

Riparian Zones To Manage or Not?

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Does timber harvesting
compromise
riparian values?



Who cares?

It's part of the job!

Expectations exist.



How much harvesting?



How close to water?



**Farming, housing, exotics,
climate change, neglect . . .**



**. . . pose greater threats
than timber harvesting.**



Are there differences among forest types?



How much variability is there among different riparian systems?





What are riparian “values”?



**Do guidelines serve to
protect these values?**



Water quality? Yes.
Habitat integrity? Probably.
Plant diversity? Maybe Not.



Values? Results?



RMZ values and characteristics



Values / Characteristics

- Aquatic systems



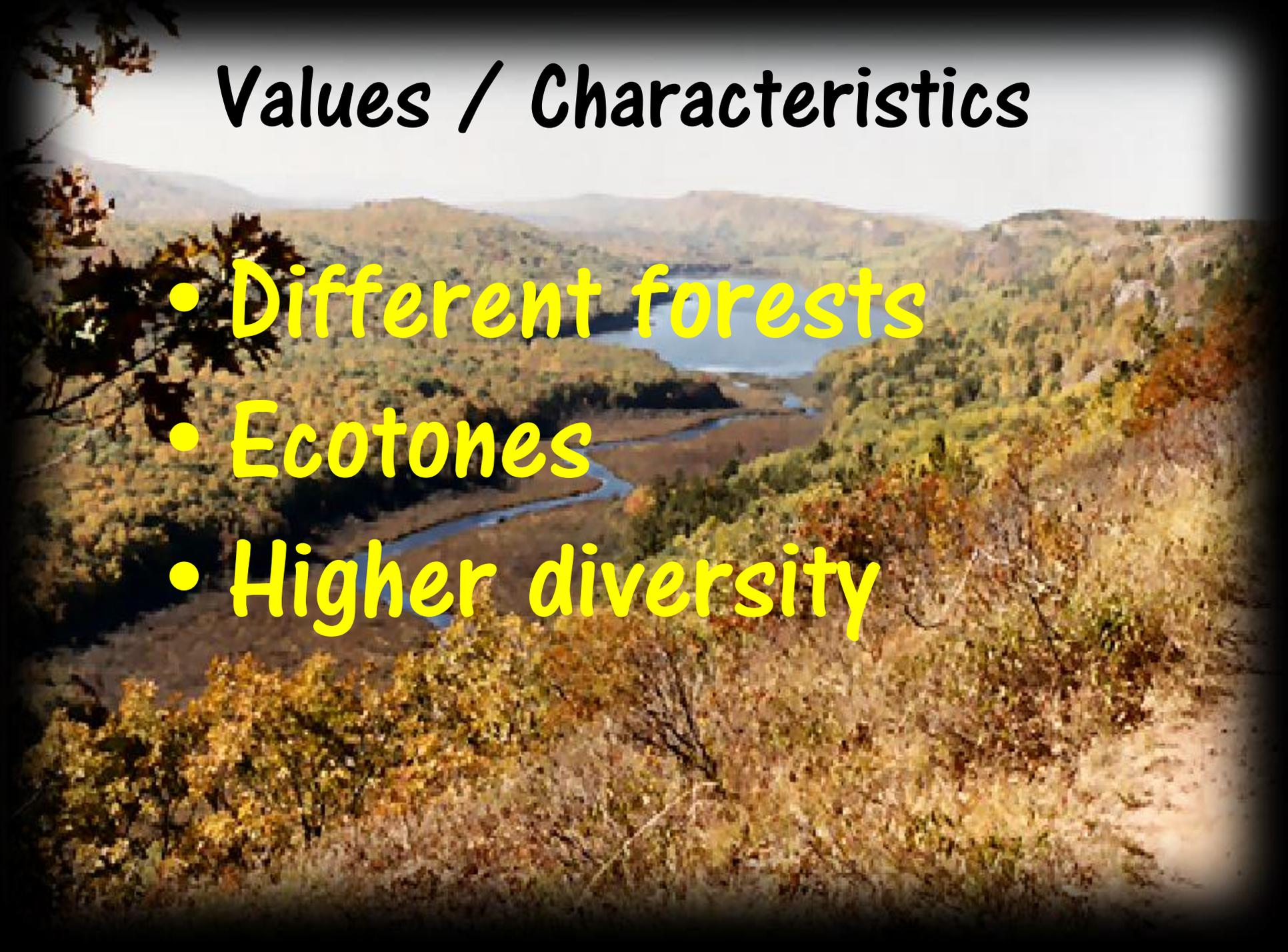
Values / Characteristics

- Soil hydrology



Values / Characteristics

- Different forests
- Ecotones
- Higher diversity



Values / Characteristics

- 80% TNEs use RMZs



Values / Characteristics

- 10%-40% of MN forest within 200 feet of open water



Values / Characteristics

- Travel corridors



Values / Characteristics

- Fishing
- Camping
- Hiking
- Canoeing
- High visual quality





**Practices
Maintain
Conifers**



**Practices
Promote
Later
Succession**

**Practices
Minimize
Ground
Damage**



**Practices
Retain
Snags
& CWD**



Practices

- *Maintain conifers*
- *Promote later succession*
- *Minimize ground damage*
- *Retain snags & CWD*

Practices

- Disturbance is important
- Key to productivity
- Yet, RMZs are sensitive to disturbance

Practices

- Multiple “zones”
- Variable retention based on RMZ structure



Practices

- Thinning > future CWD



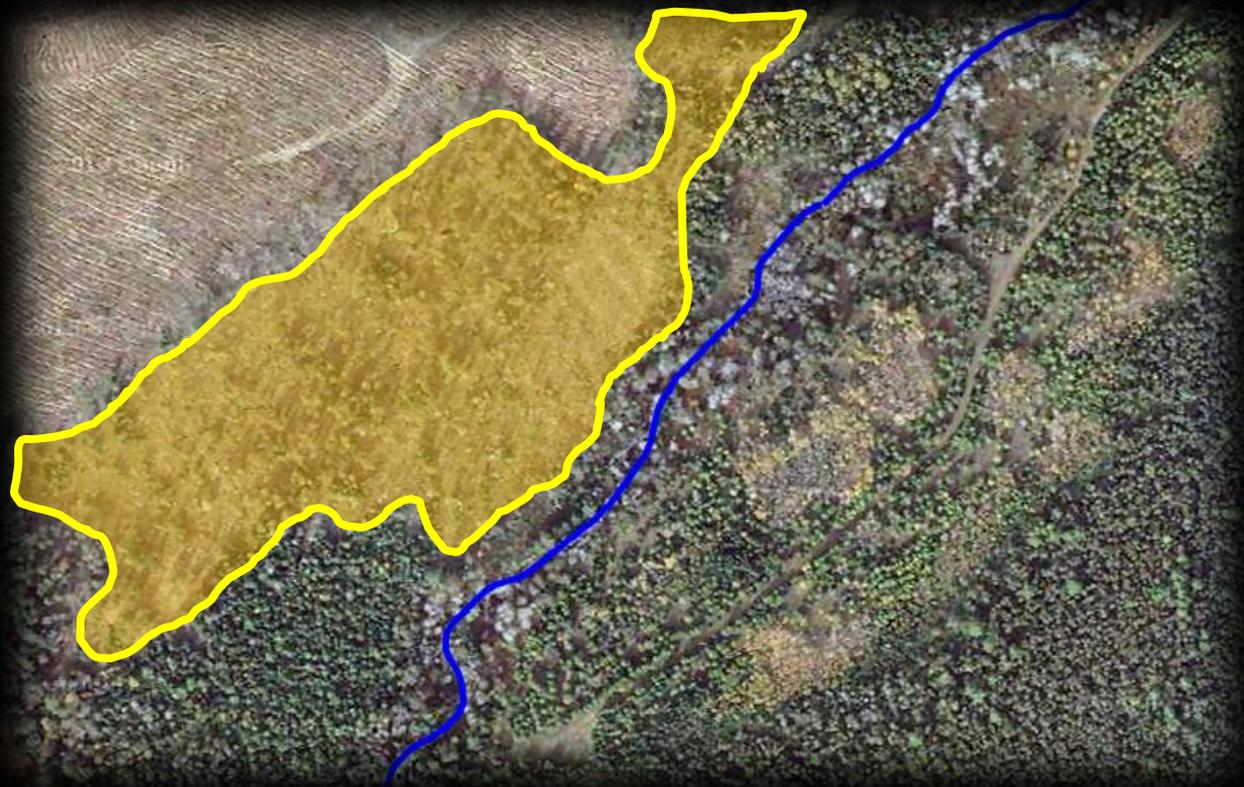
Practices

- Can also promote brush and exotic species



Practices

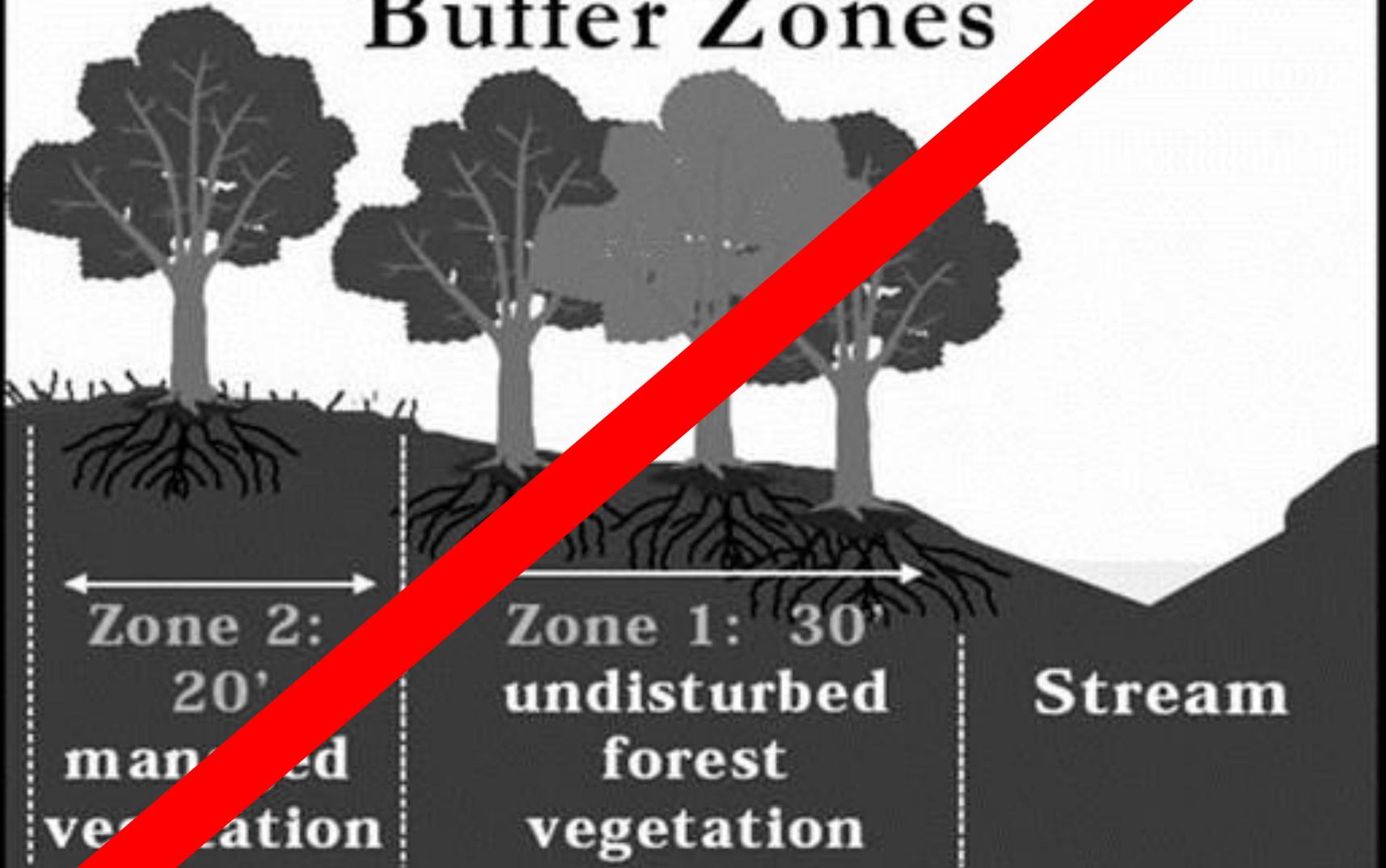
- Streams unaffected by clearcuts outside RMZ



Not So Good Practices

- No-cut buffers (usually)
- Arbitrary distances
- Soil rutting/compacting

Buffer Zones



Zone 2:
20'
managed
vegetation

Zone 1: 30'
undisturbed
forest
vegetation

Stream

Not So Good Practices

- RMZs cannot replace BMPs outside RMZ



Not So Good Practices

- “Light-tight” streams



Not So Good Practices

- *Slash in water*



Wildlife That Use RMZs

Who doesn't?

RMZs have higher diversity.

Seasonality.

Part of habitat needs.

Preferences vs. requirements.

Bats!

- Rough, wolfy trees and snags
- Cannot easily ID a roost tree
- Includes the Northern Long-eared



Other Mammals

- Fishers
- Otters
- Mink & other weasels
- Lynx in quality hare habitat
- Beavers (problems!)
- Corridors & water access



Turtle Notes

Clearcut areas warm sooner but get colder during the winter.

- Snappers, painted seek sunny, moist sites . . .
- Nests in June/July, warmer nests = more females
- Wood turtles special concern . . . reduced stand density may assist summer forays into RMZs.
- Their biggest problems are wetland loss and road-kill. NOT loss/modification of RMZs.



Amphibian Notes

- Vernal ponds, CWD important
- Prefer cool, moist woodlands, so RMZ disturbance not so great.
- Although, CWD in open areas may be more important than the canopy.



More Amphibian Notes

- Salamanders use RMZs
- Not so much toads & frogs
- Mudpuppy, blue-spotted, spotted, central newt, red-backed, four-toed, peepers, wood.



Special Bird Species

Yellow-throated Warbler

Prothonotary Warbler

Cerulean Warbler

Hooded Warbler

Louisiana Waterthrush

Acadian Flycatcher



More Bird Notes

Raptor Nests: Coopers, Red-shouldered

Woodpeckers

Wood Ducks

Merlins



OK. It's over now.

