

Project 08S208
Annual Report – December 2005
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MESA VERDE
COOPERATIVE AGREEMENT

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INTRODUCTION - Upper Colorado Environmental Plant Center (UCEPC) signed an amendment to an agreement with Mesa Verde National Park September 24, 2003, for the production of containerized materials through 2005. Eight species, including seven shrubs and one tree, were to be delivered in September, 2005.

Contract Species with Deliverable Targets

| Common Name | Scientific Name | Accession Number | Quantity |
|--------------------|----------------------------------|-------------------------|-----------------|
| Chokecherry | <i>Prunus virginiana</i> | 9070995 | 175 |
| Douglas fir | <i>Pseudotsuga menziesii</i> | 9070997 | 100 |
| Fourwing saltbush | <i>Atriplex canescens</i> | 9024878 | 100 |
| Gambel oak | <i>Quercus gambelii</i> | 9024895 | 875 |
| Mountain mahogany | <i>Cercocarpus montanus</i> | 9024874 | 260 |
| Snowberry | <i>Symphoricarpos oreophilus</i> | 9024898 | 675 |
| Utah serviceberry | <i>Amelanchier utahensis</i> | 9024869 | 875 |
| Woods' rose | <i>Rosa woodsii</i> | 9070996 | <u>175</u> |
| | | | 3235 |

OBJECTIVE – Work continues on the main entrance road to Mesa Verde National Park. The objective of this agreement is for UCEPC to produce quality plants of the target numbers by species for restoration work after road construction. The addition of containerized shrubs to the revegetation work will contribute to the overall appearance and aesthetic appeal of the construction work once completed.

ACTIVITIES - UCEPC initiated production on the above species in 2003 with anticipated delivery of September 2005. UCEPC utilized four different types of containers to optimally match root structure with container in terms of shape and size. Six cell “Tubepacks”, four cell “Bookplanters”, ten cubic inch “Conetainers” and thirty two cubic inch “Zipsets” were all used for production. A standard soil mix of vermiculite, perlite and peat moss was used in each container type for propagation. In most cases, materials were planted as they germinated after and during cold, moist treatment.

RESULTS – Production of Gambel oak and chokecherry exceeded production targets. However, all other materials were either not produced in adequate numbers or were not of large enough stature for successful transplanting.

The table below identifies the targeted numbers of container grown materials delivered to the park on September 28, 2005. Because UCEPC was 672 plants short of the agreement, additional materials will be produced in 2006 to make up for the shortfall. In addition, two small production agreements were made directly between Mesa Verde National Park and UCEPC to produce most of the same species with the same delivery date. Production of approximately 330 additional shrubs will be conducted in 2006 to complete these agreements. Present inventory

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(11/15/05) consists of 628 containerized shrubs for 2006 delivery. Germination of several species continues.

On May 5, 2005, a shipment of 20 species of Mesa Verde collected seed was sent to the park. A second shipment of seed was made to James Ranch Landscaping on October 20, 2005. This seed was field produced by UCEPC in a previous agreement. Mesa Verde personnel also picked up 900 container grown shrubs from UCEPC on September 1, 2005, as partial completion of the two production contracts with Mesa Verde.

| Common Name | Scientific Name | Targeted Quantity | Delivered Quantity | Shortfall | Adjusted Numbers |
|--------------------|----------------------------------|--------------------------|---------------------------|------------------|-------------------------|
| Chokecherry | <i>Prunus virginiana</i> | 175 | 266 | | 91 |
| Douglas fir | <i>Pseudotsuga menziesii</i> | 100 | 0 | | 100 |
| Fourwing saltbush | <i>Atriplex canescens</i> | 100 | 35 | | 65 |
| Gambel oak | <i>Quercus gambelii</i> | 875 | 1130 | | 255 |
| Mountain mahogany | <i>Cercocarpus montanus</i> | 260 | 237 | | 23 |
| Mountain snowberry | <i>Symphoricarpos oreophilus</i> | 675 | 285 | | 390 |
| Utah serviceberry | <i>Amelanchier utahensis</i> | 875 | 477 | | 398 |
| Woods' rose | <i>Rosa woodsii</i> | 175 | 133 | | 42 |
| Total: | | 3235 | 2563 | 672 | |

Delivered numbers greater than targeted

SUMMARY – Production of containerized materials will continue into 2006 to make up for materials not delivered by UCEPC in 2005. Utah serviceberry and mountain snowberry are far short of their target numbers and efforts will be focused on producing these target numbers. There has been interest expressed by Mesa Verde for an additional two party agreement for the production of containerized plant materials in 2006, but no agreement is in place at this time.