Track Fire Field Trip Notes (Compiled by Cori Dolan)
27 September 2012

Stop 1: Parking at entrance to Sugarite State Park with a 10 min. easy walk to catchment basin with views up Segerstrom Creek and down to Lake Maloya

Topic 1: Pre-fire thinning projects

Arnie Friedt – Forester, NM State Forestry Cimarron District

It remains difficult to make decisions about thinning because it is hard to convince a group of people or individual to cut a tree. Public perception of the risk associated with fire is mitigated with insurance more than pre-treatment (thinning or burning). However, during the Spring of 1996, several fires opened our eyes to the possibility of large fire activities in our backyard. In April, the Dome Fire burned 16,000 acres of Santa Fe NF while the Sugarite Fire burned 2,500 acres of Sugarite State Park. In May, the Hondo Fire burned 7,000 acres of Carson NF. People were evacuated and homes were destroyed. Events like these and the Track Fire beg the question: could another, larger fire event occur again…in our own backyard? The answer is most definitely yes, which means we have to start managing for larger events using interagency cooperation to put all treatment options available to us on the ground.

Notable funding sources:

A. Water Trust Board (2005, 2006, 2008, 2012)

May fund 5 types of projects:

1) Storage, conveyance and delivery of water
2) Implementation of the Endangered Species Act Collaboration Programs
3) Restoration and management of watersheds
4) Flood prevention
5) Conservation, Recycling, Treatment or Reuse

The first three Water Trust Board grants received were used for biology and archaeology surveys and mechanical thinning projects pre-fire. The recent award (2012) will be used for continuing the post-fire erosion control efforts.

B. Collaborative Forest Restoration Program (CFRP) (2006)

The core purpose of CFRP is to encourage collaborative partnerships.

1) Improve communication and joint problem solving
2) Encourage sustainable communities and sustainable forests
3) Include diverse and balanced groups of stakeholders in project design, implementation, and monitoring

The CFRP grant funded NEPA clearance in New Mexico and the Sugarite Stewardship Plan.

C. Healthy Forest Restoration Act (2003)

The main thrusts of the law are to thin overstocked stands, clear away vegetation and trees to create shaded fuel breaks, provide funding and guidance to reduce or eliminate hazardous fuels and streamline the NEPA process. This act was significant in acquiring federal funds on non-federal lands.

In 2006 the collaborative team landed a CFRP grant to fund the Sugarite Stewardship Plan and NEPA clearances. It was the first CFRP awarded to a municipality in northeastern NM. It took close to ten years from the Sugarite Fire in 1996 to begin thinning projects on the Sugarite Watershed. And, it only took another six short years for us to be standing in the middle of the Track Fire to witness what we have been dealt in our own backyard.

Amy Ewing – Hydrogeologist, D.B. Stephens

Amy has been involved in projects since the collaborative group was formed in 2004. The process is highly collaborative out of necessity. The collaborative group was initially formed as a watershed group for the Canadian Headwaters watershed, and the first plan was the Canadian Headwaters Watershed Restoration Action Strategy (WRAS), which was published in September 2006. The Sugarite sub-watershed became the priority project area because it supplies water for the City of Raton. Using funds from the Water Trust Board, which stipulates that money has to be spent for the good of a NM community, the large thinning projects began in 2005 (some smaller thinning projects had already been completed in Colorado, and were coordinated by the Colorado Division of Wildlife). Although a total of 2,700 acres were thinned in CO/NM pre-fire, this was approximately 10 percent of the area burned by the Track Fire. Funding has been the limiting factor in the implementation of treatments, both pre- and post-fire. With limited funds, the group is constrained to its focus efforts.

Kent Reid – Senior Forester, NM Forest and Watershed Restoration Institute

Prescription information: which trees to cut and which to leave is a considerable task. Goal is to thin to restore ecological function/promote mosaics that have groups of trees and openings. Stands are currently more dense than historically. The City has a need to protect the watershed while the park is mandated to protect ecological function of the forest. Decision made to be conservative with the number of trees removed, especially in New Mexico, in an effort to restore ecological function. The collaborative group put together a detailed prescription based on vegetation type, and the most updated version of the complete prescription was published in the Sugarite Stewardship Plan. The ponderosa pine prescription called for thinning to a residual density range of 50 to 70, or more rarely 80, trees per acre, which was generally achieved by removing all trees with a 12 inch or smaller dbh. The mixed conifer prescription called for leaving 70 to 90 trees per acre uncut. The thinning projects left mosaics of denser groups of trees surrounded by sparser areas.

A somewhat unusual prescription was proposed for planned thinning project in a mixed conifer stand on the south side of Segerstrom Creek funded by a Western States Competitive Grant. The prescription suggested mimicking historical fire behavior, assuming that fire would have started in the grassy meadow and run upslope through patches of drier fuels into the mixed conifer stand. Thus, there would have been heavy thinning on the drier ridges (and creating fuel breaks) that led up from the meadow, with much denser areas in the swales where more mesic trees and shrubs were found. The general concept was to leave a diversity of size and age classes in a spatially different composition than earlier projects. Contention over this prescription slowed down progress; the project was not implemented during the Fall of 2010 as planned.

As a part of the Track Fire, fire behavior was so extreme it burned through the fuelbreaks on the CO side (in addition to jumping the full width of I-25). One lesson learned was that residuals left

on ground after thinning were not removed, would do that differently next time. Todd recommended burning before thinning, but that comes with public pressure.

Topic 2: Fire Operations, NM

Ernie Lopez –Cimarron District Forester, New Mexico State Forestry

The New Mexico Forestry Division has statutory responsibility for fire suppression on all non-federal and non-municipal lands within the state. The Division has authority to expend funds from the state emergency fire fund, which originates from the State's disaster fund contingent on emergency declarations issued by the New Mexico Governor. Funds from a federal Fire Management Assistance Grant (FMAG) were also used to finance the Track Fire suppression effort.

The Track Fire was reported to Cimarron Dispatch shortly before noon on June 12, 2011. It is believed that the fire was started by carbon particles emitted by an internal combustion engine.

Conditions on that day were hot, dry and windy. The fuels were extremely dry from the persistent drought. Winds were blowing erratically and exceeded forty miles per hour. Temps were in the 90s and the humidity was in the single digits.

The Cimarron District had already been working on a large fire on another mesa east of Raton. That fire had exhibited a very high resistance to control due to the prevailing weather patterns and fuel moisture therefore it was anticipated that the Track Fire would be problematic. Some of the resources committed to the fire to the east were redirected to the Track Fire.

Local fire departments from communities in the local area were also dispatched to the fire. The initial attack resources on scene were under the direction of a State Forestry Type III Incident Commander. There was much on-going large fire activity elsewhere and this precipitated a huge demand for fire suppression resources. Fire suppression resources were scarce and the fire resource ordering system was somewhat overwhelmed.

A decision was made to order an incident management team. The Wildland Fire Decision Support System (WFDSS) rated the Track Fire as a Type I Incident and a Type I team was ordered but was not available, so the New Mexico Type II Incident Management team was dispatched instead.

Initially the goal was to keep the fire to the west of Interstate 25. With the erratic winds blowing the fire in all directions, the head of the fire was not discernible to the initial attack forces. The fire then spotted across Interstate 25 to the east and was torching trees, running and spotting up the southwest side of Bartlett Mesa and ahead of the main fire. The goal then became to catch the fire on the mesa top in the grass, but the fire was moving too fast and rapidly dropped into the watershed.

The initial attack forces felt that the north sides of Raton as well as residences north of State Road 72 were eminently threatened by the fire and an evacuation order was issued for residents of those areas. It also became necessary to close Interstate 25 was the railroad to traffic. Officers from the New Mexico State Police and the Colfax County Sheriff's Office were tasked with those efforts.

Bob Lineback – Wildland Fire Specialist, NM Incident Management Team

For fire teams the first priority is firefighter and public safety. On the Track Fire keeping fire out of the city watershed was a priority early on, but was impossible to accomplish due to the winds and fire behavior. Air tankers were not effective early on due to the wind, but became more effective late in the day and/or after several days as conditions moderated. The municipal communication infrastructure was not equipped to handle an event this large, which is not unusual. Delayed in-briefing for the team may have delayed initial assistance to the Type 3 organization that was in control initially. Some of the early efforts at corralling the fire were ineffective (for example the inadequate dozer line that was put in to protect the cell towers behind Goat Hill). The Track Fire was spotting a mile plus ahead in the afternoon winds. Firelines are ineffective in this type of condition, such as when the fire jumped I-25. **Take home message**: If you have to call an Incident Management Team for assistance, brief early, provide good maps and location information (roads, structures, past fires, possible fuel breaks), identify your priorities, and communicate and collaborate with the team constantly.

Topic 3: Post-fire Efforts

Randy Velasquez –District Conservationist, NRCS

The Track Fire was eligible for Emergency Water Protection Funds (EWP), which is a program that assists private, state and tribal land owners in restoring areas after a natural disaster. Once an area is safe, the EWP team assesses the effects of the event. They prepare a Damage Survey Report (includes all planned practices and a budget) and send it to D.C. for approval. The program includes cost sharing with sponsors. In the case of the Track Fire, Colfax County and the City of Raton were the sponsors. They paid 25% of the rehabilitation costs and signed a contract with NRCS. Restoration efforts may include projects such as, early warning detection systems for post-fire flooding, debris removal from water courses, stabilize road culverts and bridges if life or property is threatened, re-shaping stream banks, and re-vegetation. The 2011 Track Fire qualified for Exigency funds because the Track Fire posed an imminent threat to life and property. These funds had to be spent within 10 days, and the team was granted a one-time 10-day extension. Projects completed to date include intercepting sediment and debris (using the upstream reservoir Lake Dorothey as a catchment basin, as well as seven other newly constructed sediment catchment basins) before it reaches Lake Maloya; HydroAx mulching of dead trees to provide organic matter for vegetation regrowth; HydroAx mulching of dense, scorched oak brush within the upper Segerstrom Creek drainage, where some of the large ponderosa pines survived the fire (in order to protect these trees as a valuable seed source for natural regeneration of future forests); Securing logs on contour and installing wattles and silt fences to stabilize slopes; and aerial seeding to enhance revegetation. The awarded NRCS funds totaled $539,147, which breaks down as:

- Aerial seeding for 6,782 acres: $309,240 (Seeding was limited by time, money, and the availability of seed)
- Contour tree felling and wattles for 171 acres: $95,907
- Mulching: $50,000
- Sediment basins: $84,000

STOP 2: Lake Dorothey State Wildlife Area

Topic 1: Pre-fire thinning

Jeremy Gallegos- Trinidad East District Wildlife Manager, Colorado Division of Wildlife

The mission of the agency is to maintain healthy forests. They rely on collaboration to accomplish this. They use NRCS-Wildlife Habitat Incentive Program (WHIP) contract to do projects. The treatments were valid, but the Track Fire was big enough that it didn't matter. The collaboration that was set in place prior to the fire event was more useful than the actual treatments in containing the fire. The benefits to wildlife are already being realized. The fish population is another story. It's taking longer for them to rebound. The James M John Sate Wildlife Area recovered very quickly and could even use another burn. A prescribed fire on the Colorado side may be the best next step, but is not politically or socially feasible. Mechanical thinning is the only treatment option at this point. They are currently monitoring the catchment basins. When filled they will be planted with willow (not cleaned out).

Mark Loveall – Assistant District Forester, Colorado State Forestry

Colorado State Forestry used Water Board Trust and Emergency Supplemental Funding (2009), the latter of which had to be used on the Colorado side only and for a certain dollar amount/acre. There was enough funding to treat 800 acres of the Sugarite watershed (in Colorado); 600 acres were treated in 2010. They were cautious about taking too many trees due to windthrow concerns. The areas that were thinned did not see reduced fire behavior, but have seen quicker re-sprouting than unthinned areas. Slopes facing into Segerstrom drainage with no catchment basin possibilities were the treatment priorities. Lake Dorothey was used as a catchment basin, so the slopes facing into it were not a priority for treatment.

Topic 2: Fire Operations, CO

Todd Wood – Prescribed Fire Specialist, Southern Plains Fire Group

Initial attack was not impossible, but made very difficult because of conditions that made the default point protection focused on public safety, evacuation and defense of property. Extended attack was successful because conditions moderated and the resources were available to take advantage of that. The goal was to stop the fire on the mesa top in the grassland, but due to the combination of fuel conditions, wind speed, and rate of spread, this was not possible. The firing operation on Old Post Road eliminated green pockets of fuel and did not extend, generally, beyond the established flanks of the fire. Slopes and shading from the wind were used to help moderate fire behavior. Field trips like this one may be helpful if extended to the general/interested public and agency leadership to garner more support for prescribed burning programs.

Participant Question:

Q: How did you use interagency cooperation to suppress the Track Fire?

A: Other forests have more local resources and equipment. In the case of the Track Fire, agencies HAD to work together to secure the kinds of equipment and organization required for an event of this magnitude. The overhead leadership structure of the Type II and III teams was extremely helpful in organizing those resources and the Incident Command structure allowed for the coordination among the different agencies.

Q: Has the local perspective of cutting trees changed since the fire?

A: No. In general, people are still adamant that more trees are better than fewer trees. They do not connect watershed health at a landscape level with local water supply. It is necessary to

change the perception of watershed health and its connection to fire and water quality. For instance, studies show that the benefits of a fire event last 20-25 years the benefits from an individual treatment only last 10 years.

Topic 3: Post-fire Efforts and Water Quality Issues

Dan Campbell, General Manager, Raton Water Works and Scott Berry, Principal Engineer, K. S. Berry Engineering

Every rainstorm is your potential next problem. The total organic carbon (TOC) level in Lake Dorothey is double the level in Lake Maloya currently. At the same time water quality standards are getting higher and drinking water regulations are getting tougher. One third of Lake Dorothey has been filled in with sediment post-fire. The deliberate use of Lake Dorothey as a sediment basin saved the ecological function of Lake Maloya. They used contour felling on slopes to slow down the movement of sediment. Wattles and sediment fences must be monitored and cleaned out periodically. These measures are meant to be temporary. Although locust and oak regeneration is a long-term issue, right now it's helpful for stabilizing the soil. The next priority will be securing funds to restore the downcutting that has occurred in Segerstrom channel (perennial). The City of Raton and Colorado agencies are working on an interagency watershed management plan to help direct management actions in the future.

Participant Question
Q: Are there plans for noxious weed management?
A: There is a limit to what kind and how much chemical herbicide can be used in a watershed managed for drinking water. At this point weeds are being monitored but not removed because they serve as soil stabilizers. Any herbicides that are used in the watershed will have to be approved by the New Mexico Environment Department.

Participant suggestions: use a tax on utility to fund a watershed treatment program; consumers can support thinning treatments by purchasing the by-products (e.g. mulch); continue to work collaboratively so as to manage and at a landscape scale.