

## Wernimont Ponds

Nominating Agency: City of Loveland

**Accomplishment:** Project goal was to design and construct two regional stormwater detention ponds (27 acre-foot south pond and 29 acre-foot north pond), on an environmentally- and topographically-difficult site composed of 56% jurisdictional wetlands/open water, in order to protect the health, safety and welfare of residences and business located downstream. Prior to construction of the two ponds, the site was characterized by one shallow pond with a dense growth of cattails emerging from the water and extending outward to a salt grassland and a degraded landscape distinguished by agricultural grasses and undesirable weeds. The entire 15-acre site was regraded in order to create the ponds. Only precipitation, irrigation return flows traversing the site and upstream off-site groundwater seepage flows could be utilized to revegetate the site.

The project included the creation of a new sustainable native wetland, riparian and prairie habitat around the two detention ponds in order to mitigate the wetland/open water disturbance. The north pond contains open water and like the south pond has large areas of shallow water dominated by a high diversity of wetland plants. Plains cottonwood trees, peachleaf willows and numerous species of riparian shrubs characterize the margins of the ponds. The new wetlands provide an important water quality function by remov-



ing sediment, nutrients and pollutants from the stormwater. In addition, two forebays and a water quality pond were constructed within the project.

The area between the ponds is dominated by native prairie grasses and wildflowers. The new communities provide habitat for an ever increasing diversity of fish and wildlife. The deep aquatic habitat of the North Pond with its logs, stumps and underwater gravel areas provides habitat for three species of warm water fish: yellow perch, catfish and minnows. As the trees around the edge of the ponds grow and mature, they will shade and cool the water for the fish and provide nesting habitat for songbirds, owls and hawks. Wetland plants including hardstem bulrush, creeping spike, alkali bulrush, arrowhead and numerous others provide habitat and food for red winged blackbirds, ibis, Canada geese, ducks, great blue heron and other waterfowl. The raptor perch provides a convenient site for hawks and eagles to survey the ponds for prey. Leopard frogs (a sensitive native species in Colorado), toads and the plains garter snake

also live near the ponds and provide a food source for raccoons, foxes and skunks. The noisy killdeer nests in the prairie which is characterized by blue grama, buffalo and needle grasses.

**Innovation:** Under the Wernimont Ponds Department of the Army Corp of Engineers 404 Per-



mit, we permanently impacted 8.07 acres of low quality and degraded wetlands and 1.59 acres of aquatic habitat. We mitigated the disturbance with 4.08 acres of new wetlands with higher functions and values than the existing wetlands, 9.56 acres of new native prairie and 1.82 acres of aquatic habitat by using the Montana Wetland Assessment Method.

**Achievement:** The Wernimont Ponds project successfully created 56 acre-feet of regional stormwater detention in conjunction with establishing a new self-sustaining native wetland, riparian and prairie habitat around the two ponds. Long-term sustainability has been achieved by designing a project that utilizes precipitation, irrigation return flows traversing the site and upstream off-site groundwater seepage flows to irrigate the site. Achievement in the eyes of Ms. Margaret Langworthy (Department of the Army Corps of Engineers, Denver Regulatory Office) includes the following statements: “The finest mitigation site I have seen in the State of Colorado is associated with the above named permit.” “The site contains areas of dense and diverse cover of desirable native wetland plants that are self-perpetuating and have achieved all the success criteria, a native prairie, and the establishment of the rare Bell’s twinpod (*Physaria bellii*). It is a unique place with a diverse composition of native grasses, sedges, rushes, and forbs, and the structural diversity provided by the trees and shrubs, the presence of water and the mosaic of native habitats demonstrating that native ecosystems can be restored in degraded

urban environments.” “Once again, I must state that it only takes knowledge, hard work and perseverance to deliver a mitigation site that has significantly higher functions and values than those originally impacted.”

**Transferable:** The Wernimont Ponds project is of groundbreaking importance in its use of the Montana Wetland Assessment Method for wetland mitigation in Colorado.

**Cooperation:** Teaming with the Corp of Engineers and Western Ecological Resource Inc. from conceptual design through construction worked extremely well. We worked together from day one to create the new regional detention ponds and the new native wetland, riparian and prairie habitat around the two ponds in order to mitigate the wetland/open water disturbance.

**Summary:** The Wernimont Regional Detention Pond project successfully created 56 acre-feet of regional stormwater detention, permanently impacted 8.07 acres of low quality and degraded wetlands and 1.59 acres of aquatic habitat on an environmentally- and topographically-difficult site. To compensate for the wetland and aquatic habitat impacts, the City created 4.08 acres of new wetlands with higher functions and values than the existing wetlands, 9.56 acres of new native prairie and 1.82 acres of aquatic habitat by using the Montana Wetland Assessment Method. The new wetland communities are smaller in size than historically existed on the site but have a greater ecological value. ●

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