

# Natural Resource Damage Assessment and Restoration: Feral Hog Removal for Ecological Restoration within Iron, Reynolds, Washington, and St Francois Counties



# NRDAR overview

- **Natural Resource Damage Assessment & Restoration (NRDAR)**
  - Act on behalf of the public to restore natural resources and services
  - Compensates public for loss of natural resources and services
  - Restores, replaces, acquires, protects, and/or rehabilitates natural resources including fish and wildlife habitat



# NRDAR overview cont'd

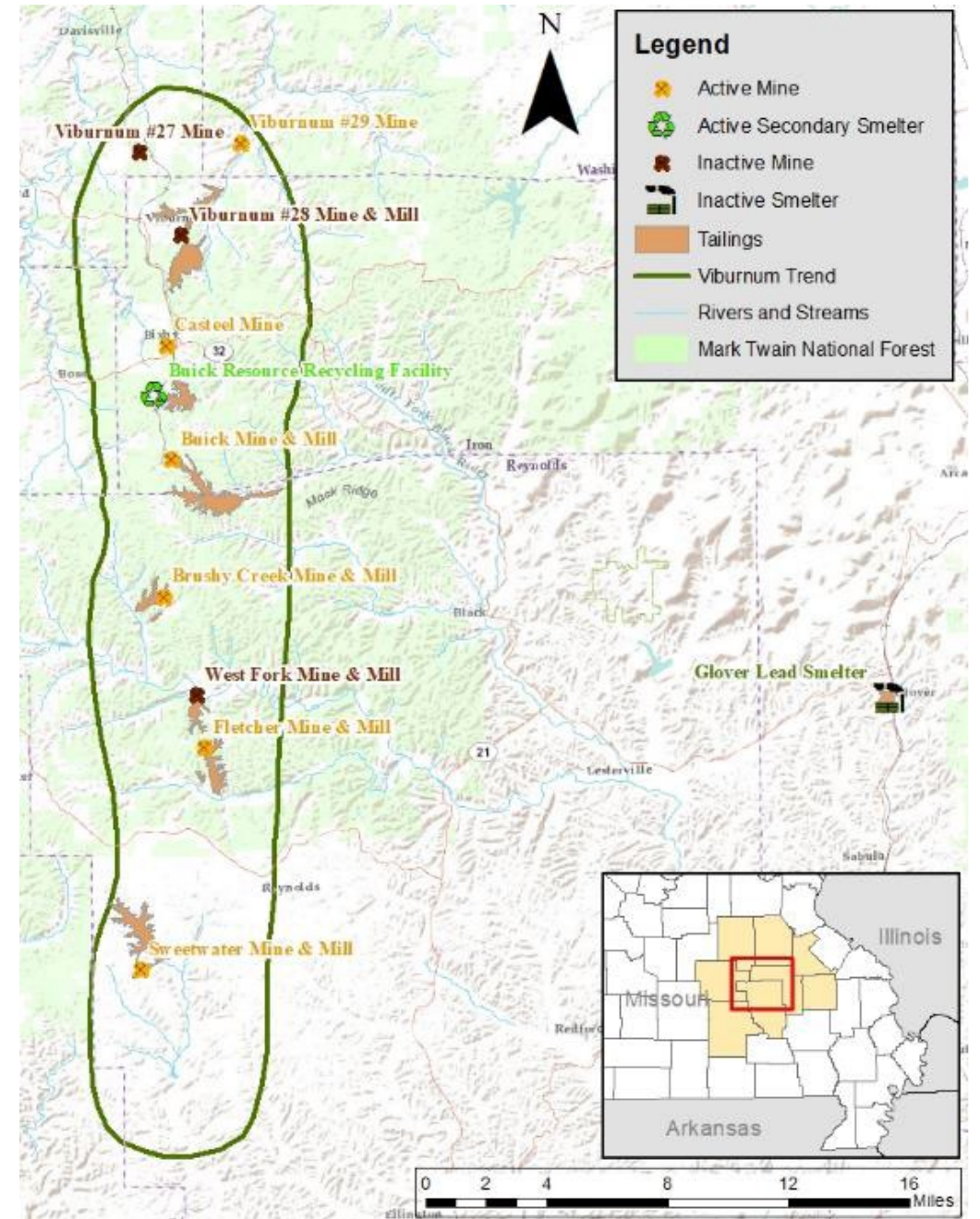
- The Trustees have assessed what resources in the Viburnum Trend have been injured by the release of hazardous substances (heavy metals).
- Funds have been recovered from legal settlements with mining companies for injuries to natural resources on land and in streams and rivers.
- The Trustees used recovered funds to compensating the public through environmental restoration for injured natural resources.





# Project Geographic context

- Viburnum Trend mining area
- NRDAR Settlements for natural resource damages as a result of historic lead mining
  - Magmont
  - Freeport



# Natural Resource Injuries (Viburnum Trend)

- Heavy metal concentrations in songbird tissues have been found at concentrations that cause adverse effects in experimental populations.
- Heavy metals in soils and mine waste contributed to toxicity to plants and reduced floristic quality.
- Stream sediments in Viburnum trend above Probable Effects Concentrations (MacDonald *et al.*, 2000) for Lead, Nickel, Cadmium, and Copper.
- Reduced populations and/or toxicity to crayfish, sculpins, snails in West Fork of the Black River, Strother Creek, and Bee Fork.

# Southeast Missouri Ozarks Regional Restoration Plan and Environmental Assessment (SEMORRP)

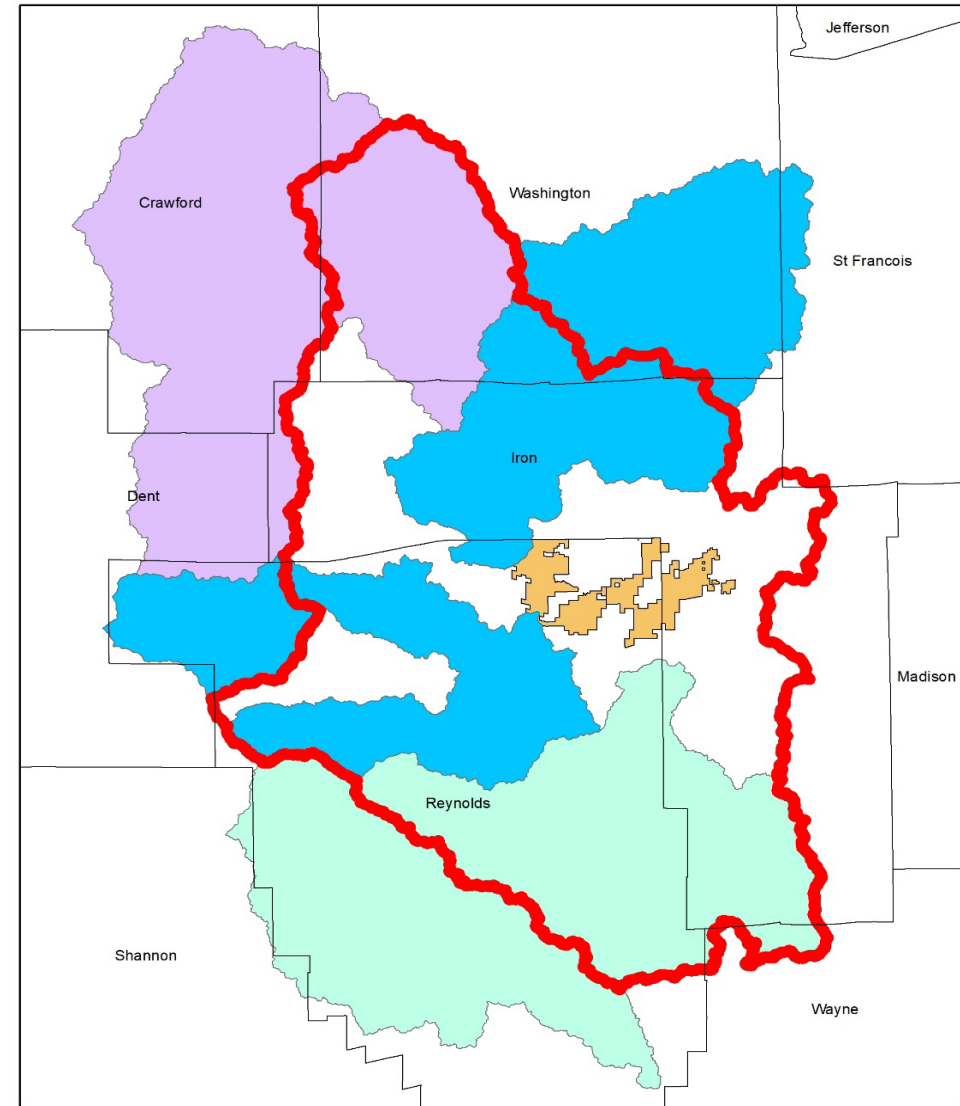
- Covers the Meramec, Upper St. Francis, Upper Black, Current, and Eleven Point Watersheds
- Provides guidelines on expenditure funds for restoration projects in SEMO;
- Restoration funds targeted for proposed project
  - Freeport McMoran
  - Magmont









# Project Location

- Portions of Washington, Iron, St. Francois, and Reynolds Counties
- State, Federal, and can include private lands
- Voluntary participation for landowners

## NRDAR PROJECT AREA PROPOSAL



### Legend

- |   |                                      |   |                          |
|---|--------------------------------------|---|--------------------------|
|  | NRDAR PROJECT AREA PROPOSAL BOUNDARY |  | NRDAR TIER 3 RESTORATION |
|  | NRDAR TIER 1 RESTORATION             |  | JSI & TAUM SAUK SP       |
|  | NRDAR TIER 2 RESTORATION             |  | MTNF                     |

# Feral Swine

- Free-ranging populations of feral hogs exist in at least 39 states
- Feral hogs have been present in Missouri for years, with exponential increase beginning in the 1990's.
- Presently feral hogs are found in at least 30 counties in Missouri.
- In 2007, Missouri Governor Matt Blunt signed Executive Order 07-26, creating the Governor's Feral Hog Task Force, in recognition of the danger and destruction caused by the feral hog population in Missouri.
- In July of 2017, The Missouri Feral Hog Partnership finalized the **Statewide Strategic Plan for Feral Hog Elimination in Missouri**



# Damage to resources

- Sensitive watersheds and native plant habitats (i.e. glades, fens)
- Threatened and Endangered Species (Mead's Milkweed, Hine's Emerald Dragonfly)
- Landscape scale ecosystem degradation from feral hog activity





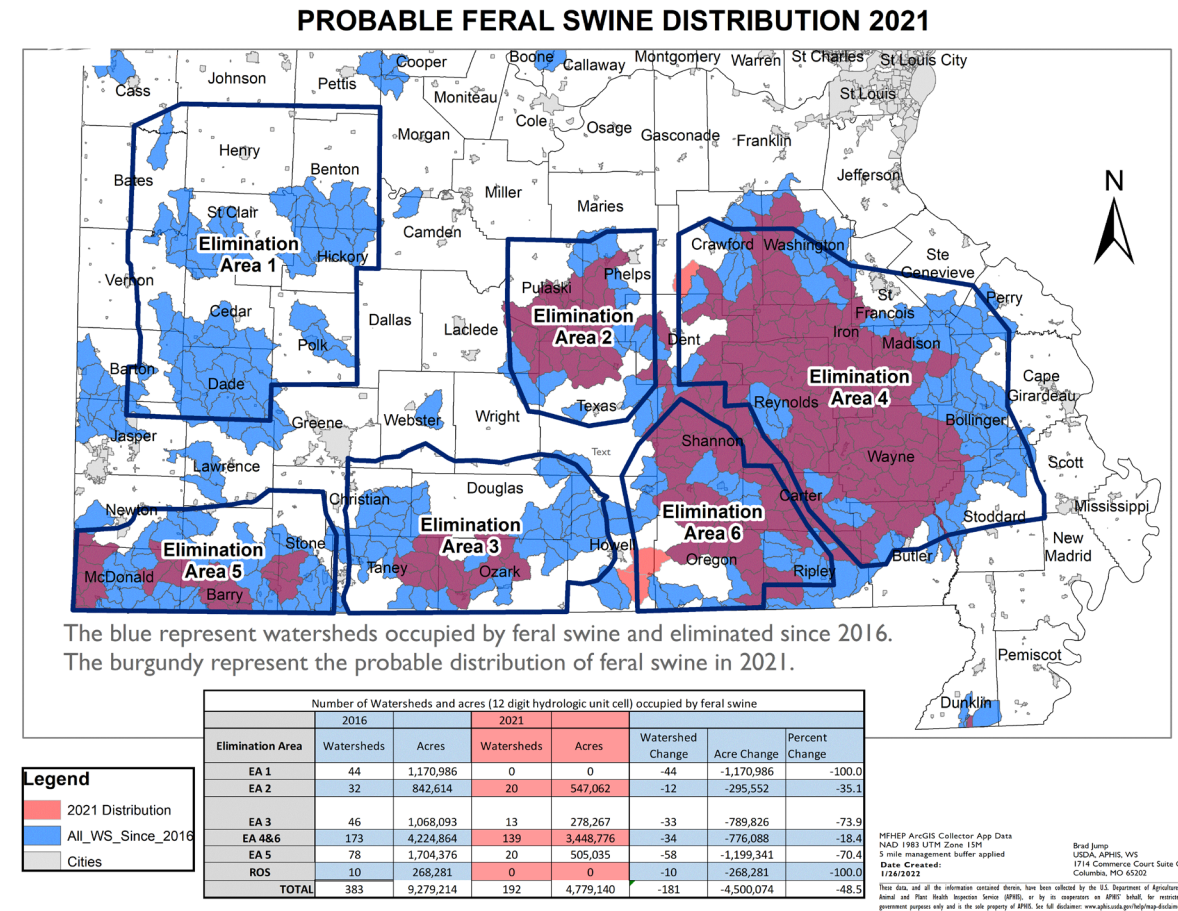
# Existing feral hog operations

- Collaboration between State and Federal partners
- Combination of trapping and aerial operations
- Limited access to wilderness areas and areas far from roads



# Existing feral hog removal operations

- Ongoing feral swine removal operations have been effective
- Many watersheds still have feral hog populations





# Project Goals

- Significantly reduce hog numbers within the Feral Hog RP/EA project area;
- Protect existing private, state, and federal lands within the project area from further hog damage including sensitive watersheds and important aquatic features;
- Protect native plant habitats impacted by feral hogs;
- Protect migratory bird and Threatened and Endangered Species Habitats



# Project Benefits

- Improve habitats in areas with natural resources similar to those injured by releases of hazardous substances;
- Increase vegetation quality in areas degraded or destroyed by feral hogs;
- Reduce destruction of migratory birds and their habitats;
- Reduce degradation to aquatic and riparian habitats;
- Compliments existing restoration practices within the project area;
- Improve habitat for federally threatened and endangered species





# Project Approach

- Fund 2 USDA APHIS staff for removal operations
- Fund aerial operations
- Utilize technology to improve efficacy

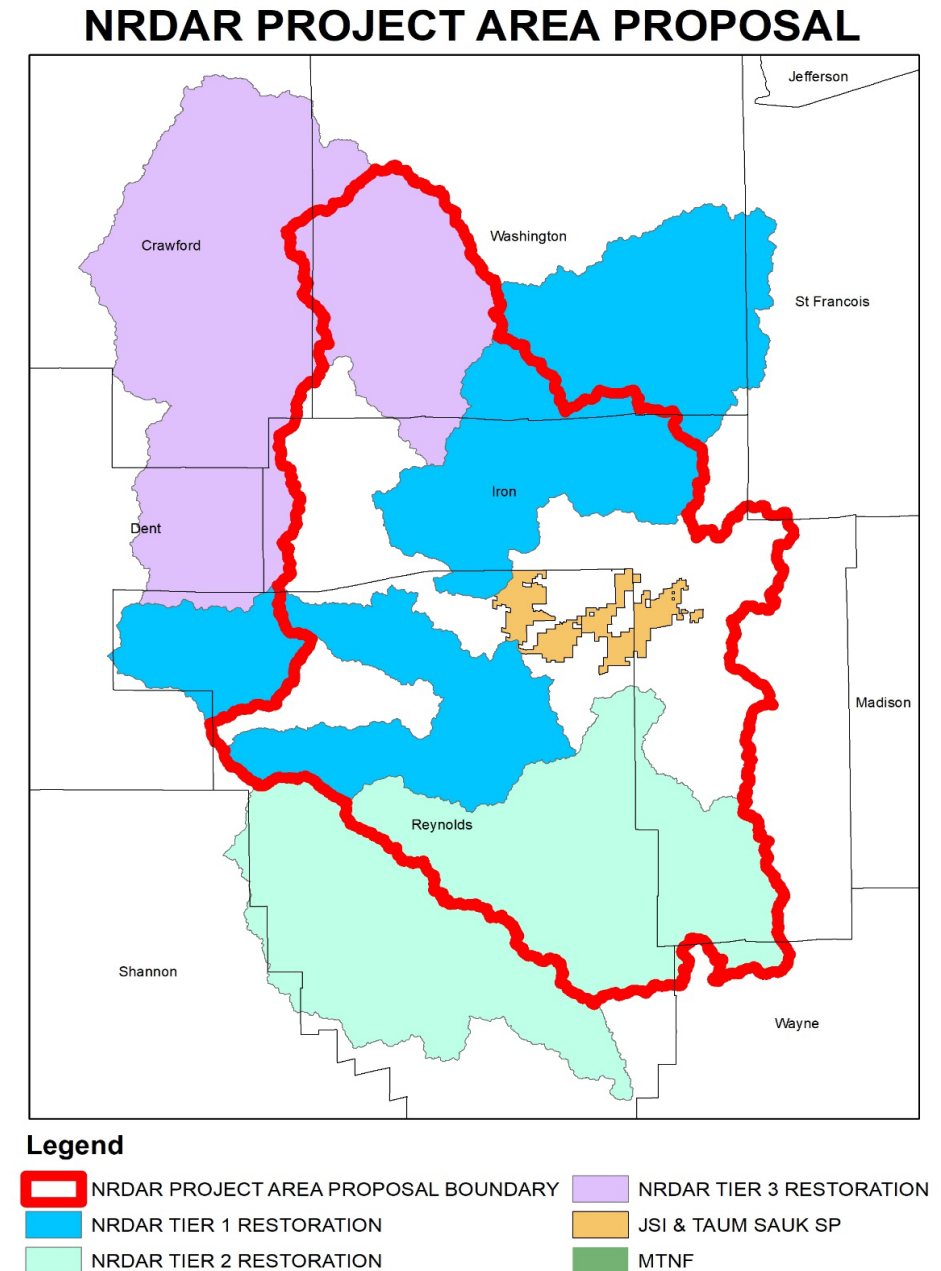


# NRDAR: Feral Hog Removal RP/EA Evaluations of various alternatives

- Alternative 1
  - No Action
- Alternative 2 (Preferred)
  - 3 years feral hog removal NRDAR funded and 2 years funded through other agency funds (5 years total);
  - 2 full time USDA APHIS employees + equipment
  - 7 weeks of aerial operations per year
- Alternative 3
  - 5 years feral hog removal fully NRDAR funded
  - 2 full time USDA APHIS employees + equipment
  - 7 weeks of aerial operations per year

# Preferred Alternative 2 + Project Map

- Alternative 2:
  - 3 years funded through NRDAR
  - 2 years funded through alternative sources (5 years total)
- Target Area
  - portions of Washington, Iron, St. Francois, and Reynolds Counties
  - includes Mark Twain National Forest, Missouri State Lands, and interested private landowner property



# Public Participation

The draft RP/EA will be open for public comment for 30 days from the date of publication (June 28, 2022). Comments will be accepted until July 28, 2022.

Submit comments by writing or email to

John LaCoste

U.S. Forest Service

401 Fairgrounds Rd

Rolla, MO 65401

[John.lacoste@usda.gov](mailto:John.lacoste@usda.gov)

573-341-7479

A copy of the Feral Hog Removal for Ecological Restoration within Iron, Reynolds, Washington, and St Francois Counties Draft Restoration Plan is available at <http://www.fs.usda.gov/goto/mtnf/feralswine>