

Friends of Northern Arizona Forests

P.O. Box 3041
Flagstaff, AZ 86003-3041



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Year-end Report on RAC project entitled “Propagating Aspen Clones: Survival in the 21st Century”

Context for the calendar year 2011

During the calendar year 2011, Friends of Northern Arizona Forests (FoNAF) held two grants to propagate browse-resistant aspen clones.

(1) A matching grant from the National Forest Foundation (NFF) and the National Association of Forest Service Retirees (NAFSR), which runs for the 15-month period January 1, 2011, through March 31, 2012. Together with FoNAF’s own funds, the grant has paid for greenhouse work by The Arboretum at Flagstaff (work which commenced in April 2011).

(2) A RAC grant for the five-year period August 1, 2011 through August 1, 2016. The primary expenditures from the RAC grant are to be for greenhouse work (after the NFF grant runs out) and for help in planting 400 saplings per year (starting in 2012). For the latter half of 2011, the expenditures were to be for supplies to construct one or two small exclosures (that is, fences eight feet high) that would protect control saplings in later years.

This year-end report describes work supported by the NFF & NAFSR grant. So far, no reimbursement has been requested under the RAC grant (for reasons that I will explain).

Field and greenhouse work in 2011

Dave Laplander, Mark Ives, and I collected aspen root segments in April and May. The Arboretum incubated the segments, which produced suckers; the Arboretum took about 120 cuttings. Here’s a photo, taken on June 30, 2011, of most of the cuttings as they sat on the misting bench while their roots developed.



Then a fungal disease killed almost all the cuttings (and seriously damaged the remaining suckers). Too late, the Arboretum began to apply a fungicide (which was plain sulfur).

Already in mid-July, Dave Laplander and I had recognized that we were not meeting our goal of 400 saplings. In early August, we collected more root segments, which have produced more suckers. Here is a photo, taken October 17, 2011, of suckers emerging from the new roots in an incubating tray.



On October 20th, the first cuttings were taken. Whether the new cuttings will survive is not clear. When I saw that the Arboretum's choice of fungicide was not working, I asked FoNAF's consultants for a more effective product. On October 31st (or shortly thereafter), the Arboretum began to use Bordeaux mixture.

This description of nine months of work by FoNAF and The Arboretum is deliberately brief. I have available an extensive chronology (that commences in November 2010). Also, I have available a detailed explanation of why I have lost confidence in The Arboretum's ability to perform the greenhouse work that the RAC project requires. As the final paragraphs of this report will make clear, much of that additional information is no longer needed.

About the exclosures

As I mentioned above, FoNAF had intended to construct one or two small exclosures to protect control saplings from browsers after saplings were planted in 2012 and in subsequent years. The exclosures are needed in the eastern portion of the Hart Prairie area, where elk and deer are common browsers but livestock are prohibited. (Plenty of exclosures already exist where all three herbivores--elk, deer, and livestock--browse.)

As part of the Hart Prairie Fuels Reduction and Forest Health Restoration Project, the Forest Service plans to ignite prescribed burns in the area of interest. In constructing the exclosures, FoNAF plans to use wooden stays between adjacent metal T-posts, and so construction is best done after the deliberate fires have burned themselves out. Unfortunately, the schedule for the burning program has changed, and the area of interest has not yet been burned.

FoNAF's Aspen Team can easily construct a small exclosure (20' by 100') in a day's time. So deferring the construction of one or two such exclosures until May or June 2012 poses no problem. Provided saplings are available, planting work can continue as originally scheduled: at the start of the monsoon season.

If saplings are not available for planting in 2012, construction of exclosures may be deferred until 2013, when the prescribed burning will surely have reached the eastern area. Of course, the exclosures and the saplings planted both inside and outside the exclosures could be protected with a fire line. It would be best, however, to build the exclosures on ground that had been burned (and the influence of grasses reduced).

Volunteer hours contributed

The table here shows the number of volunteer hours contributed to the propagation project during the calendar year 2011. The right-hand column pertains to the period of the RAC grant.

Activity	January through July	August through December
In the field	53	38
Meetings & at desk	23	101
Composite of all activities	76	139

Request for permission to change the greenhouse partner

On November 22, I met with the staff at the NAU Research Greenhouse. I explained FoNAF's project and its history. When we discussed methods for propagating aspen, I was impressed with the staff's knowledge and the diversity of approaches that the staff suggested. Early on December 14, I received a (revised) proposal that describes a three-fold approach to propagating aspen, that is fiscally affordable, and that would provide a seamless transition from one greenhouse to another at the end of March 2012.

I believe that the RAC project would benefit immensely if the roots collected in April 2012 were to go to the NAU Greenhouse (rather than to The Arboretum).

To my surprise, later on December 14 I received an email from Dr. Kris Haskins at The Arboretum. Dr. Haskins informed me that The Arboretum would not continue FoNAF's aspen work when the current agreement ends on March 31, 2012. The message said, "As you are aware, we do not have the best greenhouse conditions for rapid propagation and we are understaffed." The message went on to suggest that I contact the NAU greenhouse.

I have discussed the situation with Patty Ringle, the Program Manager at the Flagstaff Ranger Station, and with Elizabeth Vensel, the Grants Management Specialist in the Supervisor's Office. As I understand things, both support a shift, and, in fact, The Arboretum's decision has left no alternative. In closing this report, I request formal permission to shift the greenhouse work to the NAU Research Greenhouse.

Submitted by

Ralph Baierlein

Ralph Baierlein
President, Friends of Northern Arizona Forests