

# **GREATER FLAGSTAFF AREA**



## **COMMUNITY WILDFIRE PROTECTION PLAN**

***REVIEW & REVISION***

**May 2012**

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## PURPOSE

In the summer of 2011, the Greater Flagstaff Forests Partnership (GFFP) and Ponderosa Fire Advisory Council (PFAC) initiated a project to “review” the “**Community Wildfire Protection Plan for Flagstaff and Surrounding Communities in the Coconino and Kaibab National Forests of Coconino County, Arizona**” (CWPP). First approved in 2005, the CWPP review is designed to assess the status of implementation activities and evaluate progress towards desired goals. Although not required per the authorizing legislation (Healthy Forest Restoration Act of 2003 - HFRA), nor by the CWPP itself, this was intended to analyze activity within the CWPP area that addressed goals or was influenced by the plan, and to develop a report for local government and land management agencies on findings - it was not designed to revise the text or intent of the CWPP. Primary emphasis was placed on summarizing treatment activity to date and reviewing the “Improved Protection Capabilities” section included on pages 40-43 of the Plan.

## INTRODUCTION

The Greater Flagstaff Area Community Wildfire Protection Plan was approved by the Arizona State Forester, Coconino County, City of Flagstaff, and Ponderosa Fire Advisory Council (representing local fire departments and fire districts) in January of 2005. Jointly developed by the GFFP and PFAC, the plan covered a 939,736-acre area centered on Flagstaff. Working closely with US Forest Service staff and the NAU Forest Ecosystem Restoration Analysis (Forest ERA) program, the CWPP was designed to address the following Goal, Objectives and Principles (quoted from the CWPP):

### GOAL

*To protect Flagstaff and surrounding communities, and associated values and infrastructure, from catastrophic wildfire by means of:*

- a) An educated and involved public,*
- b) Implementation of forest treatment projects designed to reduce wildfire threat and improve long term forest health, in a progressive and prioritized manner, and*
- c) Utilization of FireWise building techniques and principles.*

### OBJECTIVES

- Create a healthy and sustainable forest and protect communities by implementing forest treatments designed to reduce the threat of catastrophic wildfire.*
- Engage the public by providing opportunities in both preparedness and mitigation efforts.*
- Support efforts to establish effective and sustainable methods to utilize small-diameter wood and other forest biomass.*
- Promote FireWise building materials and construction techniques, as well as creation and maintenance of defensible properties and neighborhoods.*
- Attract necessary funding (appropriations, contracts, donations, grants, etc.) to successfully reduce fire threat.*

### PRINCIPLES

**Fuel Management:** *Reduction of target hazardous fuels is based upon known fire risk, fire behavior, and threats to values-at-risk.*

**Social and Political:** *Social and political concerns play a major part in defining treatments and their locations.*

**Operational:** *Due to financial, infra-structure, and personnel constraints, emphasis must be placed on strategically located fuel treatments designed to protect key values-at-risk, and that can serve as anchor points for larger, landscape-scale treatments.*

**Ecosystem:** *Reduction of hazardous fuels should be integrated with overall ecosystem conservation, restoration and management goals.*

**Economic:** *Implementation and maintenance of fuel treatment benefits greatly outweigh their*

*costs because they: save money by avoiding suppression expenditures, rehabilitation costs, and compensation for property damage; are an investment in protecting firefighter and civilian lives; present new opportunities for rural economic development; and may help address issues related to the availability of homeowner's insurance in fire prone forest ecosystems*

***Ethical:*** *The continuing decline in forest health and the increasing probability of catastrophic fires, and their potential impact on the greater Flagstaff region, is a reality. The need to act now to restore forest health and reverse this dangerous downward spiral is of utmost importance.*

CWPP's have been developed for two adjacent areas – the Williams area in 2005 (west), and the Blue Ridge area in 2010 (southeast). Authorized by the Healthy Forests Restoration Act of 2003, these plans formed the basis for community wildfire protection planning as implemented through fuel reduction and forest restoration treatments on public lands, through private land treatments, through various emergency planning and management efforts, and through extensive public outreach and education efforts.



The Schultz wildfire in June 2010 represents the type of dangerous wildfire, and the damaging post-fire effects, that can develop if actions in a CWPP are not implemented on a wide-scale basis.

The Greater Flagstaff area CWPP can be found at the GFFP ([www.gffp.org](http://www.gffp.org)) , City of Flagstaff Fire Department Wildland Fire Management Division ([www.flagstaff.az.gov/wildlandfire](http://www.flagstaff.az.gov/wildlandfire)) , or Arizona State Forestry Division ([www.azsf.az.gov](http://www.azsf.az.gov)) web sites.

## **TREATMENT ACTIVITY**

Significant treatment activity has been ongoing under various programs for addressing public and private land throughout the CWPP area. GFFP has maintained and annually updated a “treatment map” for a large portion of the CWPP area that is posted on their web page: [www.gffp.org/about\\_gffp/map](http://www.gffp.org/about_gffp/map). It provides the best overview of accomplishments to date. Summary statistics over the past 15 years include approximately 116,500 acres of forest treatments implemented (including 48,500 within GFFP and 12,300 within the City of Flagstaff) by at least a dozen different programs.

Future activity in the area includes continuation of fuel reduction and forest health treatments through the State Forestry Division, GFFP, City of Flagstaff, Fire Districts, Rural Communities Fuels Management Program (RCFMP), and other local, non-federal projects, and treatments under projects with approved NEPA and “shelf stock” associated with the Four Forest Restoration Initiative (4FRI) first analysis area on federal land.

Nine FireWise neighborhoods have been established, and Sedona Fire District has been designated a FireWise ArcView Community.

## **IMPROVED PROTECTION CAPABILITIES**

This section of the CWPP is included below with information on the status of the 20 items identified. For several years after approval of the CWPP, a local “review team” tracked some activity. The results of these unpublished reports are included in this updated review. The 20 “activities and efforts” are identified verbatim from how they were identified in the plan (*in italicized and bold text*) and then their status is updated (**Status:**).

***Activity 1. Survey existing neighborhoods. Identify, map, and prioritize neighborhoods for neighborhood-wide home ignitibility reduction.***

**Status:** Completed for City of Flagstaff with map at [www.flagstaff.az.gov/wildlandfire](http://www.flagstaff.az.gov/wildlandfire) ; local fire districts addressing some other areas – Highlands, Summit, Pinewood, Mormon Lake, Sedona; RCFMP also targeting certain areas; systematic approach to areas not covered should be considered.

***Activity 2. Establishment of a regional fuels crew. This would involve many different partners and require sufficient funding. Principle among the partners would be PFAC members, but it could also involve NAU-ERI and GFFP as well. The consolidated crew, larger than current separate efforts, would be under single leadership with standardized training, equipment, and treatments standards. In addition to mitigation and prevention efforts, the crew could be available within the local area for fire suppression needs throughout the year.***

**Status:** Flagstaff Fire and regional Fire District fuel crews continue their activities; Arizona Department of Corrections crew works on State Land and assists with other work as needed; the Bear Jaw Fire and Fuels Module was established in 2008 with staff from Highlands, Summit and Pinewood Fire Districts.



***Activity 3. Increased public education activities: Utilization of new outreach methods to prepare the community to receive fire. Currently, there are a number of education initiatives and outreach methods underway by area partners. These include public meetings, presentations to service clubs, civic organizations and homeowner associations, media notices, periodic workshops and symposia, development and distribution of material, and participation in community events such as the Forest Festival, Science In-The-Park, and the County Fair. Future activities might include involvement in the Northern Arizona Home Show, public service announcements, airing of informational videos on Public Access TV and public service announcements on commercial TV, recognition of FireWise communities by the national FireWise program, and development and maintenance of a joint-agency website devoted to this issue.***

**Status:** Several new approaches utilized, including newspaper articles and inserts, field trips, web pages, staffed booths at public events, etc.; FireWise process very active – several neighborhoods accepted/approved (Forest Highlands - 04, Pine Canyon - 09, Continental Country Club - 07, Pinewood/Munds Park - 11, Flagstaff Ranch - 06, Lockett Ranches - 07, Westwood - 08, North Slopes



- 08, Boulder Point - 08, The Meadows – 08); outreach at Festival of Science continued; “Yellow Belly Ponderosa” developed & presented to middle schools; 4FRI project generating new interest; significant interest in forest treatments and potential cost sharing options following Hardy & Schultz fires locally and Wallow Fire in White mountains; Flagstaff Omnibus Survey indicating public acceptance of forest treatment and use of prescribed burning (see results in Appendix II); Flagstaff Fire & Summit Fire District have established social media outreach efforts.



*Engaging the public is key to success*

***Activity 4. Develop/adopt/implement Legislation & Appropriations (State/Federal) – Adequately fund and/or support, with sufficient oversight to ensure proper and timely application. Items of current interest include:***

***FEDERAL:***

***National Fire Plan (particularly those areas having to do with assistance to local government via the State Fire Assistance grants and other mechanisms)***

***Status:*** Continue coordination, including with Western Governors Association

***Healthy Forests Restoration Act (chiefly to ensure professional planning and an increased level of forest treatment implementation, tied to appropriate plans)***

***Status:*** No appropriations approved; several Coconino NF projects done under HFRA; 4FRI partially resulted from this.

***Forest Landowner Enhancement Program (a highly effective forest treatment cost-share program for private landowners)***

***Status:*** Not emphasized now with RCFMP & other cost share programs in effect.

***Ecological Restoration Institute of Northern Arizona University (provides the***

*scientific foundation and academic credibility to our efforts, as well as a source of student interns and seasonal employees)*

**Status:** ERI still heavily engaged in all aspects of CWPP related activity.

**Local Community Partnerships/Collaboratives** *(provide interface for federal agencies to address community needs)*

**Status:** Several efforts here: Analysis of Small Diameter Wood Supply in Northern Arizona, Kaibab Forest Health Focus, Four Forest Restoration Initiative and associated Collaborative Forest Landscape Restoration proposal

**STATE:**

**Implementation of HB 2549, comprised of the following five actions:**  
**Healthy Forest Enterprise Assistance Program (Incentives for wood-based businesses)**

***State Forester (establishes office w/associated duties)***

***Biomass Energy (Directs State to purchase)***

***Urban-Wildland Fire Safety Committee (establishes 12-member committee w/associated duties)***

***Interface Code (Permits adoption of code, per Wildland Fire Safety Committee)***

**Status:** Most actions considered were adopted and implemented; extension of the legislation and potential revisions to Enterprise Assistance Program being considered in 2012 legislative session.

**Adopt the remainder of the Governor's Arizona Forest Health Advisory & Oversight Councils recommendations, provided spring 2004. Among others:**

***Increase local planning & zoning authority***

***Require real estate disclosure***

**Status:** Annual recommendations made by combined Forest Health Council (FHC), some adopted; Statewide Strategy to Restore Arizona's Forests prepared and adopted; Forest Health Council extended under Governor Brewer; land use & wildfire report issued; smoke management issues are becoming important and potential need for "right to burn" legislation being discussed.

**Revise the current Environmental Portfolio Standard (AZ Corporation Commission) to eliminate the expiration date, include a larger total percentage of renewable energy, and emphasize use of biomass energy production.**

**Status:** New Renewable Energy Standard & Tariff (REST) rule approved in 2006; no revisions requested or anticipated since adoption; utilities striving to reach targets; American Recovery & Reinvestment Act (ARRA) grant funding secured for biomass studies in 2009; Drake Cement plant near Pauldin considering partial conversion of cement kiln feedstock from coal to forest biomass, may apply to ACC in 2012; Forest Health Council briefed AZ Corporation Commissioners on renewable energy potential from forest biomass in January 2012;.

**Activity 5. Recruitment of small-diameter, sustainable wood-based industry. Utilization of**

***the large amounts of biomass that must be removed from area forests is critical to success. This issue is covered elsewhere in this Section (See Utilization.)***



**Status:** No forward movement on proposed Camp Navajo industrial park ; Wood Supply Study identified potential supply; no progress on NAU biomass plant; The USFS has recently selected a contractor as a result of the 4FRI RFP – with an anticipated outcome of 30,000 acre/year for 10 years.

***Activity 6. Fire District formation. Some outlying homes within the CWPP are outside existing fire districts. Owners within these areas should seriously consider formation of Fire Districts – via the County – to facilitate emergency response, prevention, and mitigation efforts.***

**Status:** Expansion of Mt. Elden Fire District into Ft. Valley area and then consolidation with Summit Fire District; Highlands Fire District expanded into Lake Mary area.

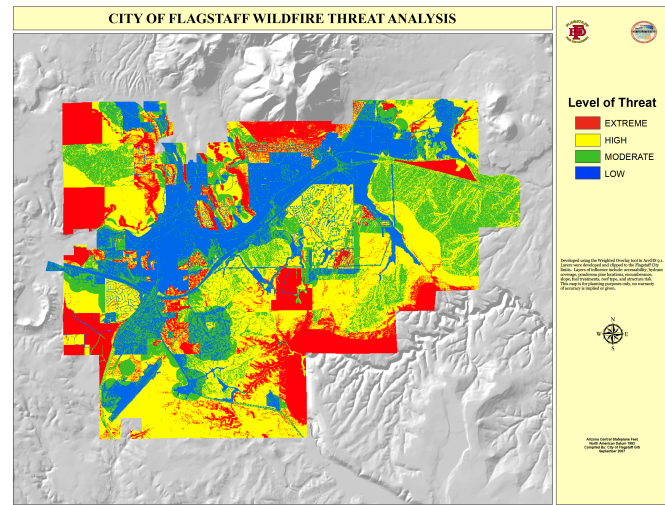
***Activity 7. Compatible data-layers for the Sedona and Winona area to facilitate analysis of the entire CWPP area. Key information used in the development of this plan is lacking for the Sedona and Winona areas and/or not in the same format as that for the remainder of the area. This somewhat complicated our use of the work of the NAU-Forest ERA project. Comparable data for areas with gaps should be developed to make future revision of this plan easier.***

**Status:** No progress here; data layers and treatment recommendations for pinyon/juniper woodlands still not developed.

***Activity 8. Develop a standardized Neighborhood Wildfire Assessment format. The City of***

**Flagstaff has recently received a donation from Allstate Insurance Foundation for just such an effort. Once developed, it can be readily transferred to other jurisdictions within the CWPP area. The information derived from this effort can augment the threat matrix data contained in this plan, as well as become an educational outreach tool to residents.**

**Status:** Process completed and format developed for City of Flagstaff; available for use by other jurisdictions



**Activity 9. Incorporation of CWPP into on-going activities and established land-management and agency plans. Both PFAC and the GFFP intend to utilize this document to prioritize actions, secure funding, coordinate activities, implement treatments, and monitor desired outcomes. The CWPP also provides guidance to private citizens in their effort to reduce their exposure to wildfire.**

**Status:** Several USFS projects completed under HFRA as consistent with CWPP (Railroad, Marshall Lake, Hart Prairie, A-1 Mountain) and commented on by GFFP and other Partners; thinning & pile burning in Oak Creek Canyon where slope allows; GFFP used approved CWPP as basis for securing additional grant funding to cost-share fuel reduction and forest health treatments on non-federal land: \$105,000 in SFA 08-006 (50%), \$210,000 in WBB 08-025 (50%), \$376,000 in WFHF 10-001 (90%); City of Flagstaff used CWPP to develop Issue Papers for Congress & State Legislature; local fire departments & districts targeting specific properties with cost-share funds; CWPP treatments strategies incorporated into 4FRI planning & project design; Blue Ridge area CWPP completed on southeast border; State Forestry Division completed the Statewide Forest Resource Assessment and Strategy, which was used during City of Flagstaff Land Development Code revision and adoption in 2011.

**Activity 10. Identification of additional resource and equipment need. Individual agencies are responsible to provide appropriate administration and planning for their respective organization. In addition, and to facilitate joint discussion and interoperability, PFAC, on an annual basis and with any needed assistance from GFFP, will host a multi-party discussion of current fire response capability within the CWPP area. Centered on the goal of reviewing and revising the PFAC Operations Plan (Appendix 4), the discussion will include all facets of fire management resources and other topics that may be appropriate.**

**Status:** PFAC acquired cache of radios and equipped trailer with hoses/sprinklers/equipment for



regional use; mutual aid agreement in place, but not for wildland fire because goes through State; Sedona has mutual aid identified for all fire boxes and is evaluating WILDCAD software for identifying what resources to send to a fire in any given polygon

***Activity 11. Funding. This plan, and implementation of the identified activities, is intended to demonstrate our intent to implement and provide general information to appointed and elected officials and grant-funding organizations and agencies. Our coordinated effort to protect the greater Flagstaff community is a key ingredient to attracting additional funding to further implementation efforts.***

**Status:** Cost-share funding identified above; GFFP funding from City & County and covers most operations; Flagstaff Cultural Partners funded the Yellow Belly Ponderosa program (and recently the “More Kids in the Woods” program of the US Forest Service); AZSFD secured additional \$1M for fire suppression on top of existing \$3M; Resource Advisory Committee (RAC) created for Coconino NF to fund specific programs; initial 4FRI funding within USFS secured for project planning, NEPA analysis and development of first analysis area (938,000 acres) in Kiabab and Coconino National Forests, as well as Collaborative Forest Landscape Restoration Program (CFLRP) funding for 4FRI implementation; preliminary discussions are currently underway within the City regarding establishment of a “Payment for Watershed Services” program to partially assist with treatment costs in the Lake Mary and Dry Lake Hills watershed areas and provide funds for long-term maintenance of treatments.

***Activity 12. Wood distribution networks. Establishment of on-going relationships with individuals and organizations on both the Hopi and Navajo Reservations, as well as with large charity organizations with interest and capability in wood delivery/distribution efforts, is an important utilization initiative. There is tremendous need for wood products – primarily firewood and posts-and-poles throughout both areas. It is estimated that over 75% of all homes on the Reservations have no electricity and require wood for heating and cooking. Creation of a steady “wood-pipeline” will not only benefit those who receive the wood, but also assist in reducing fire threat in our area by removal/utilization of excess small-diameter trees.***



**Status:** Flagstaff Fire Dept. organizes: 1) efforts at Tuba City Church of Christ for distribution to tribal elders (250-400 cords each year) on reservation; 2) provides 15 cords to Federal prison in Phoenix each year; and 3) advertises free firewood give-a-ways at some fuel reduction treatment sites; Bear Jaw Fire Module distributes wood to Northern Arizona Food Bank, Navajo Nation, and to Fire District residents in need of emergency firewood, and provides free wood pick-up at various project sites throughout the year.

**Activity 13. Statewide mapping effort.** *The "Arizona Fuels, Information, Restoration, and Education Mapping and Assessment Program" or ARIZONA FIRE MAP, is designed to establish and maintain a GIS-based mapping system that will document forest treatments, CWPP status, grant receipts, etc. Forest treatments within the Flagstaff area have been used to develop a prototype map. Involvement with this effort, as it develops, will ensure our area remains at the forefront of statewide activities.*

**Status:** Arizona FIREMAP maintained on AZ State Forestry Division web site, but updates sporadic.

**Activity 14. Coordination with adjacent areas during development of their respective CWPP.** *Two adjacent areas where future plans may be developed are Sedona/Verde Valley and Williams/Parks-Bellefont. Both Sedona and Parks-Bellefont are included in this plan: inclusion in another plan is encouraged, but synchronization will be required to ensure management conflicts do not occur.*

**Status:** Blue Ridge area CWPP completed in 2010 on southeast border (551,180 acres); Yavapai County recently completed one for area on south border.

**Activity 15. Adoption/implementation of the Coconino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) and the Coconino County Emergency Management Plan (EMP).** *Wildfire has been identified as one-of-five priority hazards within the County. The MJHMP, upon approval by the Federal Emergency Management Agency (FEMA) opens-the-door for pre-disaster mitigation funding and facilitates post-disaster mitigation and recovery efforts. The all-risk EMP, currently under development, will ensure consistency in emergency prevention, mitigation, response (including evacuation protocols), and recovery efforts throughout the entire county.*



**Status:** These plans adopted; new plan being developed – Tactical Interoperable Communications Plan; focus going forward is training of selected personnel to staff functions of the joint City/County Emergency Operation Center, with activation of EOC during LaBarranca, Woody, Brins, Schultz & Hardy fires.

**Activity 16. PFAC Operations and Smoke Management Plans – On an annual basis, a review and revision of each plan will occur.**

**Status:** No recent activity; need to determine appropriate level of review and revision.

**Activity 17. Development of a PFAC Prevention Plan. On an annual basis, a comprehensive prevention plan, using and incorporating the existing Coconino National Forest plan as a template (see Appendix 7), will be developed to coordinate activities, messages, etc.**

**Status:** PFAC has not updated the Prevention Plan, recommend this occur on an annual basis.

**Activity 18. Adoption and enforcement of appropriate codes throughout the Greater Flagstaff Area. Such action will ensure consistency on fire resistive construction, access, water, and addressing requirements, hazard fuel mitigation efforts, etc. (The adoption of the remainder of the Governor’s “Arizona Forest Health Advisory & Oversight Councils” recommendations, identified in this plan, will assist with this need.)**

**Status:** Sedona adopted the 2003 International Urban Interface Code in 2007; the International Wildland Urban Interface Code (IWIC), modified to the local environment, was adopted by City of Flagstaff in 2008, and the City’s Land Development Code was revised in 2011; Forest Health Council prepared a report – “Fire on the landscape: Planning for Communities, Fire and Forest Health” - on land development and its relationship to wildfire in 2010.

**Activity 19. Implement an appropriate monitoring program. Designed to track both accomplishments and effects of treatments, this will lend credibility to the effort and provide information necessary for the adaptive management of the plan. Perhaps this could be a project for an interested student or volunteer.**

**Status:** Some activity through GFFP Monitoring & Research Team, including NFF funding to monitor fire behavior under several treatments, pre-treatment forest structure monitoring at Partner Mark sites in Mountaineer Project area, report generated on conducting Partner Mark at site north of fire station in Mountaineer; fire modeling project by GFFP and NAU School of Forestry on Flagstaff Airport treatment units; extensive Aberts squirrel monitoring on GFFP and other local treatment sites; Flagstaff Omnibus survey results for social monitoring; implementation monitoring on USFS treatments; 4FRI has initiated monitoring under first analysis area.

**Activity 20. Support the USFS in:**

**a) Encouraging development and use of a Wildland Fire Use Plan for application in appropriate wildland areas**


**Status:** Incorporated into Coconino NF plan – approximately 60% of forest is open to WFU, now called Wildfire Managed for Resource Benefit.



**b) Application of the Appropriate Management Response for area wildfires**

**Status:** “Appropriate management response” is a term no longer used, part of Managed for Resource Benefit approach.

**c) Planning, preparation, and implementation of prescribed fire projects**

	<p><b>Status:</b> Prescribed fire application &amp; use increasing; implementation of 4FRI will significantly increase needs for prescribed fire.</p>
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**OTHER ACCOMPLISHMENTS**

In addition to the activities highlighted above that are tied directly to the CWPP, several other actions have occurred that are related to the intent and Goals, Objectives and Principles of the CWPP.

- 1) Federal and State politicians have visited the area to learn about, advocate for, and evaluate funding needs of fuel reduction and forest restoration treatments.
- 2) Under the 4FRI: Path Forward, Charter and MOU with the USFS completed; Landscape Restoration Strategy developed and CFLRP proposal adopted and funded; 1<sup>st</sup> analysis area centered on Flagstaff Area CWPP identified, and USFS Team created to design a Proposed Action (issued in 2011) and complete NEPA analysis of alternative actions; extensive monitoring and associated adaptive management approach identified; large thinning and forest biomass utilization contract proposed using NEPA approved shelf stock for initial treatment areas; levels of collaboration expanded significantly.
- 3) Forest Health Council continues efforts to affect forest restoration and management in line with CWPPs, including development and publication of the “Statewide Strategy to Restore Arizona’s Forests” and “Fire on the Landscape: Planning for Communities, Fire and Forest Health”.
- 4) Arizona State Forestry Division completed the “Statewide Forest Resource Assessment and Strategy”.



- 5) GFFP completed several reports, including: Smoke & Health study, Lessons Learned report, Annual Reports and this CWPP Review; updates website quarterly.
- 6) Flagstaff Fire Department received the National FireWise Leadership Award in 2007.
- 7) The Rio de Flag and Lake Mary watersheds were proposed and accepted as priority treatment areas under 4FRI project planning, design and NEPA analysis.
- 8) The communications tower site on Mt. Elden was thinned for fire protection through GFFP and under Eastside Project NEPA with funds from tower owners in 2008.
- 9) GFFP released funds back to AZSFD for use in clean-up of locations damaged by the Bellemont tornado episode of October 2010.
- 10) Sedona Fire District hosts annual FireWise weekend, including debris disposal, 10<sup>th</sup> year.
- 11) Annual PFAC wildfire drill held in May and annual fire training courses offered.
- 12) Restrictions and forest closure interagency conference calls held every spring.
- 13) Smoke management conference calls held with ADEQ in spring & fall.
- 14) *Home Ignition Zone* training course sponsored by GFFP and PFAC and hosted by FFD twice – in 2009 and 2011.
- 15) GFFP active and providing leadership in 4FRI stakeholder group; sponsored workshop on Payment for Watershed Services; made presentation to SW Fire Ecology Conference; and sponsored individuals to attend Smallwood Conference in Flagstaff, among other activities.

## **RECOMMENDATIONS**

In general, this review indicates that since approval of the CWPP in early 2005: fuel reduction and forest restoration treatments have been designed and implemented at a steady, if not increasing, pace; most of the activities identified under “Improved Protection Capabilities” have been accomplished and/or addressed; public understanding of and participation in CWPP related actions has increased; the shift to larger scales of project planning advocated in the CWPP have been manifest in the 4FRI and associated Collaborative Forest Landscape Restoration Planning (CFLRP) projects.

However, there are several issues and opportunities that were not covered in the CWPP and/or have become apparent since CWPP development that need to be highlighted and addressed. The appropriate mechanism for addressing these concerns is not envisioned, but they need to be incorporated into current and future planning.

- 1) The recovery and re-habilitation of forest lands after severe fire needs attention and additional resources. Re-vegetation, salvage logging, and other issues need to be addressed.
- 2) Post-fire watershed impacts also need more attention and resources. Increased flooding and sediment/debris movement must be anticipated for critical watersheds. The Schultz fire is a prime example of past need and the Rio de Flag watershed an example of the potential for future catastrophe.

- 3) More basic biophysical and socio/economic monitoring of treatment implementation and effects needs to be conducted.
- 4) Community based efforts to plan and implement education outreach and hazard mitigation treatments must continue.
- 5) Prescribed fire treatments on non-federal lands must increase, with the twin goals of neighborhood protection and ecological benefit.
- 6) Continue engagement with USFS and AZ State Forestry on landscape-scale planning and implementation.
- 7) PFAC should review the status and need for, and on an annual basis update if appropriate, the Prevention Plan and the Operations and Smoke Management Plans identified on Page 7.

### **ADDITIONAL RESOURCES REFERENCED**

Available at the GFFP web site - <http://www.gffp.org/>

Local area treatment map: [http://www.gffp.org/about\\_gffp/map.htm](http://www.gffp.org/about_gffp/map.htm)

Results from Flagstaff Omnibus Surveys:

2001 & 2006 - [http://www.gffp.org/monitor/Survey\\_Results\\_01\\_06.pdf](http://www.gffp.org/monitor/Survey_Results_01_06.pdf)

2007 & 2009 - [http://www.gffp.org/monitor/Survey-Results\\_07\\_09.pdf](http://www.gffp.org/monitor/Survey-Results_07_09.pdf)

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