

# WILDFIRE READINESS, RESPONSE, & RECOVERY PLAN

Spring 2018

## Introduction

The Colorado – Big Thompson Project (C-BT) provides an average of 215,000 acre-feet of water a year from the Colorado River to the communities of the Front Range, supporting 960,000 people and 640,000 acres of irrigated land in Northern Colorado. Water is delivered via a system of 12 reservoirs and 130 miles of tunnels and canals.

In recent years, several major fires have occurred in the watersheds that supply and directly affect the C-BT system including the High Park Fire (2012), Fern Lake Fire (2012), and Big Meadows Fire (2013). In response to these fires, as well as a growing awareness that many Front Range forests are overly dense from a century of fire exclusion, Northern Water worked to develop a Wildfire Readiness, Response, and Recovery Plan. This plan, completed in September 2016, describes how Northern Water proactively engages in pre-fire planning and fuels management, supports the wildfire suppression efforts of others, reacts internally, and coordinates post-wildfire mitigation. The objectives of this Wildfire Plan are to:

- ✓ Provide internal & external contact information
- ✓ Describe pre-wildfire mitigation activities
- ✓ Establish internal protocols to be implemented in the event of a wildfire
- ✓ Provide relevant information to the incident command team during a wildfire
- ✓ Guide post-fire response and recovery

**- EMERGENCY CONTACTS -**

**NORTHERN WATER (Farr Control Center)**

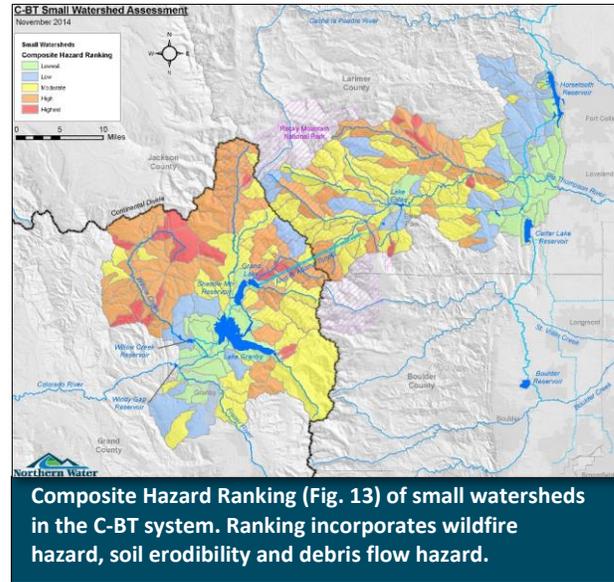
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**BUREAU OF RECLAMATION**

(307) 261-5670

## Readiness: Pre-Fire Activities

High-severity wildfires can have substantial impacts on forest soils, in turn affecting the water quality of runoff. A fire’s extent, burn severity, slope steepness, soil characteristics, and rainfall intensity all contribute to



the nature and severity of downstream water quality impacts. Common impacts include:

- Sedimentation and increased turbidity that can fill in reservoirs, harm water infrastructure, and make water treatment more costly.
- Heavy metals generally increase along with increased sediment loads, which can impact aquatic life and be an issue for water treatment.
- Increased nutrient loads, most notable nitrogen and phosphorus compounds, can lead to algae blooms (eutrophication) in reservoirs and canals.

In order to mitigate this risk from the impacts of severe wildfire, Northern Water is actively engaged in the C-BT Headwaters Partnership, which is implementing a variety of watershed health and fuels reduction projects throughout the C-BT watersheds.

## Water Quality Monitoring

A key component of pre-wildfire mitigation planning is the extensive baseline water quality monitoring program currently carried out by Northern Water. A suite of water quality data, including the water quality metrics most likely to be affected by wildfire, are

regularly monitored at 55 sites. This baseline data will allow any water quality changes due to wildfire to be quantified and acted upon during wildfire recovery.

## Response: Wildfire Suppression Phase

Northern Water is not a wildfire suppression agency. Our intended role during an active wildfire is to act as a primary contact between suppression agencies and water users, and to communicate key water infrastructure values to suppression agencies. **Northern Water would like to be notified of any Type 3 wildfire (or above) that is in or adjacent to a C-BT watershed.**

The Wildfire Plan outlines roles and procedures that will be followed by Northern Water in the event of a wildfire in or adjacent to C-BT or Windy Gap watersheds or infrastructure. The Plan establishes an Emergency Response Team that includes an Emergency Response Manager, Public Information Officer, Agency Representative, Operations Officer, and Safety Officer.

The Plan contains information for this Emergency Response Team that includes roles and responsibilities, internal protocols, and information for key agencies that interface with C-BT watersheds.

## Recovery: Post-Wildfire Mitigation

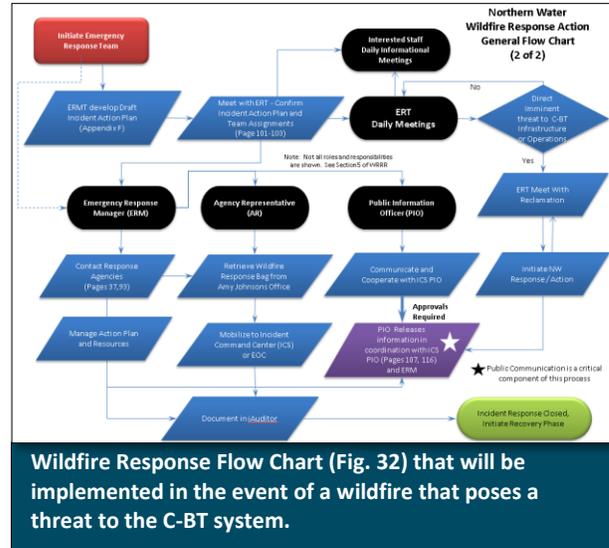
Northern Water’s objective for post-wildfire activities is to promote the immediate and long-term recovery of effected watersheds to maintain the water delivery capability of C-BT infrastructure, and to meet water quality goals for the C-BT water supply. Water quality impacts from wildfire are greatest in the months directly following a wildfire, making a timely post-fire response critical.

### Burned Area Emergency Response (BAER)

Post-wildfire response and recovery on federal lands is managed through the federal Burned Area Emergency Response (BAER) program. Northern Water will directly support this program by providing input, mapping, resources, and staff as needed. Northern Water will also work directly with the NRCS Emergency Watershed Protection (EWP) program to promote recovery on non-federal lands. If a BAER process is not initiated, Northern Water may assist or help assemble a local team of agencies to implement post-wildfire mitigation.

### Post-Wildfire Mitigation Activities

There are a variety of post-wildfire response activities that can be implemented in the immediate aftermath of a wildfire to mitigate some of the water quality impacts.



One of the most effective methods is to mulch the affected area with long, narrow shredded wood mulch. These “wood shreds” can be produced on site or are available commercially. Seeding with native grasses that will grow and stabilize soils in the years following the wildfire can complement the benefits of mulch.

Other common post-wildfire response methods incorporate placing barriers to intercept some of the sediment and debris that runoff from burned hillsides. These include placing wattles, contour-felling burned trees, installing floating debris booms in reservoirs, and constructing sedimentation basins.

### Operational Management of the C-BT System

The other key way for Northern Water to mitigate the water quality impacts of a wildfire is through short-term operational changes to the C-BT system. Through the wise management of how water is moved through the C-BT system in the aftermath of a wildfire, some water quality impacts to the system may be mitigated.

Successful C-BT operational mitigation will depend heavily upon a post-wildfire water quality monitoring program that will be established as part of the recovery process. Data will be collected at sufficient locations after a fire to properly direct operational changes to the C-BT system.

### QUESTIONS/ADDITIONAL INFORMATION

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