

## WORKPLAN FOR SIERRA CLUB HIGH SCHOOL HIKERS ECO CAMP

Sunday, February 19, 2012 (9am to 3pm)

### BWS MAKAHA VEGETATIVE FIRE BREAK

**WHERE:** Makaha Valley, off of the fire lane at the end of Kili Drive. Vehicle access is restricted by a locked gate at the end of Kili Drive. Parking is available around the reservoir tank and about 10 vehicles can fit in this area. Work efforts will be concentrated at Site 2- located above the BWS reservoir facility.

**WHAT:** Create a vegetative firebreak. The long-term goal is to establish a line of dense canopy to reduce grass cover, which quickly transports fire.

**WHY:** The goal of a vegetative firebreak is to prevent or slow the spread of fire into forested areas. This will create a buffer between the urban and conservation areas and provide a first line of defense against wildland fires.

**ESTIMATED PEOPLE:** 60 ± 10 PEOPLE

#### Aerial view of project area



#### Contact information

Amy Tsuneyoshi, Watershed Specialist. Phone: 748-5936/ cell: 222-5613 Email: [atsuneyoshi@hbws.org](mailto:atsuneyoshi@hbws.org)

HISTORY: The last major fire in Makaha was in October 2007. It started near the Makaha Towers and quickly burned through the sloped areas covered with koa haole and guinea grass and spread to the forested areas. It burned out of control for about a week, charring over 500 acres.

SITE DESCRIPTION: The area we will be working in is Site 2 and is located just above a BWS reservoir tank. The distance from the facility fence up to the base of the cliffs is about 800ft and the initial firebreak will be 25-50ft wide. The area is open with little shade, and has uneven terrain with loose rocks. The main vegetation in the area is guinea grass and koa haole with Kiawe trees in the upper areas. Dead grass can hide the rocks and holes underneath. Care should be taken when walking through the area.

TASKS: Clear guinea grass, create and maintain pathways in and around the firebreak, create suitable planting areas, plant trees or scatter seeds, and possibly install weed barriers around plants and construct water catchment device.

#### CLEARING

- Cut some koa haole near ground (leaving 1ft stub) and secure cut branches behind to act as soil erosion control barrier (max height of 1ft). Some plants will be left as shade for the outplanted plants.
- Cut grass clumps around the planting areas (just below the surface but leaving roots in soil) and lay it contour to slope and around the newly planted plants to act as mulch/shade. In the really rocky areas, clear away the dead grass.
- Grass and other vegetation that are cut will be left on site to act as mulch and add organic matter to the soil. The larger materials will be utilized to stabilize the slopes by placing it on the contour of the slope.

#### PLANTING

- Put in plants 10 ft apart with at least 2 staggered rows- I'll try to have at least 100 plants, maybe 150. Pot sizes will vary from 4" to 1 gallon pots and plant heights will range from 3" to 2'. (Milo, Kou, Hala, Mahogany, maybe Ulu, Sapodilla, etc...). It may be difficult to dig good planting holes as the area is rocky.
  - Rocks can be mounded around the plants after planting to act as mulch and deter goats from browsing.
  - Depressions or low points in the slope contour/topography will be utilized for plantings. Water running off the slopes will be directed to these areas, which will provide irrigation to the plants. Demonstrate planting hole.
- We will need to transport water up to the newly planted plants to water them. I have 2-6gallon containers and several 1 liter bottles. Once plants are in the ground, they need to be watered well. A minimum of 1 liter of water per hole, watering slowly to prevent water runoff.

#### WATER SYSTEM

One large tote (350-450g) will be filled for non-potable purposes- watering plants, clean up.

- If we have time, we can transport an empty tote up to the worksite. We can decide that day- after you take a look at the trail and see if it's a suitable task for the students. The start of the trail from the road will be the hardest in terms of footing.
- At a later date, a non-permeable surface (eg. Corrugated roofing material or plastic tarp) will be constructed on top of the tote to maximize rainfall capture. Lumber and pvc pipes will be used to direct the water into the water catchments.

I have some tools:

hand picks (10)

small/med sickles (20)

hand weeders (10)

handsaw (3)

Please bring your own gloves and enough water for the day as the facility does not have running water.