General Project Summary

Quail chicks are the size of a thimble. This is why it is crucial for the project sites to provide vertical cover and bare ground.

The Delta Wildlife Quail and Grassland Songbird Habitat Restoration Project is designed to establish premium avian wildlife habitat and improve water quality on all agricultural landscapes. The program is implemented on private lands. Delta Wildlife and the landowners select sites on their property for project implementation. The majority of sites are usually not in production, rather adjacent to production fields. Typical project sites include secondary turn rows at the lower end of a field, between a drain and cropland. Once the project sites are selected, the private landowners donate three-year easements to Delta Wildlife for project implementation, establishment, main-tenance, and monitoring. Wildlife pays for 100% of the implementation cost. This includes site prep, planting, establishment, herbicide applications, and other needed treatments. Delta Wildlife will continue to pay for all maintenance for a period of three-years after planting. Cooperators provide the land for the project and are not compensated; however, 90% of the land enrolled into the project is not.

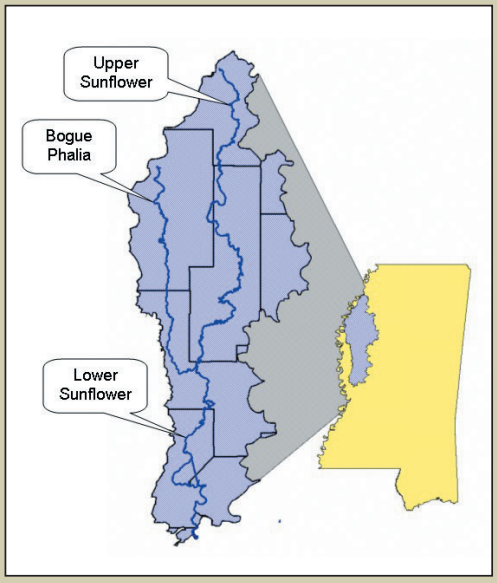
Male Bob-White Quail with chicks

Wild flowers add color to the project areas. They also attract insects that are used by quail and other birds as a food resource.

Project Operating Area.

The Bogue Phalia River Watershed was selected as the operating area for this project. This includes all lands that drain into the Bogue, Sunflower, or Quiver River from parts of 11 Delta counties. Nearly all streams in this watershed are listed on the EPA 303(d) list of impaired waters making them targets for any projects designed to improve water quality.

Project Components & Methods



Project Area

There are several components of the project that are paramount to the project's success. The first component is the willing cooperation of private landowners who choose to participate in the project. Cooperating landowners are identified by willingness to participate, a commitment to prevent harmful herbicides from damaging project sites, and the willingness to maintain the project site for a period of 10-years. Project sites are then identified on cooperator lands. Sites are selected in areas between cropland and water bodies where the greatest amount of water quality and wildlife benefits can be generated. All sites are required to be a minimum of 30 feet wide and 400 feet long.

Other components of the project included project site mapping, planning, establishment, and maintenance. These components are crucial for proper implementation. All sites are mapped using a GPS. The GPS information is then used to develop a GIS database where all activities and information can be recorded and geo-referenced. Mapping information is then used to develop implementation plans for each site. These plans are dependent on site width, site length, site acreage, adjacent crops, site slope, and topography. After plans are developed, they are implemented. This may include planting of grass filters, riparian buffers, contour buffers, the installation of water control structures, or any combination thereof. If weed pressure begins to hamper the growth of any plantings, herbicide treatments are made accordingly. After establishment, herbicides, bush hogging, and prescribed burning will be used as needed to maintain project sites.

The most important component of the project is monitoring. Scientists from Mississippi State University and the

James Braxton (lt.) of Wade, Inc. and Preston Arrington (rt.) meet with Trey Cooke (ct.) to inspect the tractor donated to Delta Wildlife for use on this project.

Planting warm-season grasses near a wetland south of Moorhead. All project sites are located adjacent to wetlands, streams, lakes, or rivers where croplands drain directly into the water body.

Mississippi Department of Environmental Quality have developed monitoring plans to document the water quality and wildlife benefits of the project sites. All known pollutants found in waters near agriculture are quantitatively proportional to sediment loads. Therefore, it is only necessary to measure sediment, as a reduction in sediment will equal a proportional reduction in all other agricultural non-point source pollutants. The Rusle Equation will be used to calculate sediment loading and reductions on all project sites. Analytical monitoring will be used to verify these calculations. Wildlife benefits will be measured by monitoring the responses of avian populations to the project areas. Selected project areas will be monitored for winter bird utilization, breeding season bird utilization, reproduction, and habitat resources (vegetative survey). All species of birds will be monitored; however, additional monitoring components have been added to more fully document quail population responses within project areas.

This Truax Drill was purchased by Delta Wildlife to plant fluffly seeded grasses. This is the only planter of its type in the Delta.

Bluestems after 4 months of growth. mature plants will have a basal diameter of 3 feet and reach 4 to 5 feet in height.

Partidge Pea - Left
Kobe Lesdedeza - Right

Primary Project Treatments

During the development of the project, the Implementation Committee established several project site prescriptions. One or more of these prescriptions would be used on each project site to generate maximum wildlife and water quality benefits. Some prescriptions included planting riparian forest buffers, field borders, and the installation of sediment retention structures in areas with point source agricultural run-off. However, the majority of the prescriptions included the planting of a contour buffer strips with specific plantings identified by the committee as having tremendous wildlife habitat potential and water filtering capabilities.

Six species of plants were identified for contour buffer plantings: Little Bluestem, Big Bluestem, Indiangrass, Switchgrass, Partridge Pea, and Kobe lespedeza. The Bluestems and Indian-grass would be used in a mixture to establish a native, perennial warm-season grass buffer. These plantings would establish slowly over a 3-year period, forming an excellent grass filter while providing significant habitat resources for quail, grassland songbirds, small mammals, and other species. Partridge Pea and Kobe lespedeza would also be used in a mixture to establish a legume buffer up-slope from the warm-season grass buffers.

The legume mixture would provide nitrogen to adjacent warm-season grass buffers and enhance the habitat value of the entire buffer. Switchgrass is primarily a water quality and erosion treatment tool and would only be used in areas with concentrated run-off.