

# BOISE RIVER ENHANCEMENT NETWORK NOTCH PROJECT

## PROJECT PURPOSE

The purpose of the Notch Habitat Enhancement Project is to improve the riparian condition of an 0.11-acre property, referred to as the “Notch”, owned by the State of Idaho and managed by the Idaho Department of Lands (IDL) along the Boise River.

The project aims to remove non-native and invasive species, plant and help establish native species, and study different methods to remove invasive false indigo (*Amorpha fruticosa*).

## ENHANCEMENT ACTIVITIES

During the past year, volunteers contributed over 200 hours to improve the riparian condition of the Notch Project site, including:

- Remove non-native seedlings/saplings of American elm, Tree of Heaven, silver maple, bittersweet nightshade, and other non-native plants.
- Remove false indigo outside of study plots and treat with Pathfinder® II or Garlon® 4.
- Plant approximately 16 black cottonwood seedlings, two (2) large bushels of willow cuttings, 12 Wood’s rose, and one (1) Oregon grape.
- Wrap existing black cottonwood with wire.
- Prune native trees and shrubs.
- Water planted vegetation weekly in the summer.
- Monitor, remove and treat with Pathfinder® II or Garlon® 4 (except control) false indigo within study plots



10/21/2020 - Notch project area before project initiation.



10/21/2020 - Following non-native tree /shrub removal.



3/19/2021 – Volunteers plant two large bushels of willow stakes and cottonwood seedlings.



07/01/2021 – Most of the regrowth is of native species. Over 90% of planted species have survived.

## FALSE INDIGO REMOVAL STUDY

False indigo (*Amorpha fruticosa*) is an invasive shrub with an extensive root system. It grows in dense thickets and is mostly left alone by native herbivores and insects. It can quickly colonize and push out native species. Previous removal efforts have had minimal success.

### ESTABLISH STUDY PLOTS

Six (6) study plots were established, each 6 meters (m) x 6 m in size: four (4) plots serve as treatment plots and two (2) serve as control plots. The study plots were further divided further into four (4) subplots for monitoring.

### REMOVE FALSE INDIGO

False indigo was removed in all study plots using pruning loppers at a length of around 6 inches. Those receiving herbicide were immediately treated following pruning.

The following six (6) study plots were randomly-selected:

- **Plot 1 (Pathfinder® II)** = Pruned to within 6" of base and treated.
- **Plot 2 (Control)** = Pruned to within 6" of base and left untreated.
- **Plot 3 (Pathfinder® II)** = Pruned to within 6" of base and treated.
- **Plot 4 (Control)** = Pruned to within 6" of base and left untreated
- **Plot 5 (Garlon® 4)** = Pruned to within 6" of base and treated.
- **Plot 6 (Garlon® 4)** = Pruned to within 6" of base and treated.



False indigo (*Amorpha fruticosa*)

### MONITOR PLOTS VIA DAUBENMIRE COVER CLASS METHOD

Within each subplot, the canopy cover class of false indigo was estimated based on the relative proportion of the subplot that is covered by the plant(s).

The Daubenmire Cover Class Method is a rapid, semi-quantitative approach that eliminates the need for "precise" estimation of canopy cover. Instead, canopy cover is assigned to one of six (6) classes, as shown to the right.



### RESULTS AND OBSERVATIONS

- **Garlon-Treated Plots** – both plots performed similarly. After the first treatment, only trace (<5%) regrowth (Class 1) was observed. After the second treatment around 7.5% (Class 2) was observed during the middle of the growing season. After the third treatment, trace (<1%) (Class 1) of regrowth was observed.
- **Pathfinder-Treated Plots** - both plots also performed similarly. After the first treatment, canopy cover was 9%-12% (Class 2). After the second treatment canopy cover was 5%-11% (Class 1 and Class 2) during the middle of the growing season. However, after the third treatment, trace (<1%) (Class 1) of regrowth was observed.
- **Control Plots** – Control Plot 2 canopy cover was 32% after the first pruning, 26% after the second, and 23% after the third pruning. Control Plot 4 canopy cover was 9% after the first pruning, 38% after the second, and 32% after the third pruning.
- **Other observations**
  - False indigo appears to thrive on uneven ground and near existing vegetation.
  - False indigo does not bounce back very well if removed in the heat of the summer and in areas exposed to sunlight, regardless of treatment.
- **Learn more at** <https://www.boiseriverenhancement.org/bren-tackles-false-indigo-at-the-notch/>