

LOWER GILA RIVER INITIATIVE

Presented By:



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Overview

- Background
- Projects
- Lessons Learned
- Closing



OUR MISSION

Collaborating for a Safer and Healthier Arizona.

CORE OBJECTIVES



Promote Health & Safety

Proactively promote the health and safety of Arizona's forests, woodlands, deserts, and watersheds.



Lead Wildfire Response

Provide leadership and oversight of wildfire response resources.



Enforce Fire Code

Ensure fire safety in public buildings through enforcement of the State Fire Code.



Encourage Fire-Adapted Communities

Foster and encourage fire-adapted communities.

OUR GOAL & METHOD



Protecting Arizona

We manage and reduce fire risk to protect Arizona's people, communities, wildlands, and natural resources.



How We Achieve It

Through cooperative natural resource and fire assistance programs, statewide fire policies, and coordinating resources across all jurisdictions.

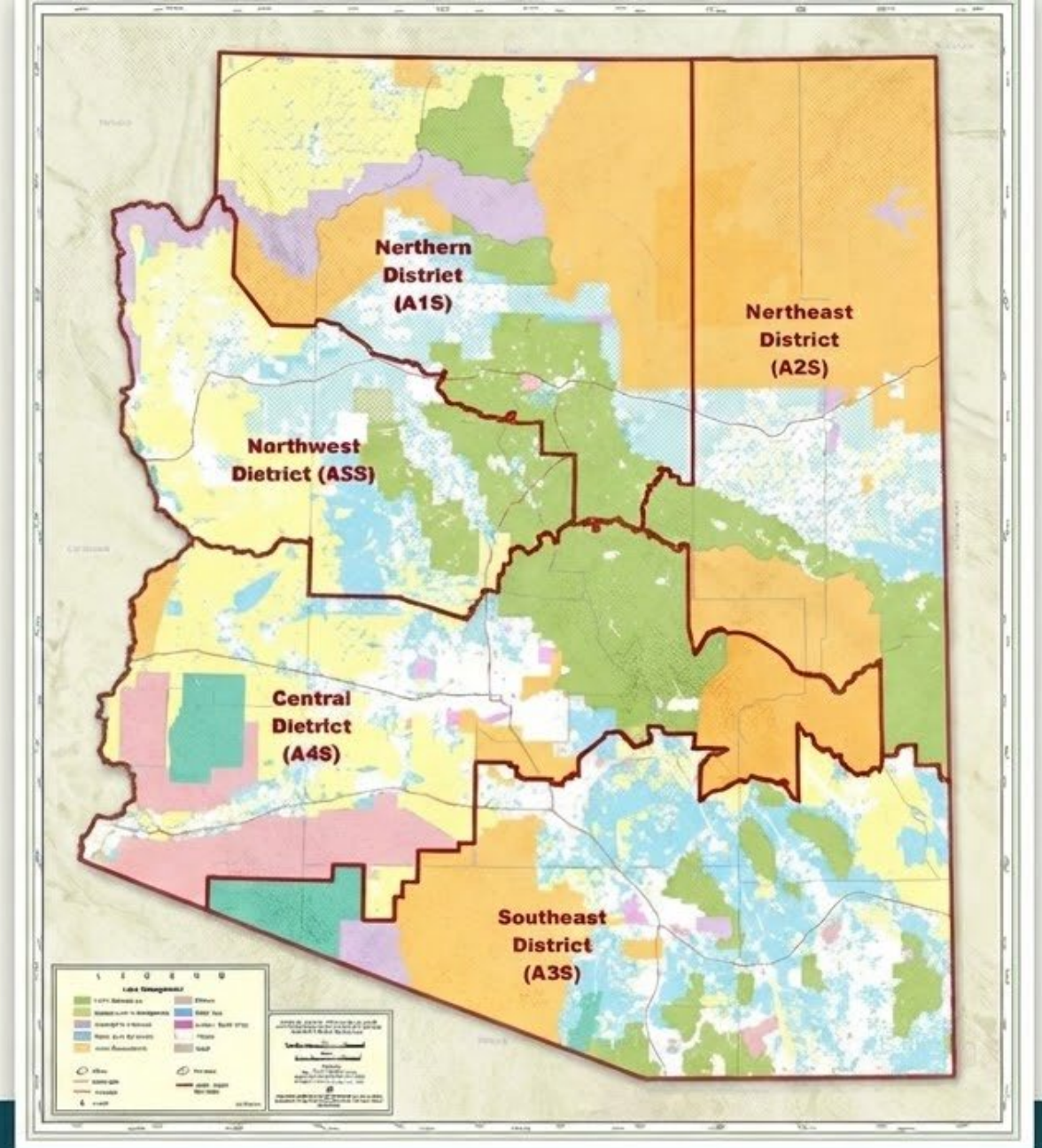


AZ State Trust Lands
Approx. 9.2 million Acres



Unincorporated Private Lands
Approx. 13 mil. Acres

=22.2 mil. Acres

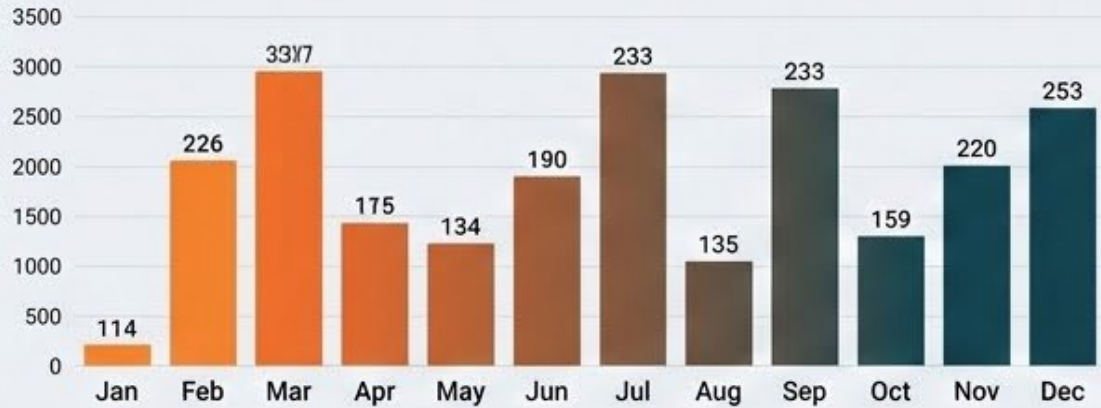


Fuel and Vegetation Treatment Accomplishments (2024 vs. 2025)

2024

Treated Acres:
22,977

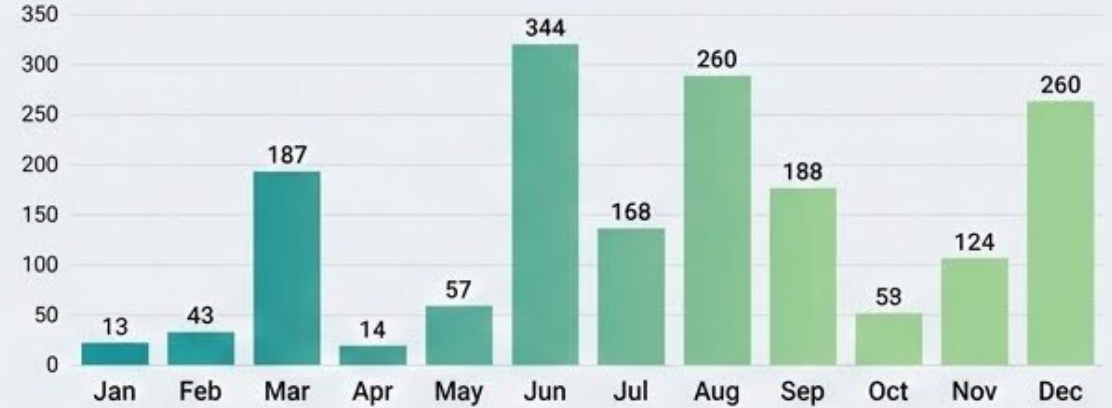
Number of Treatment Areas:
233



2025

Treated Acres:
34,636

Number of Treatment Areas:
260





15,931

NON-STATE LAND ACRES

Of the total acres treated, 15,931 acres were non-state land projects (federal, private, municipal, county, tribal, and others).

5,958 were treated by DFFM on USFS land, via Good Neighbor Authority.

Integrated Vegetation Management

Forestry

- Hand cutting
- Mechanical
- Chemical



Fire Mitigation

- Broadcast burn
- Prescribed burn
- Pile burn
- Fuel break



Lower Gila River Projects

Feb 2026

Map Center:
112°34'20"W 33°18'33"N

Maricopa County

Name

- Another Tetrís
- Arlington Wildlife Area
- Athel Patch
- Buckeye 40
- Estrella Regional Park
- Gillespie Bridge
- Green Manalishi
- Hassayampa Confluence
- Robbins Butte Wildlife Area
- Under The Bridge

Department of Forestry
and Fire Management



Scale: 1:240,000

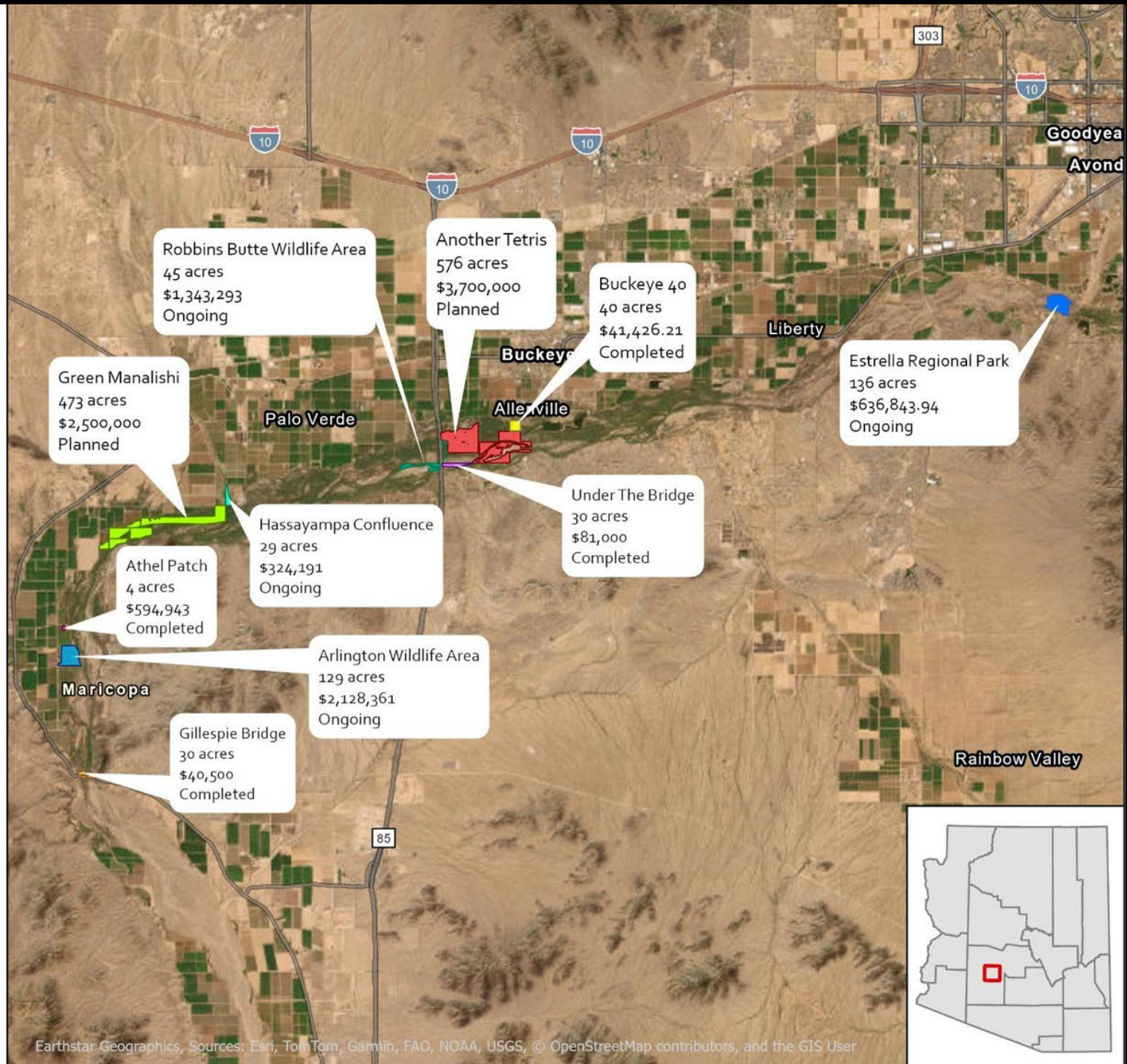


Miles

PCS: WGS 1984 Web Mercator
Auxiliary Sphere
GCS: GCS WGS 1984
Datum: WGS 1984

2/20/2026

id - 217999



Projects

Highlights

- March 2021 to June 2025



327 acres salt cedar removed



4,400 native trees and shrubs planted



5.2 million invested



19 collaborators

Arlington Wildlife Area

Arlington Wildlife Area is a 129-acre bosque habitat enhancement along the Gila River

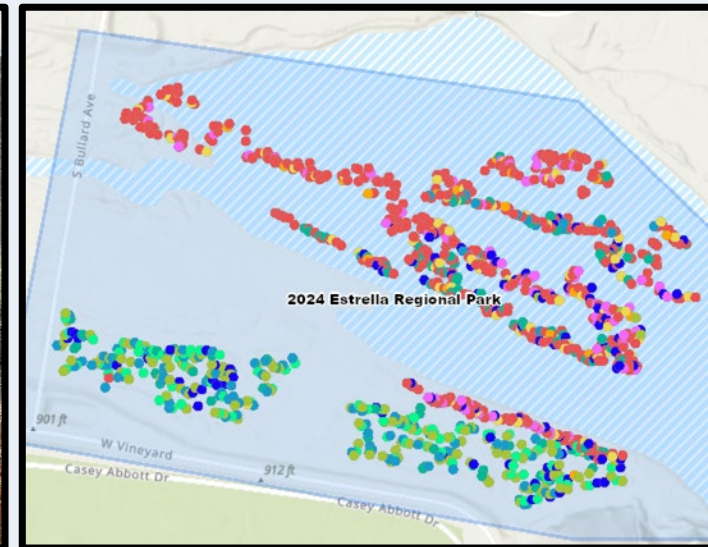
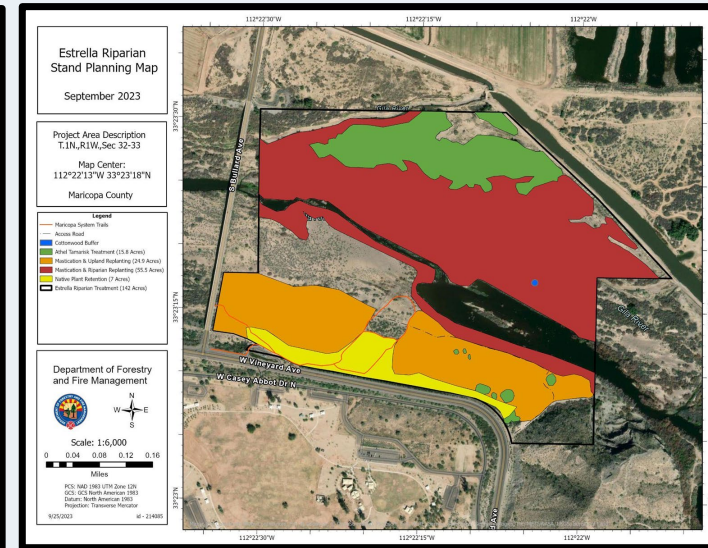
- **Primary Resource Concern:** tamarisk (salt cedar)
- **Project Goal:** native species restoration
- **Target Invasive Species:** tamarisk (primary), stinknet, and Sahara mustard
- **Biomass Disposition:** biomass was ground and hauled off the site
- **Native Plant Reintroduction:** Passive Recruitment
- **Sustainability & Monitoring:**
 - Monitoring conducted in coordination with AZGFD
 - AZGFD has long-term restoration plan, but is experiencing financial barriers to full implementation
 - DFFM stepping up to maintain our initial treatment on the site
 - Qualitative data and photopoints
 - Integrated Pest Management
 - 2 maintenance phases, 1 ongoing



Estrella

Estrella is a 136-acre xeric and riparian habitat enhancement.

- **Primary Resource Concern:** tamarisk (saltcedar)
- **Project Goal:** Riparian restoration to reduce wildfire risk
- **Target Invasive Species:** Tamarisk (primary), stinknet, Sahara mustard, arundo
- **Biomass Disposition:** Mastication, chipping
- **Native Plant Reintroduction:**
 - **Replanting:** Replanted in 2024 with ~1200 tall pots from the county, additional 400 tree pots in 2025 near riparian hand treatment areas
- **Sustainability & Monitoring:**
 - Monitoring in collaboration with Maricopa County Parks and the LGRC to collect tall pot planting data to the tree level, as well as invasive species presence/ absence
 - 3 maintenance phases, 1 ongoing



Hassayampa Confluence

Hassayampa Confluence is a 29-acre tamarisk removal project along the Gila & Hassayampa Rivers

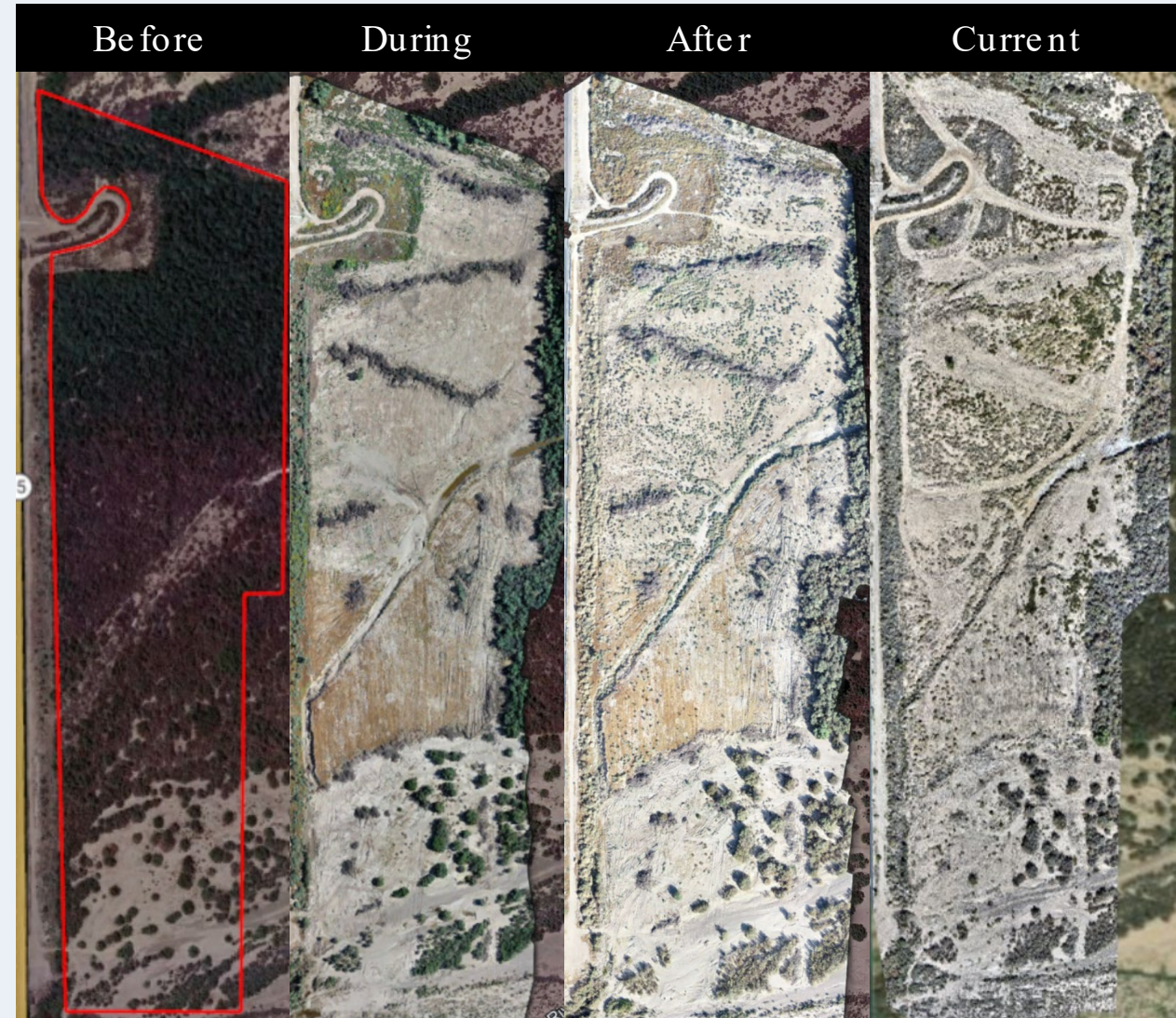
- **Primary Resource Concern:** tamarisk (salt cedar)
- **Project Goal:** native species restoration
- **Target Invasive Species:** tamarisk (primary), stinknet, and Sahara mustard
- **Biomass Disposition:** biomass was chipped and left on site as woody mulch (not exceeding 3 inches deep) and in the uplands
- **Native Plant Reintroduction:**
 - Passive regeneration only thus far
- **Sustainability & Monitoring:**
 - Quarterly qualitative monitoring
 - 2 maintenance phases, one ongoing
 - Working towards Forest Stewardship Plan for long-term sustainability



Robbins Butte Wildlife Area East

Robbins Butte Wildlife Area East is a 45-acre xeric habitat enhancement along the Gila River, initially cleared in 2021

- **Primary Resource Concern:** tamarisk (salt cedar)
- **Project Goal:** native species restoration
- **Target Invasive Species:** tamarisk (primary) and stinknet
- **Biomass Disposition:** biomass was piled, attempted to burn, ground and hauled in 2025
- **Native Plant Reintroduction:**
 - **Seeding:** Mixture of atriplex and mesquite in winter 2024
 - **Planting:** Tall pot velvet mesquite ~200
- **Sustainability & Monitoring:** Herbicide follow-up treatment were conducted twice, Spring and Fall 2023



Robbins Butte Wildlife Area West

Robbins Butte West project is a 56-acre xeric and riparian habitat enhancement.

- **Primary Resource Concern:** tamarisk (saltcedar)
- **Project Goal:** Riparian restoration to reduce wildfire risk
- **Target Invasive Species:** Tamarisk (primary), arundo
- **Biomass Disposition:** biomass was removed through grinding, hauling and burning
- **Native Plant Reintroduction:**
 - **Seeding:** salt tolerant shrubs
 - **Replanting:** Replanted in 2018 with ~500 tallpots, and willow/ cottonwood poles; by 2026 over 2,000 native salt tolerant shrubs and annuals and broadcast
- **Sustainability & Monitoring:**
 - Three maintenance phases, one ongoing
 - Collaborative with AZGFD

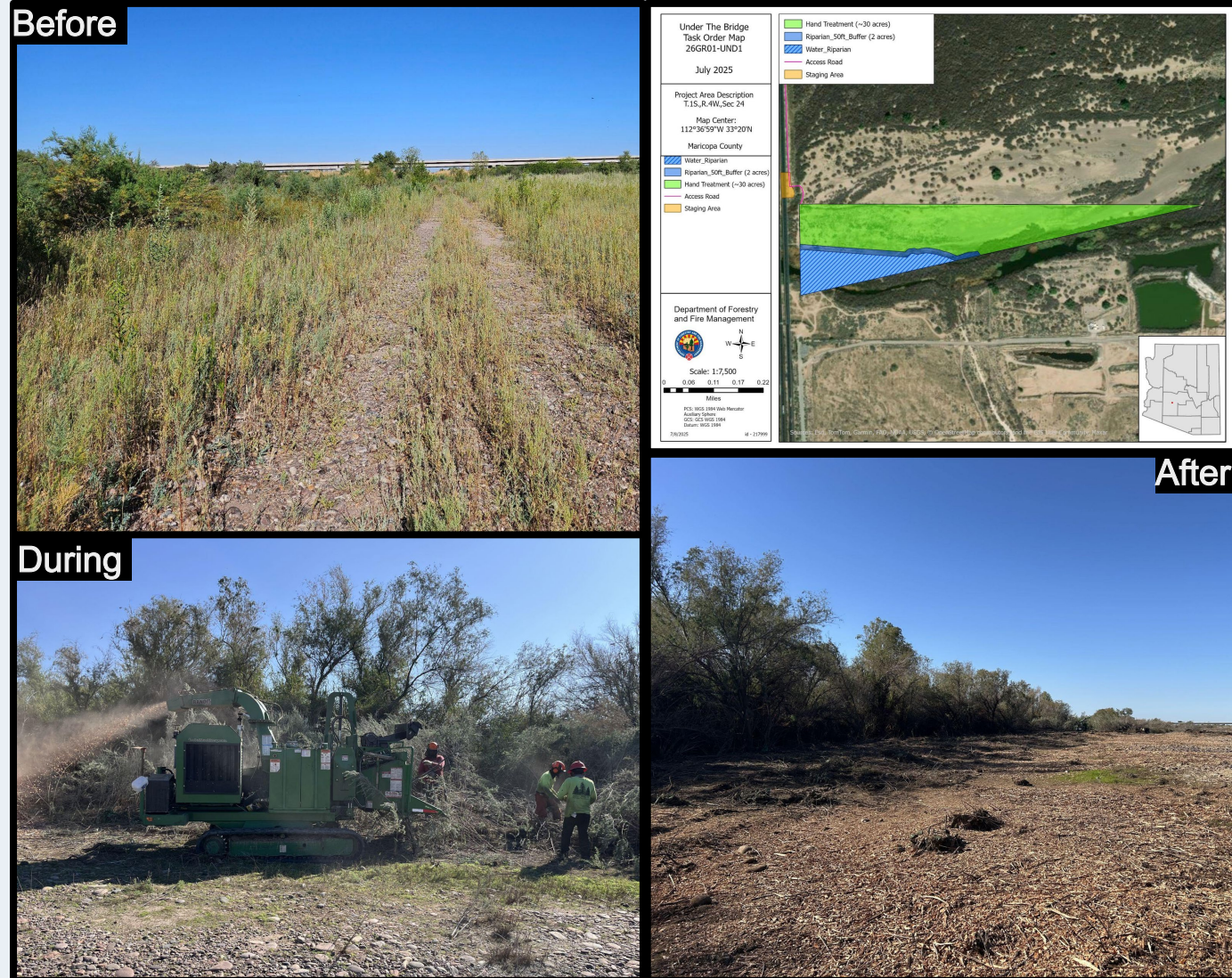


Under the Bridge

The **Under the Bridge** project is a 30-acre treatment area initially mechanically treated by the county in winter 2017/18.

- **Primary Resource Concern:** tamarisk (saltcedar)
- **Project Goal:** native species restoration
- **Target Invasive Species:** Tamarisk (primary), arundo
- **Biomass Disposition:** biomass was chipped and left on upland areas as woody mulch (not exceeding 3 inches deep)
- **Native Plant Reintroduction:**
 - **Seeding:** Tiered seed list provided to contractor and selected based on availability
 - **Replanting:** Replanted in 2018 with ~500 tallpots, and willow/ cottonwood poles
- **Sustainability & Monitoring:** Monitoring will occur seasonally in the spring and fall following treatment to help guide future management decisions. Pre-treatment photos were taken in May

2024.



The entire project area will be reseeded. These areas will be reseeded with a native species mix by hand at a **rate of 8-10 lbs per acre** using a hand spreader.

The mix shall consist of a mix of low-growing Sonoran desert native plants and an organically inert carrier. The seed mix must include a selection of native plants from the list below. Seed procurement shall be the responsibility of the contractor, and the final seed list will be approved by DFFM. The seed mix is selected by a tiered system to account for native seed availability. The tiers are found below:

- ❖ **Tier 1:** Choose **3** from the list below (50-60% of total mix weight);
 - Fourwing saltbush (*Atriplex canescens*), Quail Bush (*Atriplex lentiformis*), Arrowweed (*Pluchea sericea*), Velvet Mesquite (*Neltuma velutina*)
- ❖ **Tier 2:** Choose **2** from the list below (20-30% of total mix weight)
 - Creosote bush (*Larrea tridentata*), Wolfberry (*lycium spp.*), Brittlebush (*Encelia farinosa*), Screwbean Mesquite (*Strombocarpa pubescens*)
- ❖ **Tier 3:** Choose **2-3** from the list below (10-20% of total mix weight)
 - Alkali sacaton (*Sporobolus airoides*), Arizona poppy (*Kallstroemia grandiflora*), desert senna (*senna covesii*), Saltgrass (*Distichlis spicata*), Salt heliotrope (*Heliotropium curassavicum*), Rush milkweed (*Asclepias subulata*)
- ❖ An inert carrier, such as rice hulls, vermiculite, or screened compost, will make up the final 10% of the seed mix.

General Lessons Learned

- ❖ **Timeline Buffers are Critical**
 - Add 6 months for city permitting , 12 months for earth movement , and 2-12 months for USACE permits depending on site complexity
- ❖ **Budget for the Full Lifecycle**
 - Slash removal can be 50-70% of the total costs . Plan for 2-3 years of maintenance minimum post-treatment to ensure success
- ❖ **Know Your Site Conditions**
 - Document ecological site type, soil characteristics, depth to groundwater, and surface water dynamics. **These will directly impact restoration options**
- ❖ **Coordinate Early and Often**
 - Engage Operations & Maintenance during planning. Coordinate with local water managers on fluctuating water levels, and secure all project access well ahead of implementation. **Access can limit opportunities for projects**



General Lessons Learned in Treatment & Planting

Removal

❖ Grubbing over Dozing

Excavator grubbing **removes entire root ball**, preventing regrowth. Dozers leave shards that resprout

❖ Herbicide Timing

- **Apply** cut stump herbicides **immediately**. If you masticate, plan on herbicide treatment within 2-3 weeks. Avoid dormant seasons

❖ Protect Native Patches

- **Leave sections** of high native species cover **untouched to promote for natural seed sources** and intact soil

❖ Think Critically about Biomass

- Hauling can drastically increase costs, burning requires pre-planning and clean piles

Planting

❖ Fall/Winter Seeding

- **Best Timing: Fall & Winter**. Spring seeding leads to invasive dominance

❖ Tallpot Trees

- Larger root systems of tallpot plantings have **higher survival rates**

❖ Shifting Baselines

- Tamarisk often infests systems due to altered flow regimes. **Reference state restoration often isn't achievable**, relying more on native halophytes

❖ Tiered plant procurement lists

- Use a **tiered system** for native plant procurement to provide flexibility to vendors and contractors to adjust for availability

Lessons Learned in Monitoring & Invasive Control

MONITORING BEST PRACTICES



Dormancy Awareness

- Desert has **hot and cold dormancy** - assess during growing season



Track Baseline Metrics

- Establish percent cover by species (or family) at least at a qualitative level



Coordinate Surveys

- Time surveys to avoid disrupting endangered species monitoring

Modern Solutions

- Aerial & space-based platforms can be quicker and cheaper than field-based techniques.

SECONDARY INVASIVE SPECIES



Stinknet Persistence

- 5-year+ seed viability, requires maintenance. Mulching can be used for cultural control



Ground Cover is Key

- Time herbicide and hydroseeding strategically to prevent invasive species regrowth



Seeding Rates and Methods

- Use high lb/acre to outcompete weeds. Pellet seeding can combat seasonal precipitation variabilities



Native Seed Banks

- Even tamarisk monocultures can harbor native seed banks

In Closing

The key lessons learned—emphasizing timeline buffers, lifecycle budgeting, and crucial coordination—will be integral to the sustained success of these efforts. With continued collaboration and the support of state and federal funding, we are confident in achieving long-term ecological health and resilience along the Gila River.



Contact Us



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