and hounds tongue has continued to grow and has sufficiently taken over the majority of the site. The flood of September, 2013 created debris build up around the bases of the trees and shrubs in the site. It also aided in the establishment of many noxious weeds that now dominate the site. There is little native vegetation or suitable wildlife habitat.

The City of Boulder, in conjunction with the Army Corps of Engineers, recently restored the adjacent Open Space property of Cottonwood Pond to an established and functioning wetland. In order for success and continued improvement in the Cottonwood Pond project site, it is crucial to eradicate and control the noxious and invasive weeds that are in the Cottonwood Grove area. Both noxious weed control and native plant revegetation are important to restore the ecosystem to its full health and functionality.

The primary goal of the Cottonwood Grove restoration plan is to recover and restore a degraded ecosystem to a more resilient, native ecosystem. This goal will be achieved through a combination of mechanical, chemical, and biological treatments to target the dominant invasive species. Removal of invasive species will be followed by revegetation of the site with shrubs and trees (caged for protection from herbivory), as well as seeding of native upland species. This will aid in the improvement of overall habitat conditions to support wildlife such as insects, birds, reptiles, and mammals. The prairie dog colony located on site that will be incorporated into the restoration plan through careful selection of upland species to provide both consumable species as well as herbivory resistant species. Continued maintenance and management of the site following replanting will be conducted to keep noxious and invasive species limited while native species become established. This includes monitoring for prairie dog activity, ecosystem damage, replacing live plants as necessary, and utilizing protections to support the healthy establishment of a diverse native ecosystem. Monitoring and maintenance will be most intense in the 3-5 years following the planting onsite, and will decrease over time as the native species begin to dominate the site.

