

Wildlife Division's Human-Wildlife Conflict Workgroup Overview

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Issue to Address

- Internal workgroup formed in March 2018
- There is a lack of consistency and coordination in responding to human-wildlife conflicts across the state
 - In some cases, no streamlined process
 - Inconsistent practices across the state
 - Lack of internal guidance



Workgroup Charge

- The *internal* process for responding to human/wildlife conflict issues is to be streamlined to ensure consistency across the state.



Workgroup Members

- Core Team made up of Wildlife Division staff:
 - Policy and Regulations Unit
 - Species Specialists
 - Representatives from UP, NLP, SE, and SW
 - Public Outreach and Engagement Unit



Progress

- Survey
 - Address inconsistencies statewide
 - Provide clear and updated guidance
 - Provide educational materials to staff
- Internal workgroup meeting
 - Ideal Process
- Document and information gathering



Workshop

- Breakout groups: Migratory Birds, Cervids, Furbearer and Small Game, Turkey, and Large Carnivores
- Wildlife Division representatives from UP, NLP, SW, and SE
- Species Specialist lead each group
- Goal: Develop ways to eliminate barriers and provide *internal* consistent statewide guidelines for addressing human-wildlife conflicts



Where are we now?

- Several areas need improvement or additional work
 - Internal flowcharts
 - Training opportunities
 - Permitting procedures



Moving Forward

- The core workgroup continues to work on identified items that need improvement and meets quarterly
- Nuisance regulations package in the spring



A close-up photograph of a beaver with thick brown fur, sitting in a snowy environment. The beaver is holding a piece of wood in its mouth and appears to be eating. The background shows snow-covered ground, some dry leaves, and the trunks of trees under a bright sky.

Beaver Management in Michigan

Adam Bump
DNR Wildlife Division

Overview

- Brief history of beavers
- Current status
- Ecological value
- Finding a balance



Brief History

- Beaver are native to Michigan- statewide
- Populations were reduced dramatically due to commercial harvest and habitat loss/destruction
- Harvest was carefully regulated and kept low
 - Registration and sealing was required
- Gradual liberalization over time



Current Status

- Beaver are abundant throughout most of Michigan
 - Populations on local streams can fluctuate significantly
 - Seems to be increased presence in some parts of southern Michigan
- Liberal harvest, no bag limit, history of expansions of opportunity



Ecological Value

- Beavers create and maintain wetland habitats and brushy “young forest” habitats in riparian areas
 - Important for waterfowl (in particular black ducks), reptiles, amphibians, songbirds, woodcock, etc
 - Abandoned dams can create and maintain open wet meadows which also create critical habitats



More Benefits

- Riparian areas with beaver activity are more biologically diverse (reptiles and amphibians, avian communities, etc)
- Beaver influenced wetlands are often preferred over wetlands without beaver activity
- Can create multiple layers of benefit
 - Girdled/flooded trees create snags for woodpeckers which create cavities for secondary nesters
 - Open foraging for flycatchers, bats



Beaver Issues

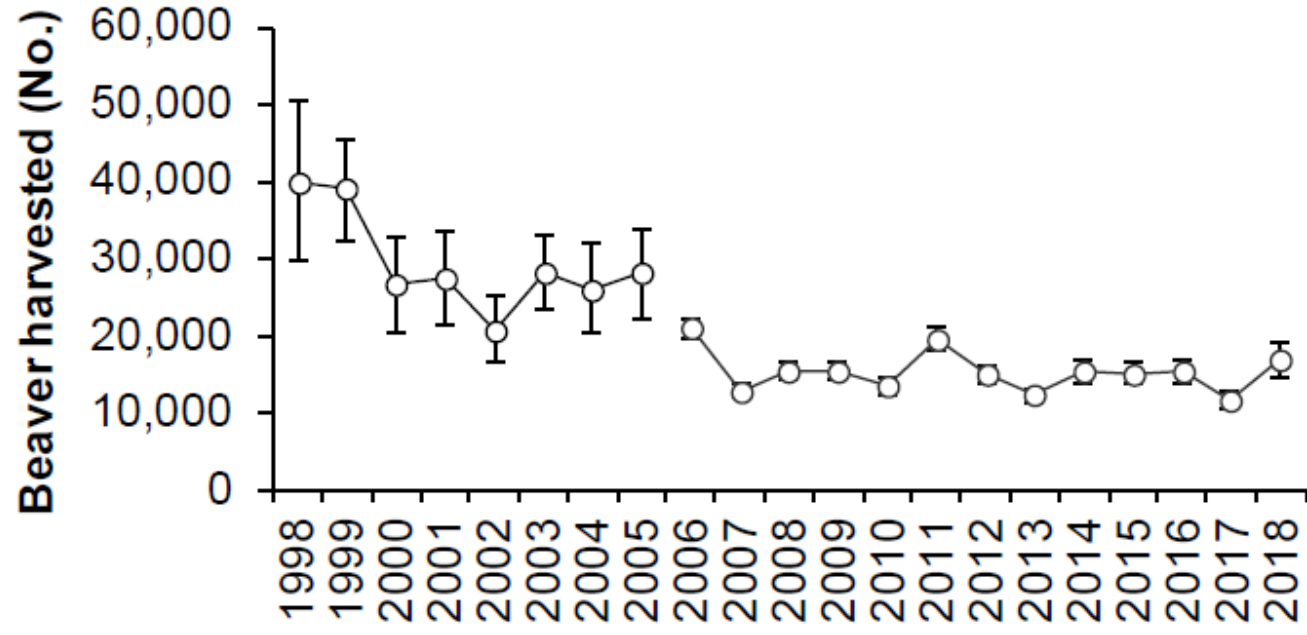
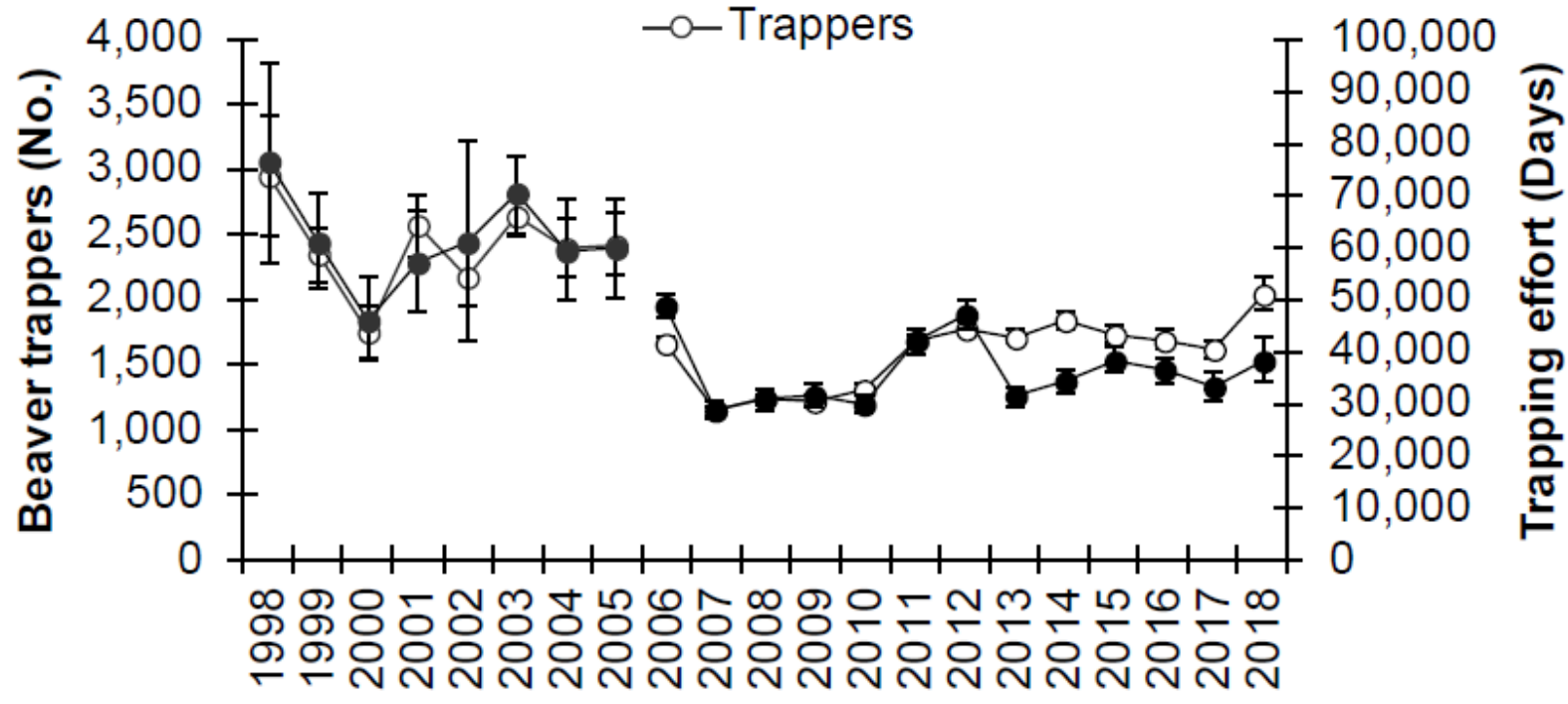
- While beaver provide many ecological benefits in addition to being a valuable furbearer, they can and do cause undesirable impacts
- Tree destruction
- Flooding
- Infrastructure damage
- Alterations to streams and riparian zones

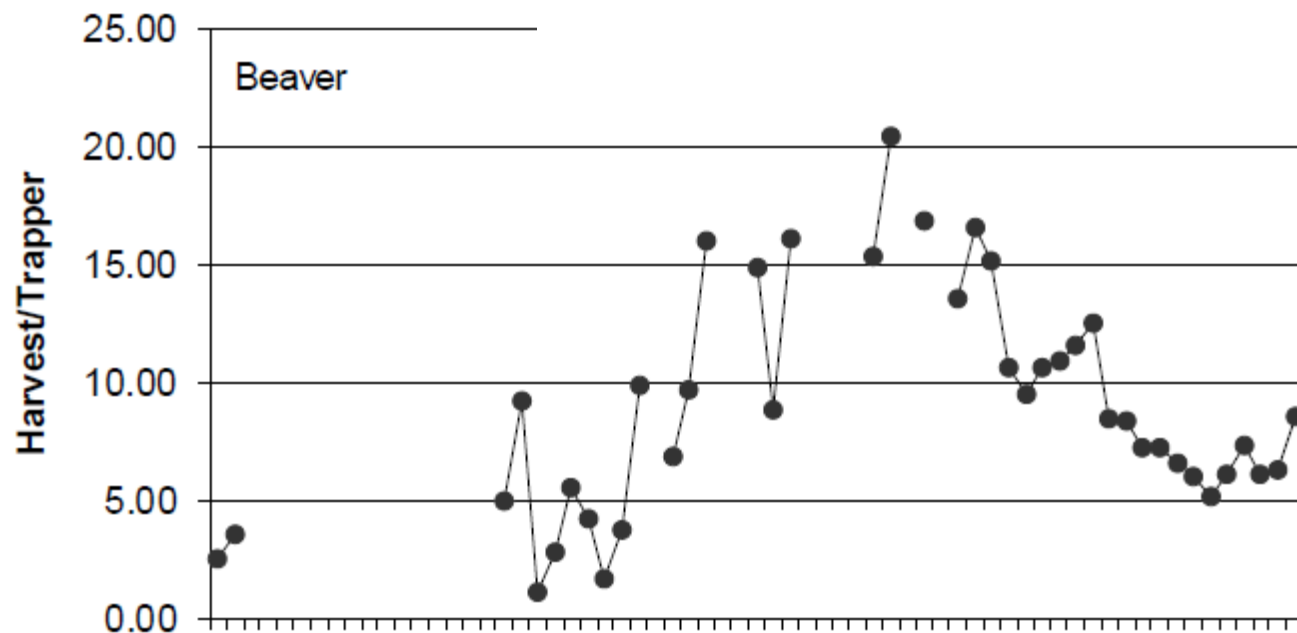
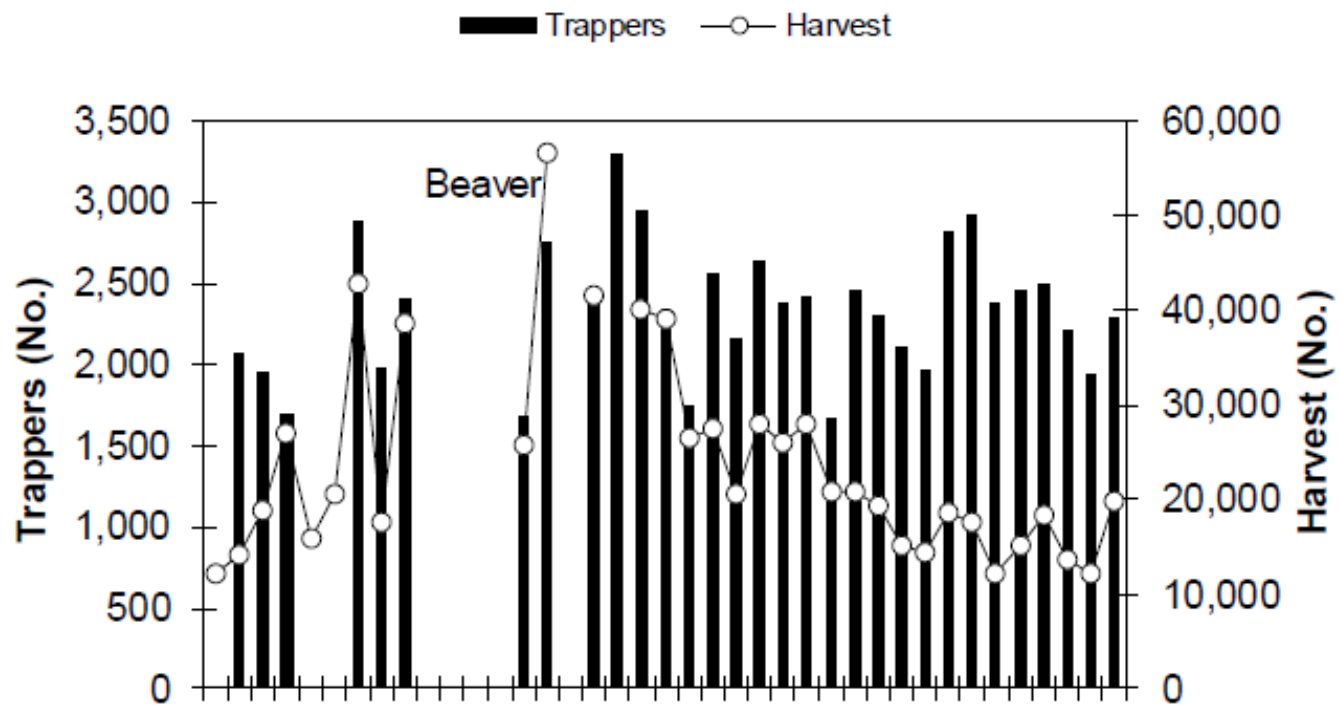


Finding a Balance

- Use of regulated trapping to help control populations and provide harvest opportunities
- Permitting is used to resolve undesirable impacts out of season
 - Provides opportunity for education and evaluation of alternatives
 - Evaluate actual impacts
 - Locally issued, some regional permitting







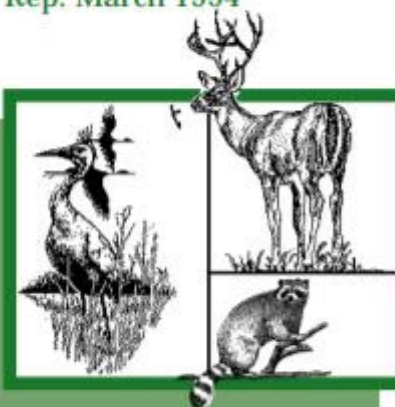
General Permitting Info

- Permits for infrastructure issues are issued broadly and liberally
- Private land issues
 - Encourage more permanent solutions, in-season trapping
 - Permit issuance is typically for property damage, loss of access or similar
- State land issues resolved through internal communications between Divisions
 - Often conflicting goals/values that require consideration and deliberation





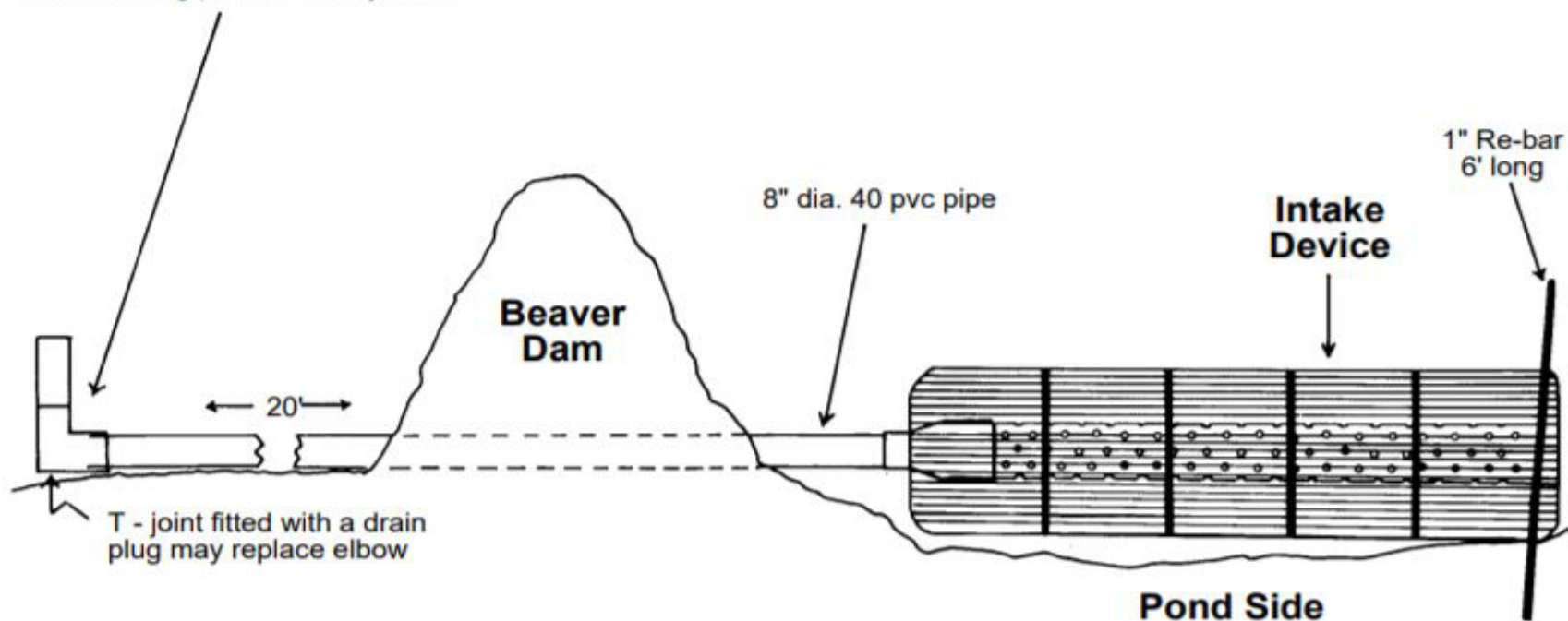
Photo courtesy of www.beaversolutions.com



THE CLEMSON BEAVER POND LEVELER

DEPARTMENT OF AQUACULTURE, FISHERIES AND WILDLIFE

Elbow and stand pipe are optional.
Needed only to manage water level
if maintaining pond is an objective



More on Permitting

- All out of season beaver take AND dam removal require a DNR permit
- Dam removal MAY require a EGLE permit
- Nuisance workgroup recommendations include some liberalization of nuisance beaver resolution
 - Recognition of likely harvest/population trends
 - Streamline (if always issue why issue)
 - Still property damage based



Beavers and Streams



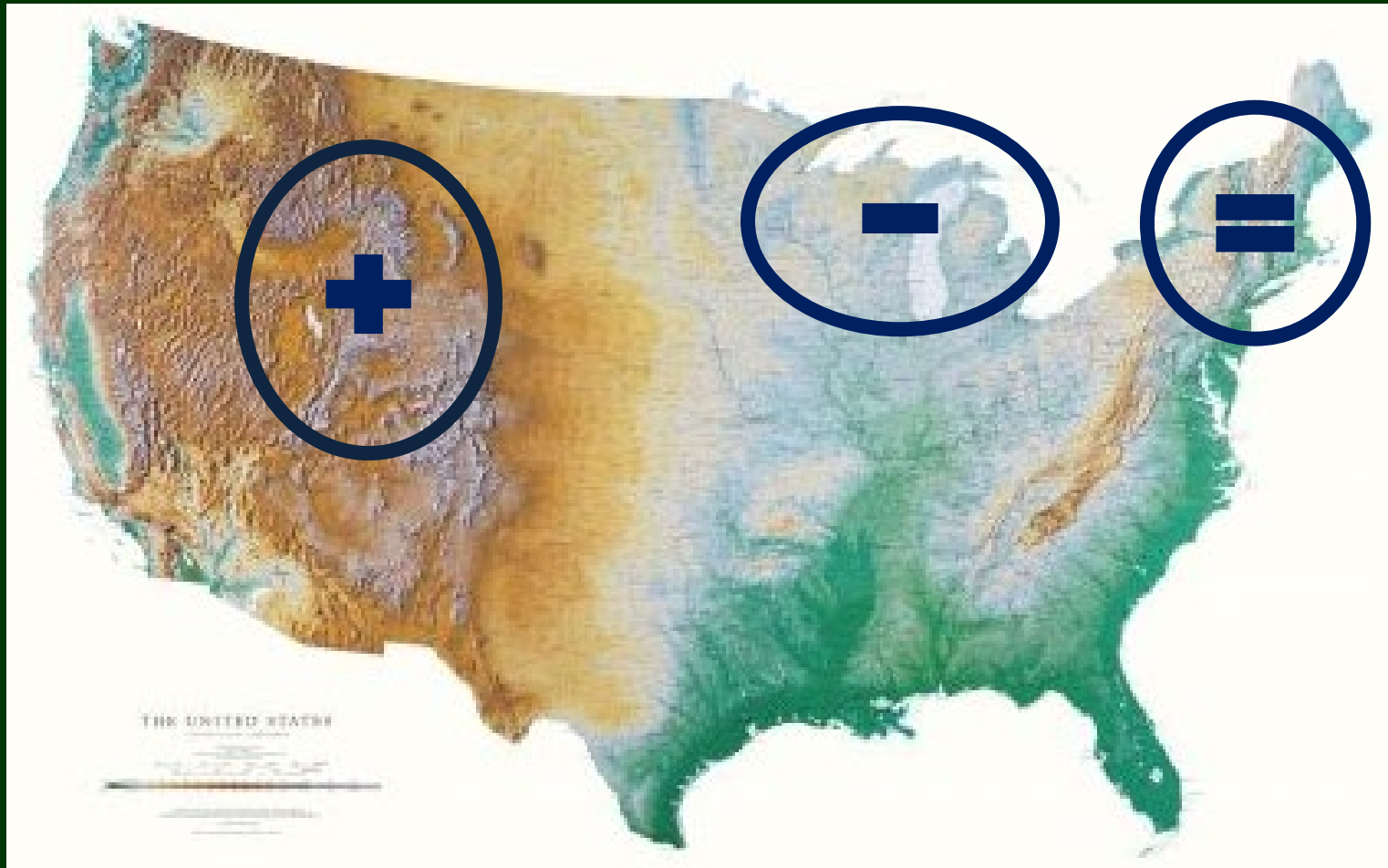
Summary of Literature

“Qualitative and quantitative effects of reintroduced beavers on stream fish” (Kemp et al. 2012)

- 108 articles, 88% from North America
- Most frequently cited species: brook trout (22), coho salmon (15), rainbow trout (14), cutthroat trout (14), Atlantic salmon (13), brown trout (12)
- Positive effects cited 184 times
- Negative effects cited 119 times



Regionalized Impacts



Fish Movement



- Johnson-Bice et. al. (2018)
 - Only 2 studies in WGL
 - “Because most of the published research on this topic from the WGL region is speculative...”
- Lokteff et. al. (2013)
 - Brook, brown, & Bonneville cutthroat trout, 2 Utah streams, 21 dams, PIT tags
 - 4% of browns, 19% of brooks, and 16% of cutthroats passed at least one dam



Sediment Transport



- Interrupts sediment movement processes
 - Suspended load
 - Bedload
- Can store multiple year's worth of load
- Failure or rapid removal risk instability of channel
- Depends on longevity of dam
 - Slope
 - Flashiness

Temperature Impacts

Thermal drone imagery of Wisconsin stream and beaver dam

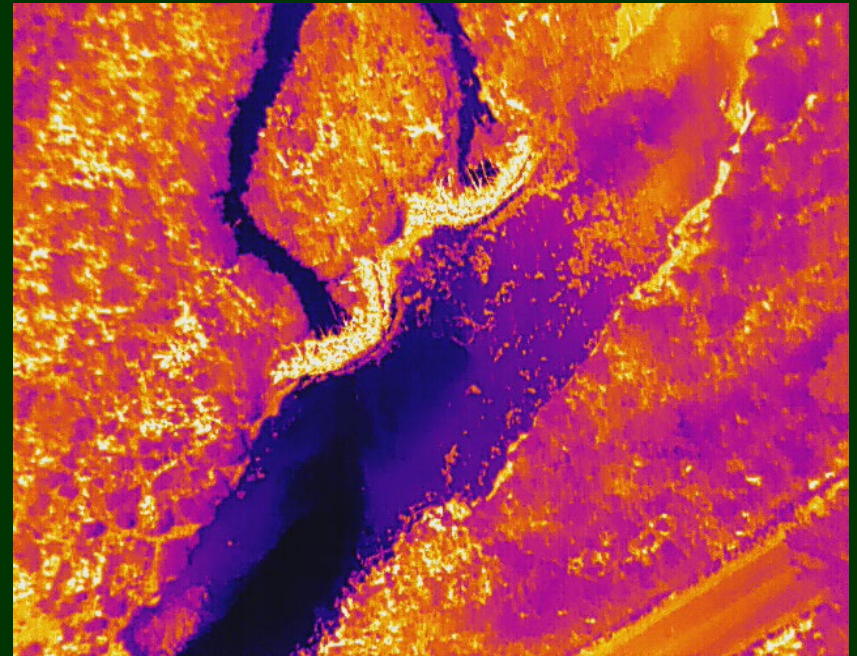


Photo Credit: Matt Mitro (Wisconsin DNR)



Management Decisions



- No “one size fits all”
- Each dam/set of dams needs analysis compared to limiting factors of the stream
- Context is important
- Stream by stream, reach by reach assessment.
- Age of dam

Removal Considerations

- Rapidity of drawdown
- Sediment storage behind dams
- Order of removal
- Capacity of stream to move sediment



Long-term strategy

2005



2013



2021





MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Water Resources Division Regulations Applicable to Beaver Dam Removal

Anne Garwood

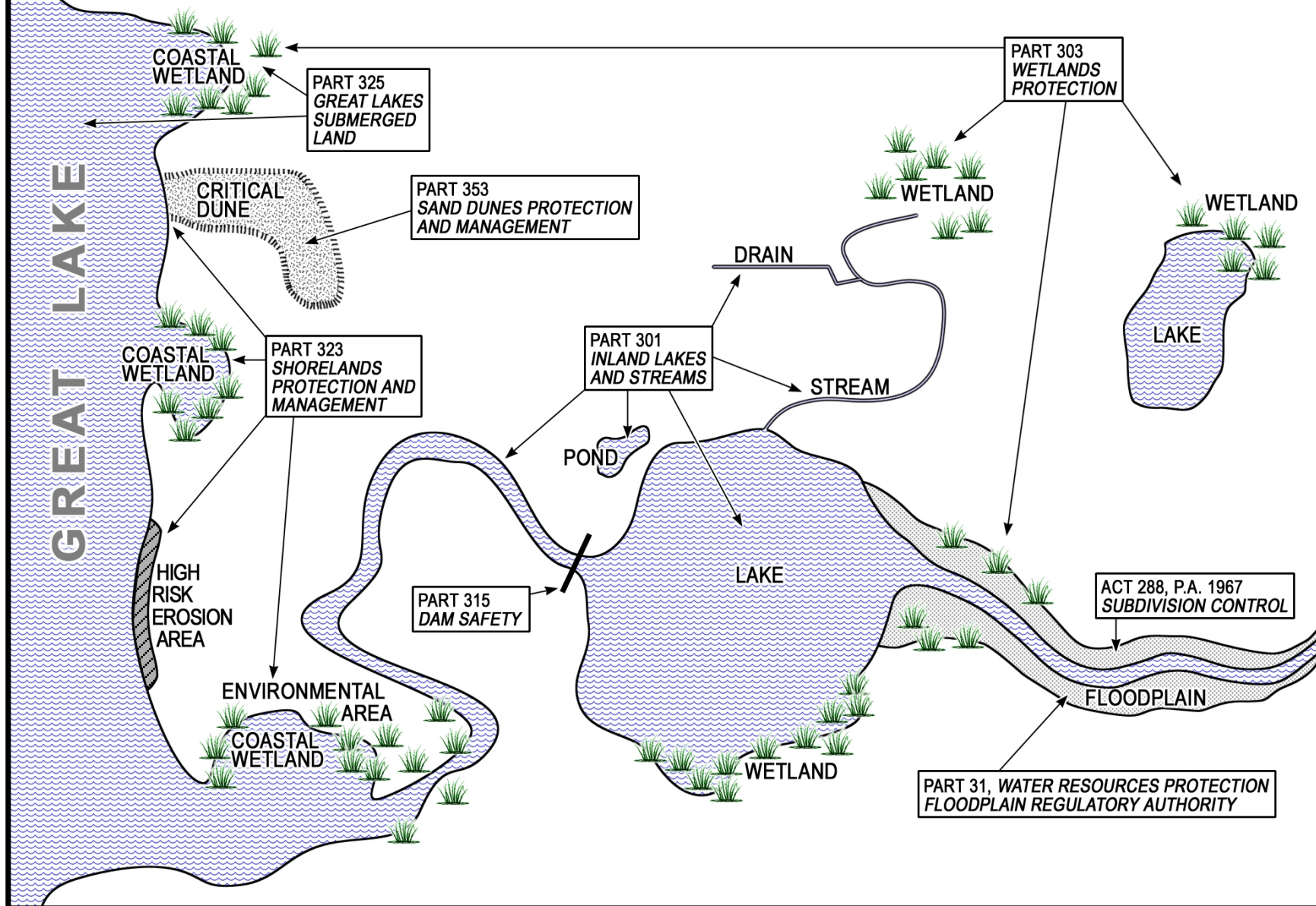
Michigan Department of Environment, Great Lakes and Energy

December 2022

EGLEWRD

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT

ACT 451 OF THE PUBLIC ACTS OF 1994 & RELATED STATUTES



Part 301, Inland Lakes and Streams

Protects inland waters by regulating work in inland lakes and streams.

Part 303, Wetlands Protection

Protects wetland functions and values by requiring permits for activities within wetlands.

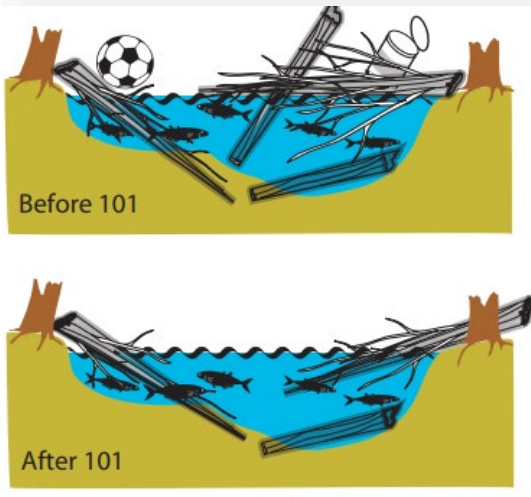
Part 31, Water Resources Protection (Floodplain Regulatory Authority)

Reduces property damage caused by flooding through regulation of activities in floodways and floodplains.

- Regulate dredge, fill, and construction activities
- Require applicants to **avoid** and **minimize** impacts to these regulated

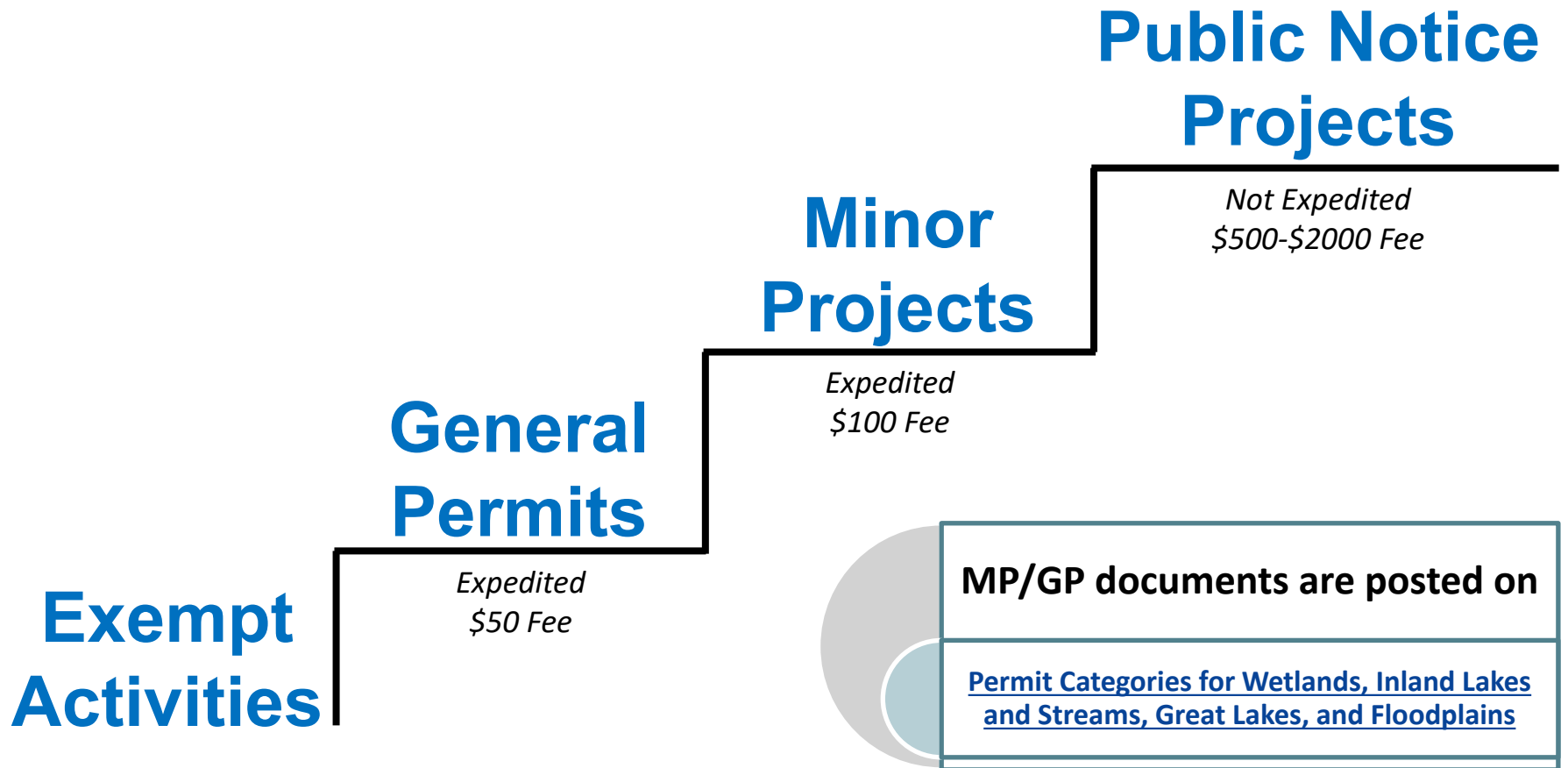


No Permit Required



- Hand removal of an obstruction (such as beaver dams or log jams) that does not alter the soil, sediment, bed, or banks of a wetland or stream.
- Typically, this would follow the “Clean and Open Method” where the woody material is cut and removed within the main channel area to allow the natural flow of water, without removing woody or soil material that is in the bed or banks.
- When beaver dam removal cannot be done without soil or sediment removal, a permit is required.

3 Tiered Permitting System





Category Set Up

Exclusions (*examples*)

- Major Discharge of Dredged or Fill Materials – EPA Redfile
- Sensitive Natural Resources (i.e., T/E Species or Habitat, Wild and Scenic River, etc.)
 - Sites with Contaminated Sediment
 - More than Minimal Adverse Impacts
 - Permit required under another statute, for which the project does not meet the GP/MP category under that statute
 - Permit required under Parts 323 or 353

Applicable Statutes

- Part 31, Floodplain Authority
- Part 301, Inland Lakes and Streams
- Part 303, Wetlands Protection
- Part 325, Great Lakes Bottomlands

Category Criteria

- Best Management Practices

General Permit U. Removal of Structures

(in pertinent part)

Parts 31, Floodplains, 301, Inland Lakes and Streams, 303, Wetlands, and 325 Great Lakes Bottomlands

Removal of natural obstructions that obstruct flow or navigation (e.g., log jams, beaver dams, etc.) in streams that meet all of the following:

- a. All removed materials shall be disposed of in an identified upland (non-floodplain, non-wetland) site.
- b. The site must be restored to its original condition or to a condition that is consistent with the surrounding area. Any bare soil or disturbed areas shall be promptly stabilized to prevent erosion. Plants and seed native to Michigan shall be used in the restoration.
- c. The fisheries and wildlife habitat values of the natural obstruction shall be considered and impacts to those values minimized.
- d. The drawdown shall not negatively impact the downstream receiving waters, habitat, or structures.

General Permit U. (cont'd)

This GP category does not include:

- Removal of woody structure from significant segments of streams.
- More than de minimus excavation of soil and sediment or the use of water jetting to remove structures.
- The removal of man-made dams (or weirs).
- Maintenance dredging, dredging of sediments in order to recover vessel, shoal removal, or riverbank snagging. Natural obstruction does not apply to shoal material or sediment.
- Abandoned property as defined in Part 761, Aboriginal Records and Antiquities, of the NREPA.



In General, We Recommend BMPs

- Remove the minimum amount of the obstruction necessary to alleviate flooding
- Minimize disturbance of sediments and river bottom
- Obstruction should be removed to minimize/manage release of sediment
- Material removed from river should be disposed of properly, in a location where flood waters won't reclaim it

BMP Don'ts

- Create access paths through wetland areas
- Place material in a wetland or floodplain
- Grub or mechanically land clear in wetlands
- Other activities that will result in draining of wetlands



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