

Meeting Minutes

Arana Gulch Adaptive Management Working Group

Planning Conference room 809 Center Street, Room 107 Santa Cruz, CA

9-4 pm July 16, 2014

Participants:

Susan Bainbridge, Researcher, UC Jepson Herbarium
Noah Downing, Planner, City of Santa Cruz Dept of Parks and Recreation
Mike Ferry, Planner, City of Santa Cruz Dept of Planning and Community Development
Mauro Garcia, Parks Superintendent, City of Santa Cruz
Grey Hayes, Consulting Botanist, CNPS
Kate Huckelbridge, Ecologist, CA Coastal Commission
Tim Hyland, Ecologist, CA State Parks
Suzanne Schettler (CNPS alternate)
Alison Stanton, Research Botanist, Consultant (facilitator)
Melissa Farinha, Biologist, CDFW (9-11:30)

OBSERVERS:

Jean Brocklebank, FOAG
Debbie Bulger, CNPS
Michael Lewis, FOAG
Richard Stover, FOAG

SUMMARY OF ACTION ITEMS

Riparian Re-vegetation Plan: Noah Downing will work with Kathy Lyons to incorporate the recommendations into a modified plan and to submit the plan to Melissa Farinha for written approval. The AMWG will have an opportunity to review the plan pending final approval.

Area C soil salvage: The City will incorporate recommendation in construction plans to thinly spread the top 6" of soil within 20 feet of the mapped boundary of Area C (approximately 3 yards of soil) very thinly throughout the coastal prairie from the northern part of Areas C and D moving southwest across the terrace. The City will also consult with the contractor to spread at least the top 3" of soil N of Area C as thinly as possible in the adjoining grassland to conserve native seedbank from those soils. The results of that consultation will be communicated as soon as possible to the AMWG.

SCT census: Kathy Lyons has counted 4 SCT plants in the usual spot and will check shoulder of E-W trail for SCT during the census.

Weed and Woody Plant Removal Recommendations:

- Map Bay Area Early Detection Network and CalIPC priority weeds in all 3 management areas to a level of detail that will inform management.
- Delineate the area that will be maintained as grassland
- 1 voting AMWG member will inspect the grassland delineation in the field with the City before finalizing the delineation

After the grassland delineation is complete, the AMWG would like cost estimates for the following activities:

- Treatment of perennial pepperweed near the harbor and otherwise in the riparian area and medusahead (if found)
- Woody species removal in mapped grasslands
- Scraping and subsequent herbicide treatment of re-sprouting Himalayan blackberry within coastal prairie
- Scraping 3 100x 100 ft plots down to bare ground. The AMWG mapped these locations in NE grassland outside of fencing
- Continued spring time flail mowing in ungrazed areas, including the NE corner and fire breaks

Grazing Program: The City will incorporate recommendations into the Stocking and Work Program Exhibit A that will be part of the professional services contract.

Seed Collection: The City will seek CDFW approval to collect up to 5% of the SCT seeds and work with qualified/approved facility to store these seeds so that they may be used to help recover the population at a later date.

Mowing: The City will provide the AMWG an estimate for fire break mowing and mowing of the coastal prairie areas, including the NE corner, as that cost will be covered by the 20K budgeted for the current fiscal year.

Location of N-S trail: The AMWG reiterated the value of placing the N-S trail as close as possible to the western property boundary to conserve more of the coastal prairie

New AMWG Members: The City and the Coastal Commission will decide on additional AMWG members that may have wildlife and/or rangeland management expertise and advise the group on their selection(s)

Annual Reporting: The City and the Coastal Commission will let the AMWG know about their decision on an annual reporting cycle. The City will send the current year report to the AMWG with sufficient time for their review.

AGENDA ITEMS

1. Propose modifications to the Arana Gulch Multi-Use Trail Riparian Re-vegetation Plan

The meeting convened at 9am at the Harbor entrance to Arana Gulch. The group walked along the fence line of the causeway construction toward Arana Creek to view the hillslope slated for re-vegetation as mapped and described in Exhibit A of the Riparian Re-vegetation Plan. The group discussed modifications to the plan that would improve success criteria and simplify the methods.

10:30 Meeting re-convened at the City Planning Department Conference Room

2. Modifications to the Arana Gulch Multi-Use Trail Riparian Re-vegetation Plan

Recommendations were provided for the following sections of the Plan Notes:

A. General Information

- Include adaptive management as part of the plan

B. Planting Operations

The hillslope slated for re-vegetation at Arana Creek identified in Exhibit A is an erosion concern and the project area is not clearly identified within the orange polygon on the map provided to the AMWG. The planting operations could be simplified as follows with less cost to the City and an increased chance of success:

- pre-irrigate if possible prior to hydro-seeding
- irrigate, if necessary, after planting so that vegetation is well established before onslaught of rains
- utilize a sterile hydroseed mix, rather than the specified native grass and shrub mix to provide quick ground cover
- correct Himalayan blackberry scientific name to *Rubus armeniacus*

- install willow cuttings from local willows
- Maintenance of 80% cover of both planted and naturally regenerating species in the herb and shrub layers (excluding tree cover) is an appropriate success metric. No container stock/division survival criteria is needed
- Map drainage outfalls from project hardscape and create success criteria specific to those specific and especially vulnerable sites.

For the flat areas identified within the green polygons:

- Re-vegetation with divisions of *Artemisia douglasii*, *Rosa californica*, and *Elymus triticoides* instead of container-grown stock of *Quercus agrifolia* and *Ribes sanguineum*
- Maintenance of 80% cover of both planted and naturally regenerating species in the herb and shrub layers (excluding tree cover) is an appropriate success metric. No container stock/division survival criteria is needed

C. Maintenance Requirements

- Clearly delineate all project areas and transects for ease of 3rd party monitoring
- Extend maintenance period beyond 5 years if success criteria are not met
- Reference the CalIPC Invasive Plant Inventory for weed removal and modify list to correct name of Himalayan blackberry, add *Lepidium latifolium*, *Carpobrotus edulis*, and *Eucalyptus globulus*, and remove genus limitation on “thistles”.
- Simplify watering regime requirements to be “as needed”

D. Monitoring Requirements

- Extend monitoring period beyond 5 years if success criteria are not met
- Use % cover as measured with a CNPS rapid assessment or releve method as the success metric
- Monitor for erosion on steep slopes at specific points and require 100% ground cover at these points
- Specify what happens if success criteria are not met within time frame

The City wishes to work with Kathy Lyons to incorporate the above recommendations into a modified plan and to submit the plan to Melissa Farinha for written approval. The AMWG will review the plan prior to final approval.

3. Finalize recommendation for placement of salvaged topsoil from within 20 ft of Area C (discussed after seedbank assessment results)

The group estimated that approximately 3 yards of soil area Area C would qualify under the requirement of the USFWS Biological Opinion for salvage and re-location. The recommendation is:

“Thinly disperse the top 6 inches of soil from around Area C from the northern part of Areas C and D moving southwest across the terrace.” One method of doing this is to fill a truck with the soil and use shovels to fling the soil around as the truck moved slowly.

Budget-

For the fiscal year July 1, 2014 – June 30, 2015, the City has allocated \$20,000 to activities specified by the Adaptive Management Working Group, including mowing for firebreak maintenance and experimental treatments. Labor provided by City retained biologist Kathy Lyons is covered under a separate funding source. The AMWG agreed that it needs to consider the range of priorities for that entire year to effectively budget this limited funding.

4. Seed bank assessment and soil study results/ potential for propagation

Sue showed several slides with the results from the seedbank assessment. The soil study results are not yet available. Sue will distribute the results to the group of both when available. Several key points include:

- There was a significant decrease in viable seeds since 2001, both in total number of seeds and seed density, although some viable seeds remain in Areas A and D. No viable seeds were found in areas B & C
- Successful management of the prairie for recruitment of SCT has only occurred a couple of times and in very small area since 1988 and so the SCT seedbank has been lying dormant and aging for 26 years
- Genetic diversity has likely declined.

The group further comments that the flush of SCT along the E-W trail was promising and that the area should be closely checked for SCT during the census. The group also discussed the timeline for grazing. Fencing is scheduled to be completed in August/September. Grazing could occur in Nov. (possibly before the end of the construction contract in November). There was general agreement that there is some benefit to getting cows out on the prairie before it rains.

Sue is currently propagating 14 seedlings. The group recommended establishment of an ex situ seed bank from annual collection of 5% of seed, representing as many individuals as possible. Seed from each individual should be kept separate and stored appropriately until placed in a long term storage facility. It would be good if Kathy Lyons started this year.

After meeting note* From the HMP MOU: “The details of seed collection and ex-situ propagation shall be approved by CDFW in advance in writing”.

5. 2014 Baseline assessment results

Alison briefly showed a map of the transect locations that have been installed across the prairie. The mowing damaged most of the re-bar caps so re-location will happen with GPS.

6. Priority weed control recommendation: recommendation for herbaceous and woody plant species removal

The first priority is to map weeds in all 3 management areas to a level of detail that will inform management. A comprehensive weed inventory is also needed but all species do not need to be mapped.. The City will ask Kathy Lyons to do that, and it will not fall under the 20k management budget for the upcoming year. Volunteers could be available to help, but a single person produces more reliable results. A clear written record of the survey methodology will be important, including the specific paths taken during the survey and identification of any areas that were inaccessible. Make sure to keep an eye out for the species on the Bay Area Early Detection Network Priority Species List available at: http://www.cal-ipc.org/WMA/BAEDN/BAEDN_EDRRSpecies2010.pdf

The second priority is to map the area that will be maintained as grassland. The group had lengthy discussion on how to do this that progressed section by section around the entire grassland perimeter. The City will ask Kathy Lyons to do the mapping. Key guidelines include:

- Map the grassland within a 20’ buffer of the coastal prairie loop trail. The map will be a GPS route overlay on satellite imagery. There will be some subjectivity here and the group would like to review the map by having one voting member inspect the areas delineated with the City before finalizing the map.
- For now, do not include the NE section of the prairie that is outside of the fence and trail network as part of grassland area to maintain. To investigate the quality of this grassland and assess future habitat goals scrape 3 100 x 100 plots to bare soil before the first rains this fall. This can be accomplished with hand crews using McClouds to scrape away all biomass but not soil. Feather the removed biomass into adjacent grassland. Also maintain mowing in this area.
- Consider planting and otherwise maintaining the area E of coast loop trail near the intersection with the marsh vista trail as wetland.
- It is not necessary to maintain the area west of the N-S paved trail north of Area C as grassland.

To best allocate limited resources and the 20K budget for FY2015, the AMWG would like cost estimates for the following activities:

- Treatment of perennial pepperweed in the riparian area near the harbor and otherwise and medusahead (if found)
- Woody species removal in mapped grasslands
- Scraping and subsequent herbicide treatment of re-sprouting Himalayan blackberry throughout prairie
- Scraping 3 100x 100 ft plots down to bare ground. The locations have already been mapped in NE grassland outside of fencing
- Continued mowing in unfenced areas

Recommendations were discussed for each of these activities:

Perennial pepperweed : Herbicide treatment of perennial pepper is necessary to prevent re-sprouting. Ideally, this needs to happen now while there is downward translocation going on.

Medusahead: handpull immediately if found.

Blackberry: removal should utilize mechanical equipment to scrape it away and then treat re-sprouts with herbicide. The timing is not crucial and can wait until people have harvested fruit this summer.

Woody plant removal:

Remove all non-native woody species within the mapped grassland.

Remove all coast live oak and coyote bush within the mapped grassland that are less than 8 inches diameter.

Cut woody plants and immediately treat stump with herbicide-it's a two person job. The best timing is late spring or early summer for translocation of herbicide through stump. If cutting happens this year, then cut high so the stump can be re-cut and re-treated next year. Blow the chips into the adjacent oak woodland. If the chipper will be impeded by the fence then do treatment this winter. Any chips landing on grassland shall be removed.

In January propane torch woody seedlings that emerge.

7. Implementation of Grazing Program

The group reviewed the handout with language from both the HMP Grazing Program in section 3.7 and the Stocking and Work Program Exhibit A that will be part of the professional services contract. Recommendations are as follows:

- Describe the AMWG and the AM process so the Grazer understands he will be receiving recommendations from the group and may need to interact directly with the AMWG
- Include specific goals and objectives for SCT and the coastal prairie from the HMP
- Specify 1x per month communication between City and Grazer
- Specify an annual meeting in August to review the objectives and form a plan for the following year
- Refer to the National Range and Pasture Handbook (NRCS 2003) for guidelines on best management practices (BMPs)

A further discussion ensued about how grazing will be implemented and how it will be received by the public. Several issues were raised regarding difficult dog- cow interactions and that cows will eventually get loose. Several recommendations were made:

- Make sure there is signage on the site that lists the name and phone # of a person to contact
- Provide information on importance of leashing dogs to protect against injury from livestock
- Include information on the grazing plan and objectives on the website-get materials from Sheila Barry on grazing and public outreach- the AMWG would like to review the language
- Moving cows across the E-W trail poses a safety risk and impediment to cyclists and trail users. Consider installing gates that can block access when open.
- Consider periodic press releases from the City on the grazing program and other management activities
- Consider allowing human access in fenced areas when cows are gone- agenda item for next meeting.

8. Addition of new members to AMWG

Kate explained that she has been looking for an academic to add to the group. Everyone agreed that additional expertise in wildlife or riparian restoration would benefit the group. There is social science research that indicates that 10-15 members provide an optimal size for a decision-making group and therefore we may want to add several members.

UC CoopExt is hiring a new certified range manager (CRM) for the region. Having that person as a formal member of our group is free and could make a lot of resources available. In addition that person would presumably be involved with the management of other SCT populations and so could provide cross pollination of sorts with additional land managers. Sheila Barry has been in the position and will know who gets hired and when so we should stay in contact with her in order to issue an invitation before the workload gets huge.

9. Public comment period

The public was allowed to provide input throughout the meeting. During the reserved period, the main issue raised was that the website needs improvement and a clear and effective mechanism to receive public comment such as a form for interactive communication.

10. Debrief and objectives and outcomes and next AMWG meeting

Alison briefly re-capped the actions items listed above and then re-requested discussion of timing for the next AMWG meeting and agenda items.

AMWG meeting timing: Meeting 3x per year seems adequate. Next meeting should be in November to prioritize tasks for last 6 months of FY2015. A meeting in Jan-Feb will focus on management actions/budget needs for FY2016.

AMWG Agenda: Add standing agenda item for a “time of learning” to discuss how recommendations are being implemented, what worked well, what needs improvement, and how we can continue to adaptively manage most effectively.

Reporting: The CDP require annual reporting of the HMP implementation. The AMWG needs to review this report and needs to identity a plan for review process. . The group discussed that the initial implementation date of the HMP should be the start of the reporting year, but it was unclear when that implementation date would be.

4:00 Adjourn meeting