



# Flagstaff Watershed Protection Project Biannual Report January - June 2017



## **BACKGROUND**

In November 2012, City voters overwhelmingly approved (74%) the \$10-million-dollar Flagstaff Watershed Protection Project (FWPP). This forest treatment effort, involving city, state, and federal lands, is designed to reduce the risk of severe wildfire and subsequent post-fire flooding in the Rio de Flag (Dry Lake Hills) and Upper Lake Mary (Mormon Mountain) watersheds. This report highlights significant accomplishments from January - June 2017.

## **ON THE GROUND WORK**



ACE Crews Hand Thinning  
in Dry Lake Hills

**Dry Lake Hills:** Forest treatments that consist of tree thinning in the Dry Lake Hills will be implemented in two phases. Phase I will occur on the lower slopes of Dry Lake Hills/Mt Elden and, following this, Phase II will consist of treatments on the upper slopes. Arizona Conservation Experience (ACE), US Forest Service (USFS), and City of Flagstaff crews have hand thinned 108 acres in the area. Hand thinning is being conducted because the terrain is steep and rocky and cannot be thinned with ground based mechanical equipment. Phase I mechanical thinning operations are expected to begin late summer and continue into December. In Phase II, layout and marking of treatment units has been completed, totaling 2,629 acres. Tree marking guidelines and prescriptions have been completed for Phase II hand thinning units. In addition, USFS personnel have almost completed all work related to cruising, a forest inventory that estimates the quantities of wood according to species, size, quality, and other characteristics. Contract preparation has begun for thinning with ground base equipment in portions of Phase II which is expected to go out for bid this fall.

## **Observatory Mesa, Brookbank Meadow and State Trust**

**Land:** Mechanical thinning treatments totaling 384 acres on Observatory Mesa (Section 8) have been completed. Hand thinning on Section 6 on the Mesa will continue through this winter. Approximately 500 acres (Section 20, near Amberwood) have been mechanically thinned on State Trust land. Logs and chips are being transported to Phoenix for processing into and pallets and mulch and firewood was distributed to Tuba City residents. Slash piles will be burned as conditions allow. A Digital Restoration Guide that marks units using a digitally formatted map was used to implement treatments on the Mesa and to plan treatments on Brookbank Meadow, a Navajo Nation parcel that is located in the middle of the Dry Lake Hills. This technology helps lower costs and increases the efficiency of forest thinning projects. These forest treatments are the first step towards reducing the threat of severe wildfire and promoting a fire adapted ecosystem where future low intensity surface fires can play a historic ecological role that minimizes excessive debris on the forest floor and recycles soil nutrients that promotes diverse understory growth.



Feller Buncher Cuts and  
Gathers Small Diameter Trees

## **OUTREACH**

FWPP presented to several professional groups and organizations. This included a presentation and discussion with faculty and graduate students at Northern Arizona University's (NAU) School of Forestry Seminar. In addition, we shared our successful efforts with the USFS's International Programs' International Seminar on Watershed Management – 23 individuals from 15 countries participated. In March, we displayed an exhibit booth and led presentations at Arizona's Wildland-Urban Interface (WUI) Summit – Living with Wildfire. During the Summit, we shared how FWPP assists in reducing risk to communities, creates resilient fire adapted ecosystems and funding strategies. FWPP hosted a field tour to demonstrate our progress to the Western State Foresters/Western Forest Leadership Council's annual meeting, which included State Foresters and USFS Regional Foresters from across the country. We also participated in several public events that included Earth Day and the Harvesting Methods Open House & Wildfire Preparedness Day. These events provided the opportunity to share our progress with the public and to prepare them for in-the-woods mechanical thinning operations. As on-the-ground work ramps up, informational kiosks and sandwich boards will be located at key trail heads in the Dry Lake Hills that will include current information like locations of treatment operations and area and trail closures.



**Field Tour: Western Forest Leadership Council**

## **MONITORING**

The City Monitoring Plan, a community-driven strategy, contains four capacity monitoring frameworks: 1) Fire Behavior, 2) Hydrologic Response, 3) Socioeconomic, and 4) Other Ongoing/Potential Monitoring Projects. The City's Utilities Department is installing two hydrologic monitoring stations in the Dry Lake Hills that consists of precipitation gauges and stream flow transducers. These stations are some of the first hydrologic instrumentation in the area, which will be used to assess the effects of precipitation amounts to stream flow and extreme weather events in the area. Several research projects are being conducted by NAU graduate students who are studying log drying rates and associated insect activity and wood quality on Observatory Mesa. Lastly, the USGS is using wood chips from the Mesa for rangeland restoration research on Babbitt Ranch.



**Spruce Ave. Rain Gauge Station**

## **FWPP "IN THE NEWS"**

In looking towards increased on-the-ground work in the coming years, FWPP was featured on CBS' Good Morning Arizona with the story "[Wildfire, flood risks spur forest thinning near Flagstaff.](#)" In addition, FWPP was featured in *Forest Journalism for a Sustainable Future* with an article, "[Western communities create partnerships to restore forests, protect watersheds.](#)"

## **FINANCIAL INVESTMENT AND LEVERAGED FUND**

To date, through cash or in-kind service contributions, partners have provided \$4 million to the project; this is over and above the City's \$10 million commitment. FWPP also secured numerous grants this period and these funds will be used for thinning in the project area. The bulk of this additional investment has come from the USFS, but 13 other partners have also contributed to the project, demonstrating the widespread financial support the project has received.

## **SUMMARY**

We continue to make steady progress and are committed to the goals of reducing the threat of severe fire, protecting two critical watersheds, and enhancing community well-being. We are excited to begin full-scale implementation in the National Forest in the Dry Lake Hills this year. We are devoted to the success of this innovative project that is designed to maintain the quality of life of our community. Thank you for your continued support!