

LARIMER COUNTY: NATURAL RESOURCES



RUSSIAN OLIVE AND SALT CEDAR MANAGEMENT

MARCH 7, 2024



LIFE HISTORY TRAITS

Russian olive

- Invades middle canopy riparian niche and seasonally dry wetlands
- Fruit stays on branches
- Zoochoric dispersal; spread by birds
- Seed requires stratification and scarification
- Frankia symbiosis
- Seed survives up to 3 years





LIFE HISTORY TRAITS

Saltcedar

- Grows in alkaline soils
- Seed immediately viable but only survives 5 weeks
- Most germination is within 24 hours
- Grows vegetatively
- Roots extract salt, leaves exude salt
- Plants are flammable
- Deep rooted (>15ft)



OPPORTUNITIES

Cost savings

- Prevention/eradication
- Grant funding
- Do it right the first time!

Learning

- Research opportunities
- Hands-on experience
- Landowner outreach

Partnering

- Share resources
- Stakeholder engagement
- Diverse perspectives

Restore

- Habitat
- Ecological processes
- Native species

CHALLENGES

Contracting

- Qualification
- Scheduling
- Site supervision

Terrain

- Flowing/standing water
- Mud
- Varying topography

Cost

- Disposal
- Tools, staff time and funding
- Long-term management

Restoration

- Poor soils
- Secondary invasion
- Fluctuating water table



PROJECT PLANNING



- Inventory
- Identify constraints
- Assess
- Partner
- Budget
- Develop specifications
- Delegate
- Conduct quality assurance
- Set S.M.A.R.T Goals

INTEGRATED TECHNIQUES

- Prevention
 - Decontaminate
 - Educate
 - Limit disturbance
- Early Detection Rapid Response (EDRR)
- Biological agents
 - *Diorabda carinulata* for tamarisk
- Pulling - Russian olives **NOT** salt cedar
- Combining mechanical and chemical control
 - Summer, fall and winter



**Address the problem not the symptoms!*

TREATMENTS

Cut stump

- Clear path and limb tree
- Drop, cut trunk flat and low to the ground
- Apply herbicide with tracer dye to cambium with low pressure
- Chip material and move off site or give away as firewood





TREATMENTS

Foliar application

- Calibrate sprayer
- Spray non-woody trees less than 5" diameter or 6' in height
- Apply when tree is actively growing and not stressed
- Revisit and retreat if necessary



TREATMENTS

Girdling

- For small treatment area
- Cut around main stem and treat cambium with herbicide

Masticating

- Quickly removes and grinds up woody material
- Difficult to target with herbicide
- Soil disturbance



HERBICIDE RECOMMENDATIONS

Triclopyr

- Foliar or cut-stump
- Rates
 - 2 qt/ac foliar
 - undiluted Garlon 3A for cut-stump
- Use surfactant
- Limited soil movement
- Selective treatment
- 1 month plant back interval

** The following active ingredient has products labeled for aquatic use*

** Read the label*

Specimen Label



™Trademarks of Corteva Agriscience and its affiliated companies

For the control of woody plants, broadleaf weeds in range and pasture, forests and non-crop areas, including manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, fence rows, non-irrigation ditch banks, and around farm buildings; and applications to grazed areas, and establishment and maintenance of wildlife openings, and in Christmas tree plantations and aquatic sites.

For use in New York State, comply with Section 24(c) Special Local Need labeling for Garlon 3A, SLN NY-110005.

Active Ingredient:	
Triclopyr: 2-[(3,5,6-trichloro-2-pyridinyl)oxy]	
acetic acid, triethylamine salt.....	44.4%
Other Ingredients.....	55.6%
Total.....	100.0%
Acid equivalent: triclopyr - 31.8% - 3 lb/gal	

HERBICIDE RECOMMENDATIONS

Imazapyr

- High rate of translocation
- Foliar or cut-stump
- Creates “ring of death”
- Persistent in the soil
- Leaching potential
- Secondary weed invasion

* *The following active ingredient has products labeled for aquatic use*

* *Read the label!*

Habitat[®] Herbicide

SePRO

SPECIMEN

For the control of undesirable vegetation growing within specified aquatic sites and nonirrigation ditchbanks.

Active Ingredient
isopropylamine salt of imazapyr: (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) 1: . . . 27.77%

Other Ingredients 72.23%

TOTAL 100.0%

1 Equivalent to 22.6% 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.

Keep Out of Reach of Children
CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Refer to inside of label booklet for additional precautionary information and directions for use, including first aid and storage and disposal.

NOTICE: Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Terms and Conditions of Use, Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies* inside label booklet.

Habitat is a registered trademark of BASF Corporation.
Manufactured for: SePRO Corporation 11550 N. Meridian St. EPA Reg. No. 241-426-67690
Suite 600, Carmel, IN 46032, U.S.A. FPL20120613

KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

HERBICIDE RECOMMENDATIONS

Glyphosate

- Over 50% a.i.
- Apply undiluted for cut-stump
- Non-selective
- No soil residual
- Plant back immediately

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** Read the label!*

Specimen Label

GLYPHOSATE	GROUP	9	HERBICIDE
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Rodeo®

HERBICIDE

® TM Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

For control of annual and perennial weeds and woody plants in natural and production (plantations), forests for site preparation, mid-rotation release treatments, timber stand improvement activities, noncrop sites including industrial sites, rights-of-way (including roadsides, electric utility and communication transmission lines, pipelines, railroads, airports), irrigation and drainage ditches, canals, reservoirs, natural areas (including wildlife management areas, wildlife openings, wildlife habitats and refuges, parks and recreational areas, campgrounds, trailheads and trails), rangeland, and in and around aquatic sites and wetlands; also for perennial grass release, and grass growth suppression and grazed areas on these sites.

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

Active Ingredient:

glyphosate† N-(phosphonomethyl)glycine,	
isopropylamine salt	53.8%
Other Ingredients	46.2%
Total	100.0%

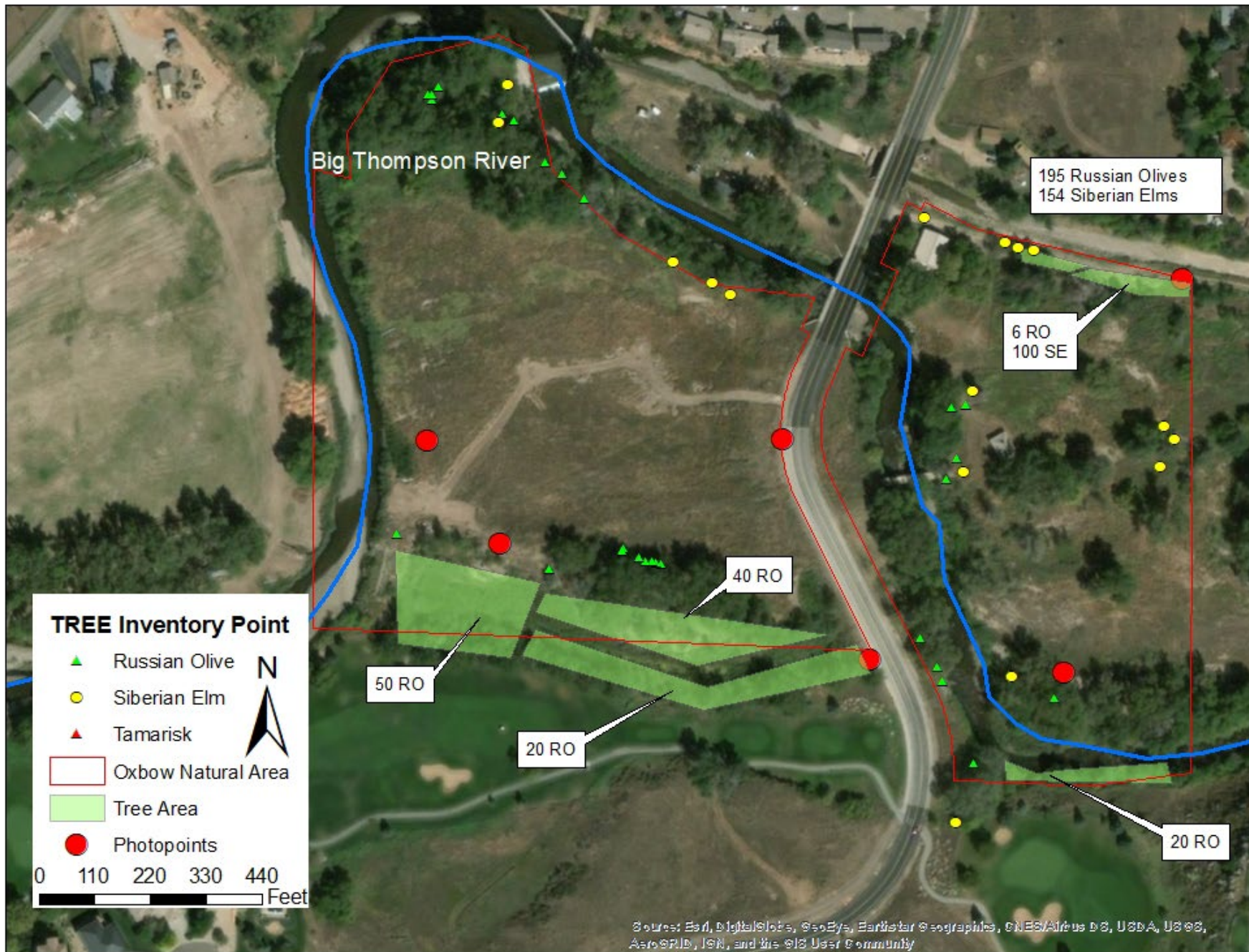
† Contains 5.4 lb per gallon glyphosate, isopropylamine salt (4 lb per gallon glyphosate acid).

MONITORING

- Develop protocol prior to implementation
- Tree/stem/resprout counts
- Wildlife surveys
- Soil testing
- Photo points



Oxbow Natural Area



ADAPTIVE MANAGEMENT

- Quantitative and qualitative evaluation
- Troubleshoot
- Apply follow-up treatments
- Address unanticipated challenges
- Consider plant succession on the landscape
- Revegetate



BEST PRACTICES



- Be proactive with prevention and Early Detection Rapid Response
- Partner with other stakeholders
- Be on-site during project implementation
- Monitor and retreat for six years
- Contract with qualified companies
- Consider seasonal hydrology
- Use pole saw and brush cutters to clear limbs and other vegetation
- Sawyer and applicator must work in tandem
- Look at the project like an investment
- Celebrate your accomplishments even though there's always more!

THANK YOU!!!

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