

# FLOOD RESPONSE 2013



Access to Forest Road 128 from Larimer County Road 43 on the Canyon Lakes Ranger District before post flood repairs.

## FLOOD DAMAGE 2013 FACTS

### ■ The flood damaged at least

- **232 roads (382 miles)**
- **70 trails (236 miles)**
- **4 bridges**
- **42 facilities**

■ The most heavily affected area is concentrated on **230,000 acres** of National Forest System (NFS) lands which are interwoven with **144,000 acres** of private lands.

■ Further damage is expected from **snowmelt and spring run-off** in 2014.

■ The landscape has changed. Many roads, trails and recreation areas are **unrecognizable** because the original ground cover has washed away to bedrock. The **course of several rivers and streams has changed**.

■ Damage will take years to address and it is unlikely that all areas, roads, and opportunities will be returned to **pre-flood conditions**.



Keep up-to-date on flood recovery activities, closures, community meetings and volunteer opportunities at [www.fs.usda.gov/goto/arp/floodrecovery](http://www.fs.usda.gov/goto/arp/floodrecovery)

*Unprecedented sustained heavy rains began on Sept. 9 and increased on Sept. 11 when major flooding began in Boulder and Larimer counties causing significant damage. The flooding was declared a disaster by President Obama on Sept. 15, 2013. The landscape on the National Forest System (NFS) lands of the Boulder and Canyon Lakes ranger districts has changed. The area affected by the flood covered more than 609,000 acres of NFS land and a vast area of private land.*

► The Arapaho and Roosevelt National Forests and Pawnee National Grassland's (ARP) initial response to the flood was to **ensure public and employee safety**. Employees, campground occupants and other recreationists were accounted for daily. The ARP worked closely with Boulder and Larimer County Sheriffs to shelter in place affected visitors or evacuate campgrounds. The Boulder Ranger District office was closed for two days. Visitor **travel was discouraged** on all but the Sulphur Ranger District due to uncertainty of the condition of roads. Employee field work was restricted or postponed. **Initially 260,000 acres of NFS was closed to all entry**. Some portion of this area is expected to have some type of restrictions for the next several years.

► Fort Collins Interagency Dispatch Center assisted Boulder and Larimer counties with **assembling resources** from the start of the flood, continuing through recovery operations. ARP personnel were dispatched to assist with the incident including the Roosevelt Hotshots. A helicopter and staff temporarily stationed in Fort Collins also assisted.

► The ARP worked closely with counties to ensure that **closure orders supported rescue and recovery actions and resolved access issues for residents** who needed to travel through the closed area to remove essential items, winterize their homes or have periodic subsistence travel.

► Many ARP fire personnel worked in response to the September flooding, serving in close coordination with affected counties, the National Guard and the U.S. Army to rescue and provide initial support to local residents, under the direction of the Federal Emergency Management Agency. Additional ARP fire personnel staffed the Fort Collins Dispatch Center and filled roles on the two Type-2 Incident Management Teams employed by Larimer and Boulder counties in response to the flood.

► On Sept. 16, 2013, the Forest Supervisor established a **Flood Impact Assessment Team (FIAT)** to rapidly assess damage and imminent risk to facilities and infrastructure caused by the flooding. Seven to nine two-person teams surveyed damage on the ground or by helicopter from Sept. 20 to 27. **Approximately 463,000 acres of the assessment area had to be surveyed by helicopter** due to inaccessibility from damaged or destroyed state and federal highways, county and Forest Service roads.

► The FIAT completed their field work on Sept. 27 **assessing 609,000 acres and 365 roads**, totaling 557 miles, 17 bridges, and 168 facilities including recreation sites, administrative sites, recreation residences and

# CHANGED LANDSCAPE IMPACTED RESOURCES

*Historically the ARP is a dynamic landscape affected by natural forces and processes such as flood, fire and insect outbreaks.*

several hiking trails. The assessment was released on Nov. 8 and provided a snapshot of the scope and scale of the flood damage and risks to ARP facilities and infrastructure. **The assessment did not include damage to other resources such as fisheries, range, etc.**

► The September 2013 flood dramatically changed the landscape on portions of the **Boulder and Canyon Lakes ranger districts**. The most affected area is north of Colo. State Highway 72 and South of Highway 14 (Poudre Canyon) and west to Rocky Mountain National Park.

► Although damage to the natural resources was not assessed some areas have extensive damage or changes. **More than 250 debris slides** exist on the North Saint Vrain area alone. Piles of debris are deposited in streams, culverts, and lands throughout the National Forest. These debris flows and piles may contain hazardous materials and sometimes are a combination of natural debris and remnants of manmade materials. Assessing debris and identifying possible action is a 2014 priority.

► **Multiple streams on the Forest were affected**, including Buckhorn Creek, the North Fork and main stem Big Thompson Rivers, the Little Thompson River, North and Middle St. Vrain Creeks, Lefthand Creek, Middle Boulder Creek, as well as many smaller tributaries. **Fish in the flood affected areas of the ARP experienced significant changes to their habitats**. As rivers and streams flooded, streambeds became mobile and streambank vegetation was scoured. In some cases stream channels were permanently altered.

► Some fish communities survived others did not. Preliminary information from **Colorado Parks and Wildlife** suggests that while the larger trout in the upper Big Thompson River survived, the fish community in the lower portion of that canyon suffered immensely, with very few fish remaining. As road reconstruction continues along valley bottoms and large equipment attempts to forge a defined river once again, **habitat conditions will remain poor for the immediate future**. With the aid of partners, the ARP will attempt to gain an understanding of how local fish populations were affected and how the Forest might best aid in their recovery and resiliency for the next event. The assessment of resource damage is one of the focuses of the flood recovery team in 2014.

► Several **roads and trails have been closed due to safety concerns** and to protect the fragile resource the flood has left behind in many areas. As the resource assessment continues, recovery priorities will be led by the needs and opportunities suitable for this new post-flood landscape. Some roads, trails, facilities and recreation opportunities may not be restored to pre-flood conditions. New opportunities will be available within the limits of what the changed landscape can sustain.



One of many debris flows on NFS lands. This one is in Pierson Park area.

## FLOOD RECOVERY 2014 FOCUS

- *Addressing public and employee safety issues.*
- *Prioritizing work needed to stabilize, repair, relocate or decommission facilities and infrastructure, and restoring dynamic ecosystems that are sustainable and appropriate within the limits and opportunities of this changed landscape.*
- *Providing public service through working with communities, partners and volunteers to resolve issues, leverage funds, and expand our recovery efforts.*



Canyon Lakes Ranger District worked with power companies to relocate powerlines near the Big Thompson Canyon.