## Provo River Restoration Project Before & After (1999-2001)

A s part of its mitigation program, the Utah Reclamation Mitigation and Conservation Commission developed the Provo River Restoration Project (PRRP). It is restoring twelve miles of the middle Provo River between Jordanelle Dam and Deer Creek Reservoir in Wasatch County, Utah. This section of river was channelized and diked in the 1950's and 60's and consequently lost many of its abundant natural resources, such as riparian forests, emergent wetland, backwaters and deep fishing holes. PRRP's objective is to realign the river to a more natural channel pattern and regain the vegetative and wildlife resources once supported by the river. Restoration construction activities create many new landscape features. During these activities, some riverine, wetland and upland areas are disturbed. The Commission actively revegetates constructed features and disturbed areas with native, local plant materials as each construction phase is completed. Restoration is intended to advance the sequence of natural succession and result in additional habitat diversity for wildlife.



**P**RRP began construction with a "Pilot Project" that was initiated April 1, 1999 and completed in December, 1999. The area covered approximately 1.45 miles, starting about 1.6 miles downstream of Jordanelle Dam and ending where the river crosses under Highway 40. The photos to the left show the project area before construction (far left) and after construction (right) during a flood in Spring 2000.

he aerial photos to the right show the PRRP 2000 project construction area, which was completed in May 2001 and began just below Highway 40 and ended at River Road in Midway. The photo to the right was taken before construction. The photo on the far right shows the project after construction during an early summer flood in 2001. While the photos are oriented at slightly different



angles the change in main channel structure, side channel habitat and expanded floodplain is apparent.

A n example of construction disturbance is shown below left where a wetland is under construction in the Pilot Project area to provide additional spotted frog habitat. Prior to construction, the area was dominated by non-native pasture grasses. Though unsightly during construction, disturbed areas quickly



recover as seen below right. Within weeks following construction, native wetland plants (rushes and sedges) were colonizing the area.





Side channels are historically important as spawning and escape habitat for native fish, such as the leatherside chub and Utah sucker. Side channels are being constructed primarily in upland areas dominated by non-native pasture grasses. They are planted with native riparian trees and shrubs, such as willow, alder, birch and dogwood. In addition to providing habitat for fish, side channels provide important riparian habitat for birds and mammals. The photos below show an area in the Pilot Project where a side channel existed historically (left). The photo to the right shows the side channel three months after construction through the PRRP.



U nder PRRP dikes are being removed to allow the river to reestablish a more natural alignment and appearance and revegetated to add habitat diversity. The photo above left shows a dike at one of the U.S. Bureau of Reclamation's man-made wetlands. The top of the dike extends well above the wetland level and is sparsely vegetated. Following construction, dikes are revegetated with native grasses, forbs, shrubs and trees, such as cottonwood, box elder, Wood's rose and hawthorne. The photo above right demonstrates a PRRP pilot project reconstucted wetland dike and restored vegetation.





he PRRP 2000 project took the main channel of the Provo River into new meanders in an open field. The work was conducted primarily from September through December, 2000 with minor addition in Spring, 2001. As a new meander was excavated the main channel is slowly diked to prepare for a diversion of water from the main channel into the new channel. The two photos above show excavation of a new meander and the diversion of water into it.

