

Mat Su Riparian Revegetation Project Progress

Report December of 2012

- Maintenance of field plantings and box garden
- Wild seed collections
- Seed harvest- fields and box garden
- Seed conditioning and cleaning

Maintenance of field plantings and box garden

By 2012 growing season species planted previous summer were well established.

During breakup field plantings were covered with 5 inches of water. Couple of days later the water turned into ice. Despite these harsh conditions both *Calamagrostis canadensis* and *Deschampsia beringensis* survived. There was minimal or none frost damage in the plantings.



Fig.1 *Deschampsia beringensis* and *Calamagrostis canadensis*

Same plantings a week later all the ice and most of the water are gone.



Fig.2 *D. beringensis*



Fig. 3 *C. canadensis*

Plantings later in the season.



Fig. 4 *D. beringensis*



Fig. 5 *C. Canadensis*

In May fields were fertilized and weed management program was implemented.

All the forbs species were planted in the box garden. This allowed easier and less labor intensive maintenance. Two boxes were designated to the same grass species grown in the field and provided additional data about the amount of seed produced.



Fig. 6 View of the Box Garden



Fig. 7 *Lupinus nootkatensis*



Fig. 8 *Aquilegia formosa*



Fig. 9 *Carex mertensii*

Willow and cottonwood cuttings overwintered well and are showing strong growth. Young trees were pruned to encourage development of bushier crown.

Regular mowing was necessary during the season.



Fig. 10 View of willow and cottonwood plot.

Wild Seed Collections

PMC staff did a wild seed collection on Lazy Mountain in mid August. Seed from wild stands of *Lupinus nootkatensis*, *Aquilegia formosa*, and *Carex mertensii* were collected. Second collection site was Palmer Fishhook Rd, where stands of tall fireweed (*Chamerion angustifolium*) were found and seed collected.

Seed Harvest- Fields and Box Garden

During the months of August and September multiple harvests in the box garden and the fields were done. This is due to the uneven seed maturation observed with native species. In the box garden harvest was done by hand and in the field with a brush machine. By harvesting multiple times maximum amount of seed is collected.

Seed Conditioning

After harvest seed is dried to desired moisture content. Then follows the seed cleaning during which inert matter, weed seed, and seed of other crops is removed. The goal is to obtain maximum percentage of pure seed with highest germination potential.

During 2012 growing season following amounts of seed was obtained after cleaning;

Fields:

Calamagrostis canadensis - 1200g

Deschampsia beringensis- 3100g

Box Garden:

Calamagrostis canadensis – 4.8g

Deschampsia beringensis- 248g

Chamerion angustifolium- 49g

Lupinus nootkatensis- 193g

Aquilegia formosa- 63g

Carex mertensii- 72g



Fig. 11 Clean seed from the box garden

Wild Collections:

Chamerion angustifolium- 61g

Lupinus nootkatensis- 648g

Aquilegia formosa- 20g

Carex mertensii- 37g

Total Weigh: 5695.8g or 12.5 lbs.



Fig. 12 Clean seed from wild collections