



**YELLOWSTONE NATIONAL PARK
2008 Summary Report**

prepared by

**Natural Resources Conservation Service
Bridger Montana Plant Materials Center**

INTRODUCTION: The Bridger PMC has maintained a cooperative agreement with Yellowstone National Park (YNP) since FY 1986. The agreement facilitates the collection, increase, and reestablishment of indigenous plant material for restoration of disturbances resulting from road construction and other improvement projects within Park boundaries.

In 2008, eight allocations of 68 seed lots from 39 species were distributed to YNP, YNP-contracted growers, or to the PMC totaling 312 pounds (141 kg). This included 53 grass lots (25 species) weighing 310 pounds (141 kg); 13 forb lots (12 species) weighing one pound (0.4 kg); and two woody lots weighing 0.4 pound (0.2 kg). The distribution included nine grass lots (4 species) and one tree species to the BPMC for planting seed increase fields and container production.

ACCOMPLISHMENTS: Yellowstone National Park has identified future road projects allowing collection and production efforts to begin at least three years in advance of each project.

Wildland seed collections are made by YNP and BPMC crews, dried, and either delivered to the Bridger PMC, or picked up by PMC personnel. In 2008, 42 collections were made from 33 species: 36 grasses (19 species) at 57 pounds (26 kg), 16 forbs (9 species) at five pounds (2.2 kg), and three trees/shrubs (two species) at 0.5 pound (0.25 kg). The wildland seed collections totaled approximately 63 pounds (28 kg).

Records are maintained by the PMC of person-hours to collect each seed lot, from which the approximate cost of collecting native seed can be estimated. In 2008, YNP and BPMC personnel spent more than 253 person hours in the activity of seed collection on 10 different sites. There were 195 hours (approximately 8.5 hours per collection) dedicated to collecting grass seed on nine sites, 51 hours (approximately 3.2 hours per collection) for forbs on seven sites, and seven hours (approximately 2.3 hours per collection) for shrubs on two sites.

There were four grass increase blocks planted at the PMC on 0.96 acres (0.39 ha) in 2008. Seed increase blocks of six grasses on 1.13 acres (0.46 ha), were removed due to natural decline in production, project completion, or poor establishment. Currently there are two acres (0.8 ha) planted with seven accessions of six grass species in seed increase blocks at the Bridger PMC.

During the past growing season, eight grass accessions (three species) were harvested on two acres (0.8 ha). The total amount of seed produced was 226 pounds (103 kg), with the best grass stands yielding 150 lb ac (168 kg ha).

Purity analysis and tetrazolium viability tests were conducted on PMC seed increase production for five grass accessions. All samples were cleaned to exceed purity standards set forth for foundation seed class as established by the Association of Official Seed Certifying Agencies. The samples averaged 97% viability, 98% purity, and 95% pure-live-seed.

The wildland collection and seed increase inventory contains 516 lots (88 species) totaling 1,596 pounds (725 kg). This is comprised of 252 grass lots (25 species) at 1,532 pounds (695 kg), 256 forb lots (58 species) at 63 pounds (29 kg), and eight woody lots (five species) weighing approximately one pound (0.5 kg).

TECHNOLOGY DEVELOPMENT: All plant material collections are assigned accession numbers and inventoried in a database. The lot identification numbers have been upgraded to include identification by individual construction projects. Extensive assistance was provided in seed collection and study site selection for revegetating the Northern Boundary. A presentation, *Plant Materials in the Greater Yellowstone and Beyond*, was given on May 7th at the Weed Subcommittee of the Greater Yellowstone Coordinating Committee in Red Lodge, Montana.