

Bosque Forest Management

EMNRD, New Mexico Forestry Division





Overview

- Objectives of treating the Bosque.
- History of the Bosque.
- Bosque Fire Regime.
- Native plant species in the Bosque.
- Non-Native/Invasive plant species in the Bosque.
- Bosque Vegetation Treatments.
- Endangered Wildlife Habitat Improvement.

Why Treat the Bosque?

- Objectives:
 - Reduce catastrophic wildfire risk in the Bosque.
 - Retain and improve native plant species vigor.
 - Remove target invasives plant species and reduce fuel load.
 - Improve overall Bosque ecosystem health.
 - Increase public safety.
 - Improve Bosque aesthetics.





History

- Historically the Bosque would flood.
- Jetty Jacks implemented by BOR and Army Corp of Engineers helped to stabilize soils and banks to channelize the Rio Grande River.
- This created a cohort of Cottonwood stands and the bosque we know today.

Fire

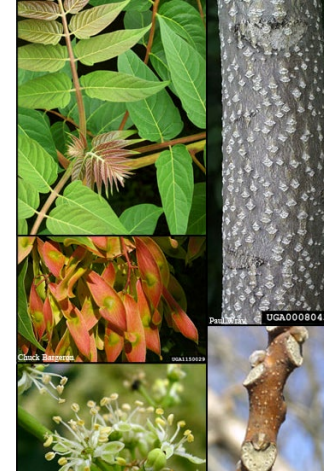
- The Bosque is not a fire adapted ecosystem.
- Native species such as Cottonwoods are not adapted to fire.
 - Low intensity and low severity fires can kill or severely weaken live cottonwoods. Causing them to become hazardous trees.
- ‘Class C’ Invasive species such as Salt cedar and Russian Olive have the ability to vigorously re-sprout.
 - Invasive species create ladder fuels causing an elevated risk for wildfire activity within the bosque.
 - More frequent and severe wildfires. Eventually removing native species from the ecosystem and promoting non-native and invasive species encroachment.





Native Bosque Plant Species

- Rio Grande Cottonwood
- Peachleaf willow
- Coyote Willow
- Fourwing saltbush
- False indigo
- New Mexico Olive
- Baccharis
- Yerba mansa
- Saltgrass



Non-native Target Species

Salt Cedar AKA Tamarisk, (*Tamarix ramosissima*)

Russian Olive (*Elaeagnus angustifolia* L)

Siberian Elm (*Ulmus pumila*)

Tree of Heaven* (*Ailanthus altissima*)

Ravenna Grass* (*Tripidium ravennae*)

Bosque Vegetation Treatments

Thinning

- Cut and remove target invasive species.
- Hand crews using chainsaws.
- Down and Dead wood removal.
- Snag and some large dead and down retention for wildlife.

Herbicide Application

- Herbicide applied to only target invasives species stumps within a 15-minute window after being cut.
- Applicators using backpack pumps.
- Applicators are required to **Follow The Label(s)**.

Slash Management

- Mechanical slash treatment (chipping).
 - Skid steer
 - Chipper.
- Pile chips and firewood sized material.
 - Designated locations.
- Remove material out of the bosque.

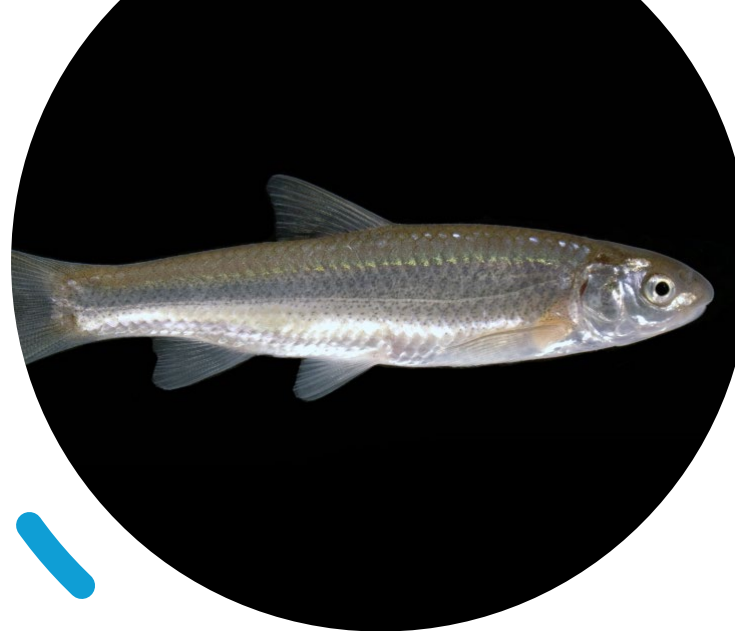


Non-native Fuels Reduction Treatments

Endangered and Threatened Wildlife Species.

- Southwestern Willow Flycatcher, *Empidonax traillii extimus* (Endangered)
- Rio Grande silvery minnow, *Hybognathus amarus*. (Endangered)
- Yellow-billed cuckoo, *Coccyzus americanus* (Threatened)

- ☐ Endangered species managed habitat restoration and non-native and/or invasive plant species management.
- ☐ Fuels reduction and invasive species removal projects tend to create better habitat options for birds.
- ☐ Bird surveys are conducted prior to treatment to avoid nesting sites.
- ☐ Treatment is not conducted during the ***Migratory Bird Treaty Act*** time period
 - ☐ **April 15th – August 15th**
 - ☐ Exceptions may be made if necessary following appropriate approval.





Thank you!
