

Strategizing & Prioritization

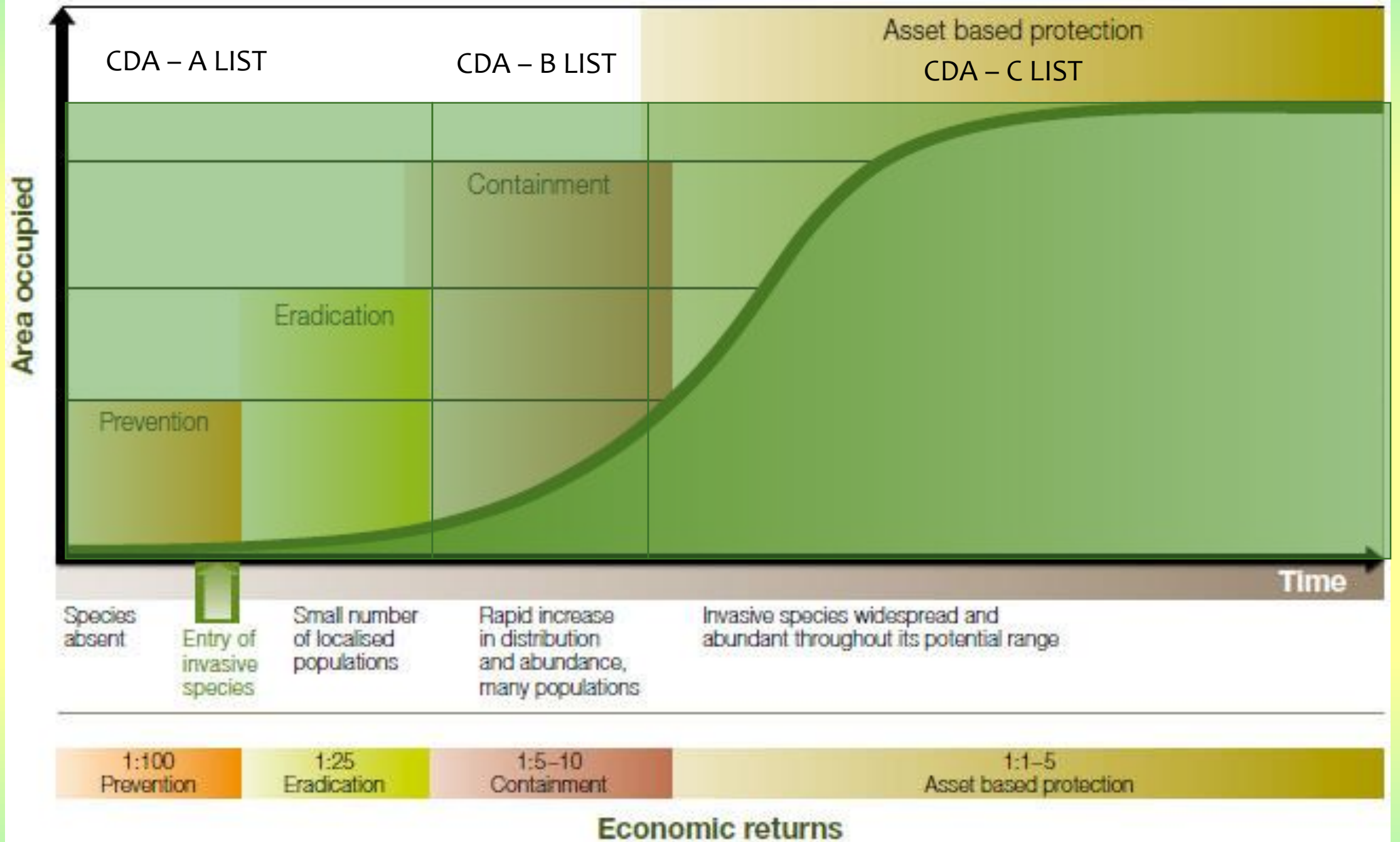
Too many plants, too little time.

Kayla Malone

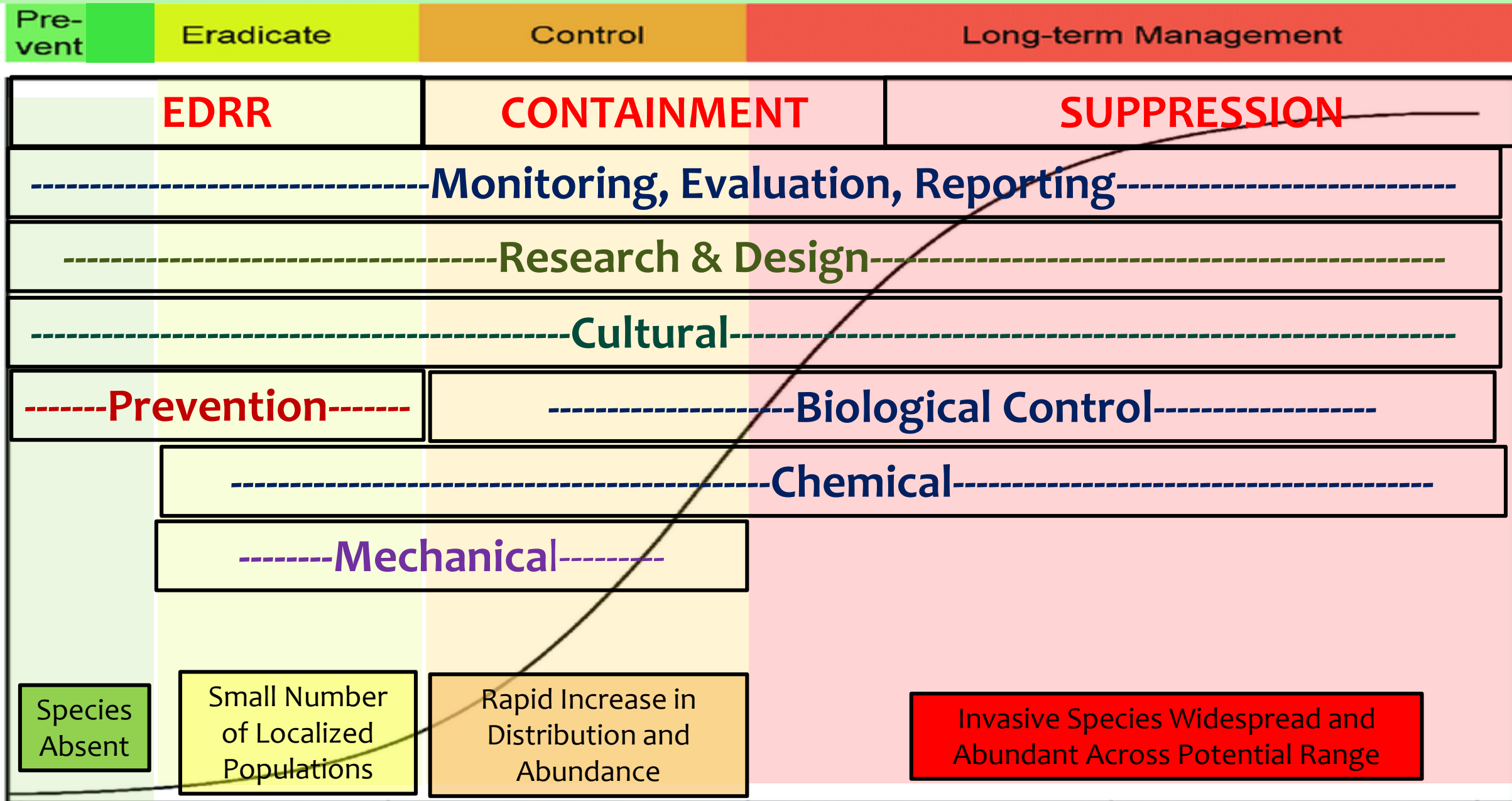
Chaffee County Noxious Weed Department

Summary

- Invasion Curve & Management Strategies
- Key Considerations for Prioritization
- Proposed Local Prioritization Process
- Efficient Herbicide Application Methods for Rare Invasive Species
- Eradication Challenges



- Cost of impact +



- Density/cover of invasive species +

Legal Requirements

State and local negotiated boundaries.

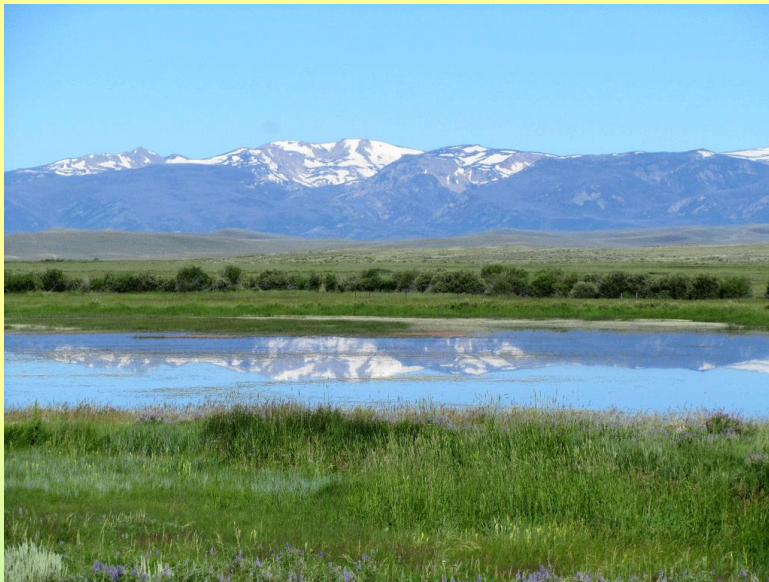
Defines what species are required to be eradicated vs. contain vs. suppress.

- “Eradicated” = annual “elimination” until seedbed is depleted.
- “Contain” = eradicate outside of the boundary, suppress within.
- “Suppression” = actions taken to reduce the success of targeted species.

State-wide Noxious Weed Lists DO NOT reflect local distributions or program capacities.

Key Considerations

- Targeted Species
- Land-use Values
- Local Resources



Targeted Species

- Life Cycle
- Seedbed
- Potential Threats
- Treatment efficacy
- Invasion Potential
- Current Distribution
- Dispersal Mechanisms
- Potential Distribution



Diffuse knapweed



Oxeye daisy



Dalmatian toadflax



Spotted knapweed



Plumeless thistle



Houndstongue



Chamomile



Absinth wormwood



Leafy spurge

Land-Use Values

How is the land used?

- Agriculture – if so, what types?
- Recreation – if so, what types?

Consider the risks of dispersal for different species on areas with different land-uses.

- EX: Hoary Cress vs Leafy Spurge on a grazing allotment.
- EX: Burdock vs Canada thistle on a fishing easement.



Local Resources

Consider the current and potential available resources.

- Agency staff available for surveys and treatment.
- Local landowners and possible partners.
- Grants or cost-share programs.
- Non-profits for conservation, biodiversity, or recreational development.
- Volunteer groups and events.

Legal Requirements

“Eradicate” vs. “Contain” vs. “Suppress”

State defines ONE consideration for all species:

Can you eliminate all reproductive parts of this species in your area annually for the life of the seedbed?

- If the answer is “YES” then Eradicate is an effective goal.
- If the answer is “NO” then more work needs to be done to define your goals, objectives, management boundaries and program capacity.

Eradication Species

Can you eliminate all reproductive parts of this species in your area annually for the life of the seedbed?

If the answer is “NO” then determine why not.

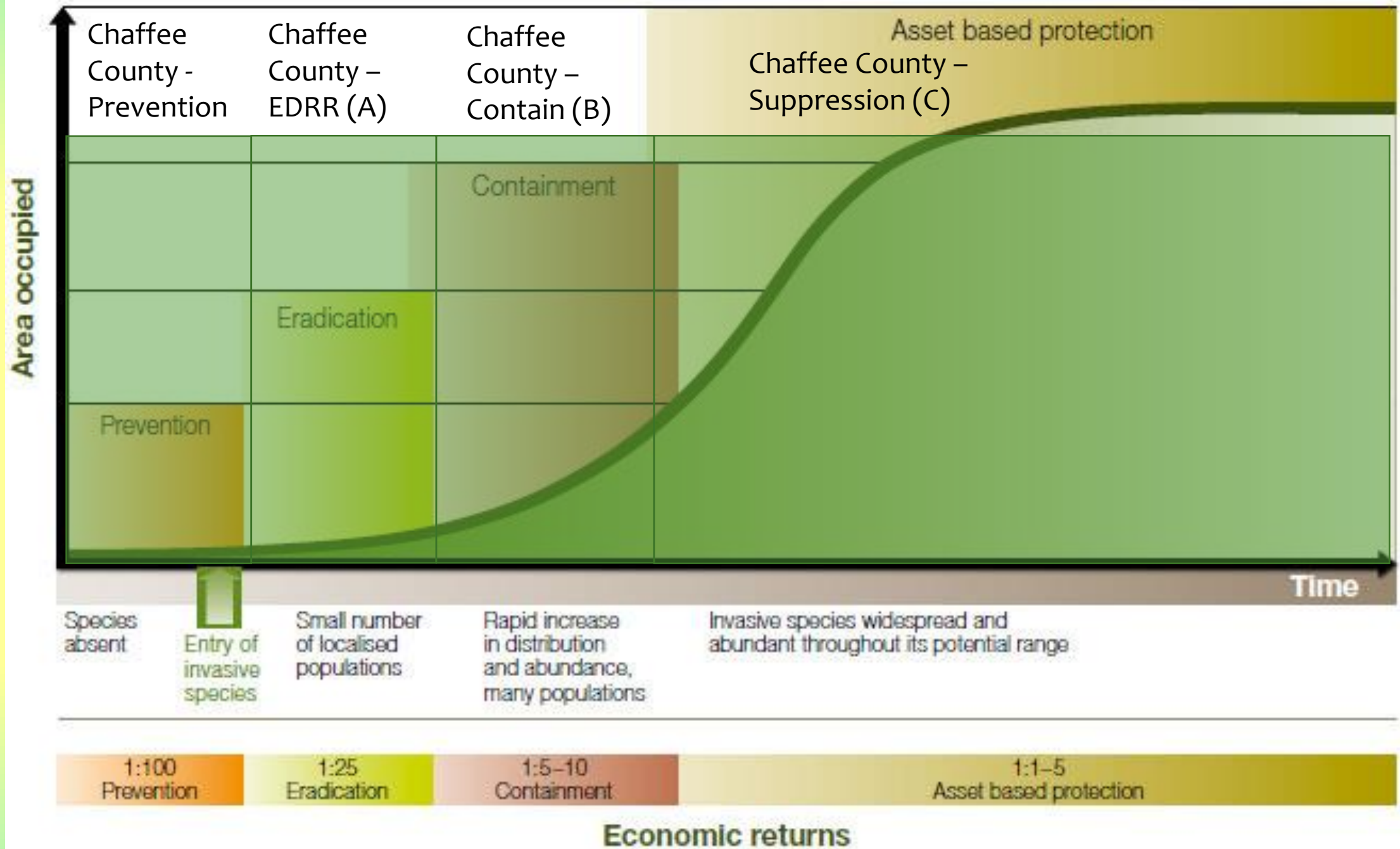
- Why not?
 - Private property with non-resident landowners – lack of landowner permission.
 - Lack of education – landowners do not understand the risks.
 - Not enough staff time – work to increase staff capacity, work with the CDA to adjust management boundaries.

Local Prioritization

Analyzes state-mandated objective with local program capacity.

Creates 5 separate lists of species and defines management actions when detected.

- Not Present in the Region - PANIC!!! (Okay, don't panic, but treat immediately).
- Present in the Region and can be fully eradicated BY YOUR AGENCY ONLY - ERADICATE
- Present in a portion of the Region and cannot be fully eradicated by your agency only - CONTAINMENT
- Present across the region and cannot be treated annually – SUPPRESSION
- Need more information to determine distribution - RESEARCH



Local Program Decision Making

Chaffee County:

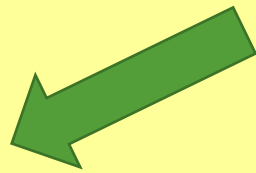
Considers two factors for determining local prioritization.

1. Species Distribution.
2. Local Program Capacity.

Decision-making Flow Chart

1. Has the species been identified within my jurisdiction?

No



EDRR Species

Recommended Management Includes:

- Monitoring, Evaluation & Reporting
- Research and Program Design
- Cultural
- Education & Outreach
- Prevention

Yes or Undetermined.



Head to Question #2

Decision-making Flow Chart

2. Can I and/or My Agency ensure that all known plants can be eliminated annually?

Yes

No or Undetermined

ERADICATE Species

Recommended Management Includes:

- Mechanical Removal
- Herbicide Treatments
- Monitoring, Evaluation & Reporting
- Research and Program Design
- Cultural
- Education & Outreach
- Prevention

Head to Question #3

Decision-making Flow Chart

3. Are populations of this species in limited or widespread geographic regions within my jurisdiction?



Decision-making Flow Chart

4. Are populations of this species widespread in my jurisdiction or do I need more information to determine?

Widespread

Undetermined

SUPPRESSION Species

Recommended Management Includes:

- Mechanical Removal
- Biological Controls
- Herbicide Treatments
- Monitoring, Evaluation & Reporting
- Research and Program Design
- Cultural
- Education & Outreach

Requires additional data to prioritize effectively. Focus on mapping!

Local Prioritization

5 Categories of Plants:

- EDRR
- Eradicate
- Contain
- Suppression
- Needs More Data

Herbicide Treatments for High-Priority Populations

Ensure small equipment is calibrated correctly.

- Use the 18.5 x 18.5 method to calibrate.
- Calibrate all equipment to the same application rates to allow for use of pre-mixed herbicide.

EX: if my ATV applies at 24 GPA at standard use, aim to calibrate hand-held equipment at 24 GPA. This allows you to utilize herbicide from one piece of application equipment to another.

Inaccurate calibration results in under-applications, which are ineffective, or over-applications, which are illegal.

Herbicide Treatments for High-Priority Populations

Chemistry selection:

- Evaluate effective treatment options for high-priority species.
- Determine what additional species can be effectively treated with that product.
- Determine if the product is appropriate for the site and conditions.
- Select products that are: Effective at targeting your high-priority species AND effective at targeted more common species.

This allows you to move from a rare, high-priority species to a more common, lower priority species in a single day AND reduces the potential for excess herbicides at the end of the day.



Herbicide Treatments for High-Priority Populations

Treatment Order:

Move from high priority, rare species treatments into lower priority, common species treatment within a small area. CLEAN YOUR GEAR BEFORE MOVING!

- Avoids accidental dispersal of common species onto new sites that are previously uninvaded.
- Reduces unnecessary travel-times.
- Reduces potential waste and excess herbicides.



Eradication Challenges

- Private Property.
- Fluctuations in local resources.
- Changes in ecological conditions.
- Staff Turnover.
- Treatment Method Efficacy.
- Lack of mapping data
- Establish a notification process that can easily be followed.
- Work to develop 5+ year agreements.
- Develop flexible management plans.
- Analyze reasons for staff-turn over.
- Keep records to track treatment success.
- Build data collection INTO your goals.

Conclusion

- Evaluate your area to determine presence, absence and distribution of all state-listed noxious weeds.
- Evaluate your local land uses to determine land-use values at risk.
- Create management plans that reflect local values and program capacity.
- Keep records to determine distribution, treatment efficacy, and program capacity.
- Re-evaluate species listings at least annually to make appropriate adjustments.
- Create flexible programs with metrics of success BEYOND treated acres.

Conclusion

- Create flexible prioritization process' that reflect land use values, targeted species risks, and local program capacity.
- Develop management activities that can be used on species of different prioritization efforts.
- Consider program efficiency when developing annual scopes of work AND daily treatment activities.

Thank you!

Questions?

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