

# THE LOOKOUT

## Four Forest Restoration Initiative



Stakeholder Newsletter / Spring 2020

### 4FRI Working Groups

Communications Working Group  
[Tayloe Dubay](#)

Comprehensive Implementation Working Group  
[Hannah Griscom](#)

Industry Working Group  
[Brad Worsley](#)

Multi-Party Monitoring Board  
[Bryce Esch](#) and [Steve Flora](#)

Rim Country DEIS Working Group  
[Pascal Berlioux](#), [Steve Rosenstock](#), [Amy Waltz](#), [Travis Woolley](#)

### 4FRI Partners

Greater Flagstaff Forests Partnership  
[www.GFFP.org](http://www.GFFP.org)

Natural Resources Working Group  
[Jason Whiting](#)

### Stay Connected

4FRI Stakeholder Group website:  
[www.4FRI.org](http://www.4FRI.org)

Forest Service 4FRI webpage:  
[www.fs.usda.gov/4fri](http://www.fs.usda.gov/4fri) includes all public documentation of the 4FRI project, including maps, contacts, and public input opportunities.

### 10 Years of 4FRI Accomplishments

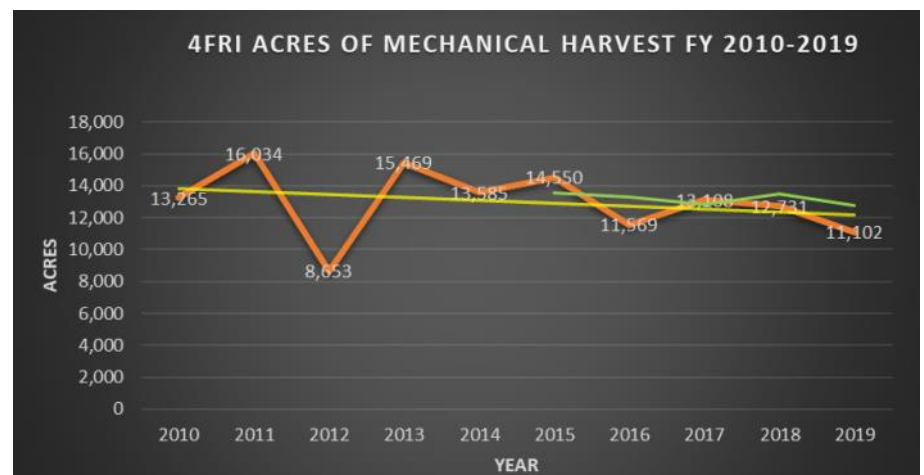
In 2010, the Four Forest Restoration Initiative (4FRI) was selected as the largest forest restoration project in the Forest Service under the new Collaborative Forest Landscape Restoration Program. At that time, and still today, the goal was to increase the pace and scale of forest restoration across the 4FRI footprint and get appropriately sized industry in place to handle the restoration outputs. Have we increased the pace and scale of restoration across 4FRI? A simple way to examine this question is to look at linear trend lines in relationship to accomplishments, which will tell you the answer is: yes and no.

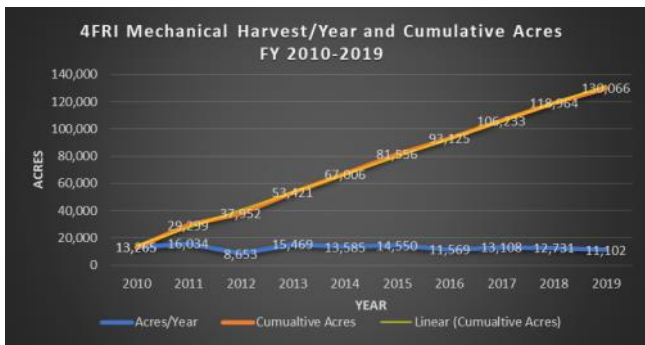
In 4FRI, our goal for mechanical treatment is 50,000 acres per year of mechanical treatments (acres harvested). The mechanical harvest graph below<sup>1</sup> displays the trend line for cumulative accomplishments; indicating that

industry's capacity for completing treatments has remained relatively unchanged. For 2010 through 2014, the numbers include White Mountain Stewardship (WMS) contracts and show a slight drop off in acres accomplished per year after completion of the WMS contract (green line on per year treatment graph). The bulk of the mechanical harvest treatment accomplishments are from the regular program of work, with approximately 60 percent of the treatments occurring on the Apache-Sitgreaves National Forest. The value of the industry created with the White Mountain Stewardship 10-year contract cannot be understated and is a main reason for the mechanical harvest success on the Apache-Sitgreaves.

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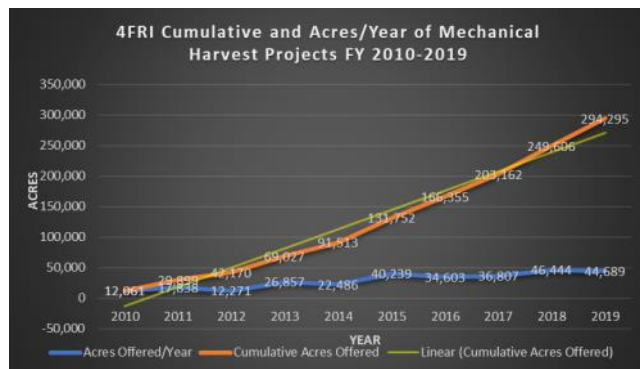
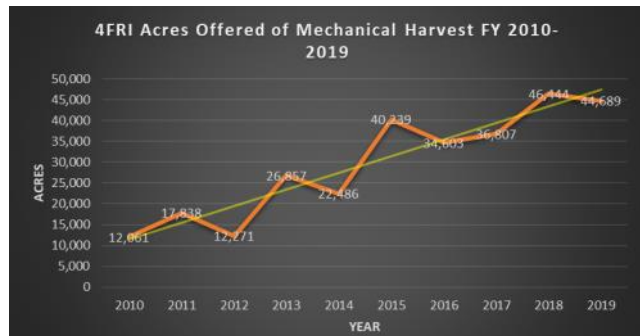
<sup>1</sup> Data source: USDA Forest Service FACTS database in gPAS Initiative Accomplishment Reports



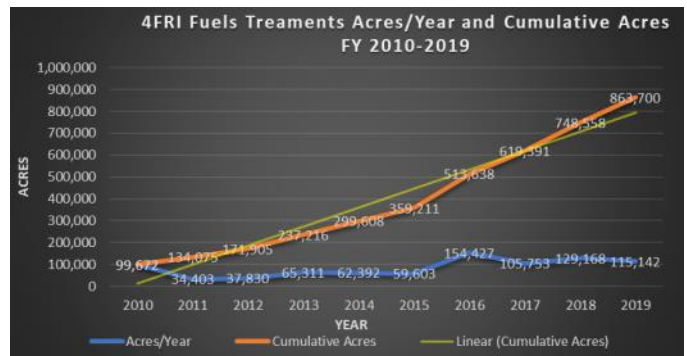
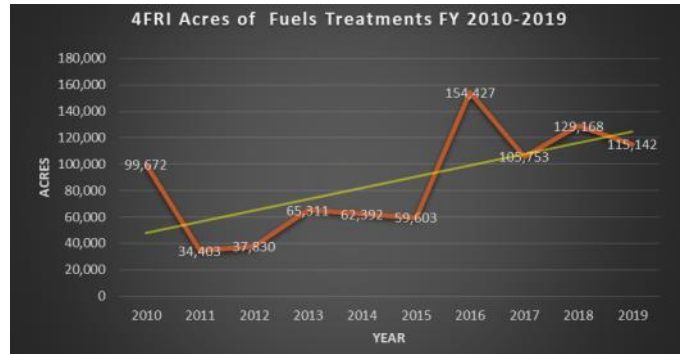


Even with the award of a 10-year stewardship contract (4FRI Phase 1) and the completion of the 1-million-acre NEPA (4FRI 1st EIS in the Coconino and Kaibab national forests), the markets for small-diameter, low-value ponderosa pine have not developed to drive increased infrastructure development and subsequent increased harvest treatments. We expect that contract(s) resulting from the 4FRI Phase 2 Request for Proposals will help spur existing industry and attract new investments to develop a well-capitalized forest products industry that can support restoration treatments across the 4FRI landscape over the next 20 years.

Can the Forest Service perform to prep the acres needed to support the increased contracts needed for the second RFP? We have been very successful in increasing our efficiencies in order to support accelerated treatments. The tables below display the increased acres offered through time in 4FRI. We have nearly quadrupled our pace of offerings.



The reintroduction of fire is another success for 4FRI. The graph below displays the increase in fuels treatments per year since 2010. The trend line for per year accomplishments is a positive slope indicating accelerating restoration of pace and scale for fuels treatments. When compared to a linear trend line, we increased the pace and scale of fuels treatments the last three years of the initiative, with the management of wildfires to meet forest plan/resource objectives being a main driver.



The data above reflect numbers of acres, but what about outcomes and/or effectiveness? There were multiple wildfires within the 4FRI footprint that were not being managed for forest plan objectives. Did our treatments change fire behavior? The answer is yes—restoration treatment activities did change fire behavior in multiple locations across the 4FRI footprint and were tested with multiple, large wildfires including the Wallow and San Juan fires on the Apache-Sitgreaves NF and the Slide Fire on the Coconino NF ([Johnson et al. 2019](#), [Roccaforte 2016](#), [USDA Forest Service 2014](#), [Waltz and Stoddard 2013](#)).

(continued on p. 3)

<sup>2</sup> Data source: USDA Forest Service FACTS database in gPAS Initiative Accomplishment Reports

<sup>3</sup> Note that 2010 data did not have a CFLRP identifier on the data so is displaying accomplishments that could have occurred on 4FRI Forests outside the 4FRI footprint.

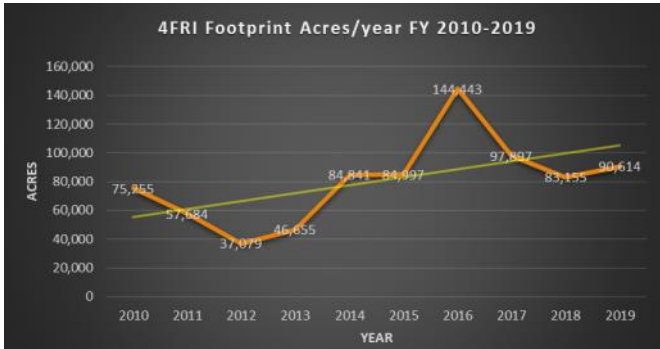
Click [here](#) to access a detailed presentation on treatment accomplishments by 4FRI Operations Coordinator Dick Fleishman. The presentation was presented at the 4FRI Stakeholder Group meeting on Feb. 26, 2020.



### 4FRI Footprint

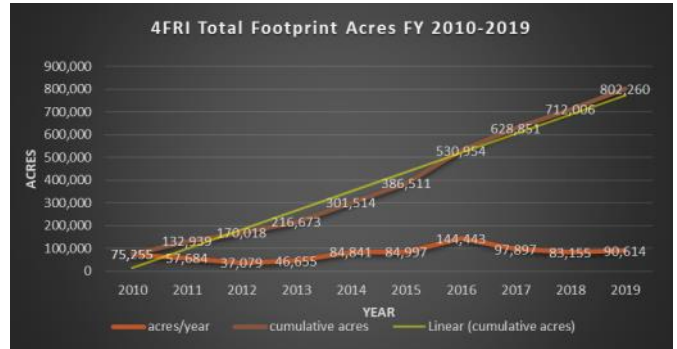
To understand total area affected, we need to look at the 4FRI footprint acres that eliminate the double counting of acres. The footprint only includes acres and does not include the miles of restoration work related to streams, roads, and trails and is likely an underestimate of all the restoration work. The graphs below display the 4FRI footprint from 2010 to the end of the initiative in 2019.

When examined as a whole, the trend line for yearly accomplishment is positive, suggesting



that we are increasing the pace and scale of restoration. On cumulative accomplishments, the accomplishment acres have been positive over the trend line since 2016—suggesting an increased pace and scale of restoration as well.

The need for a successful Phase 2 RFP implementation cannot be understated in order to get the mechanical treatments on scale with the fire accomplishments. Overall, we have done a lot of work in the first 10 years—there is still much more work to be done.



## Collaborative Forest Landscape Restoration Program Reauthorization

On Dec. 18, 2018, the 2018 Farm Bill became law and included reauthorization of the Collaborative Forest Landscape Restoration Program (CFLRP) through the end of fiscal year 2023. As a CFLR project, the Four Forest Restoration Initiative (4FRI) was eligible to apply for reauthorization and continued funding to facilitate collaborative, science-based restoration across the 4FRI landscape. In the summer of 2019, the 4FRI Stakeholder Group formed the CFLRP Reauthorization Working Group with the purpose of working collaboratively with the Forest Service to develop the required proposals and materials to be eligible for reauthorization.

The goals of the CFLRP Reauthorization Working Group were to: 1) obtain continued funding for 4FRI; and 2) ensure that restoration done under 4FRI is consistent with the 4FRI stakeholder foundational documents, the first

Environmental Impact Statement (where applicable), and CFLRP criteria. The working group, which consisted of Pascal Berlioux (EACO), Aaron Green (DFFM), Melanie Colavito (ERI), and Steve Rosenstock (GCT), worked collaboratively with the Forest Service in research, writing, and other processes required to develop both the Tier 1 and Tier 2 proposals required for reauthorization of 4FRI as a CFLR project. The Tier 1 proposal was approved in fall 2019, and the Tier 2 proposal was approved on Jan. 8, 2020, and submitted to the Region 3 office of the Forest Service for review. The Tier 2 proposal will be reviewed by a Federal Advisory Committee Act (FACA) Committee sometime in the spring of 2020, and projects that are approved for renewed funding should be notified shortly thereafter.

## Stakeholder Group Comments Submitted on Phase II DEIS

The 4FRI Draft Environmental Impact Statement (DEIS) Work Group worked closely with the Forest Service throughout the comment period to better understand the DEIS, prioritize issues of concern to the Stakeholder Group, and develop constructive comments in order to address those issues. The 4FRI DEIS Work Group and the 4FRI Planning Group are committed to working

with the Forest Service to address these issues in the Final EIS.

The 4FRI Stakeholder Group chairs and broad stakeholder group members would like to extend their gratitude to the members of the DEIS Work Group for the time and hard work required to develop comments on behalf of the group.

## Results are in for the Chip-and-Ship Pilot Project

The lack of markets for low-value woody biomass is one of the biggest barriers to accelerating the pace and scale of restoration treatments. A pilot project in Flagstaff tested the possibilities of shipping wood chips long distances to foreign markets. In August 2019, researchers at the Ecological Restoration Institute procured and chipped 1,400 tons of small-diameter wood from an area thinning project, loaded the chips onto intermodal railroad containers, and sent them to South Korea where the chips sold for \$80 per ton.

Researchers collected data on log procurement, chipping, loading, and railroad operations and investigated the railroad infrastructure and business requirements needed to implement full-

scale shipping operations using railroad transportation. The research team published a [report](#) detailing the results and lessons learned and a summary [fact sheet](#).



## Coconino County Tests New Air Curtain Burner Technology

In 2019, Coconino County, in an effort to look at different technologies to reduce the amount of biomass in the forest and smoke produced from burning slash piles, purchased a S119R air curtain burner. The S119R is the roll-off model that allows the County to use its existing equipment to move the machine around the county. The burn rate of the machine is rated at 5 tons per hour. Coconino County, with the assistance of the Coconino National Forest, Flagstaff Ranger District, implemented the Chimney Springs Pilot Project to help understand the operating costs of burning slash piles and to allow Forest Service personnel the opportunity to evaluate the safety measures needed for running an air curtain burner on federal lands.

The pilot project was completed in February 2020 and the County is still analyzing the data collected. However, some observations from the project are worth reporting now. Once the project area was determined, the Forest Service had to write a burn plan for the operations, and it was determined that a qualified Burn Boss would be required to be on-site during the operations. The Forest Service is required to treat an air curtain burner in the same manner it would a pile burning operation. Prior to starting the operations, Coconino County procured the proper

ADEQ Air Permits for the air curtain burner and trained our employees in operating the machine. The project contained slash piles that were approximately 12–16 months old, however, it is interesting to note that the interior portions of the piles still had high moisture content. The smoke that was emitted during the project timeframe was significantly less than if the piles were open burned, however the rate of burn was much longer and the costs were much higher. Coconino County will produce a more detailed report once

all the data is analyzed.

The overall impression is that the air curtain burner will have specific scenarios for utilization, however, large scale operations would be cost and time prohibitive.

