

# Partnerships and Nature-Based Restoration in Mitigation Banking Projects

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EPA defines **compensatory mitigation** as: the restoration, establishment, enhancement, or in certain circumstances preservation of wetlands, streams or other aquatic resources for the purpose of offsetting unavoidable adverse impacts.

Regulated under CWA Section 404, so is subject to permitting through U.S. Army Corps of Engineers

EPA's Mitigation Sequence for projects likely impacting wetlands:

1. **Avoid** detrimental impacts
2. **Minimize** detrimental impacts
3. **Mitigate** detrimental impacts – quantity and function
  - This is where compensatory mitigation comes in.

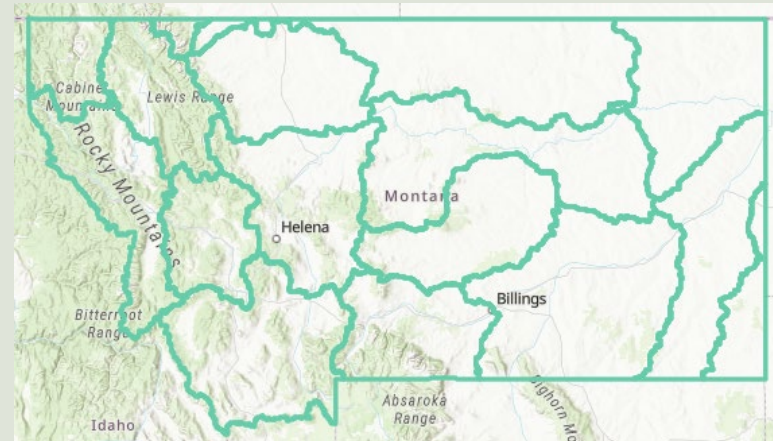
When any development or construction activities permanently impact jurisdictional wetlands, the wetland loss needs to be mitigated- in theory, to replace at least the same **quantity** (area) **and quality** (ecological function) of wetland.

## Mechanisms for Compensatory Mitigation

- Mitigation Banking: Credits created before impacts
- In-Lieu Fee; Permittee pays a fee to a program to create wetland credits
- Permittee-Responsible Mitigation

Usually must mitigate within same (large) watershed in which impacts are incurred, where possible

- One of more 8-digit HUC watersheds often used but other watershed regions may be defined



## Example partners in restoration for mitigation bank projects

- Landowners (generally work on large parcels)
- Land conservancy organizations
- Other companies (consultants, contractors, materials suppliers)
- Tribal and county government, Conservation Districts
- Multiple state and federal agencies on Interagency Review Team (IRT)
- School groups or watershed groups (Envir. Education)
- Beavers

## Partnership with landowners:

Project components/extent are developed in cooperation with the landowner

Mitigation banking company is mitigation bank “sponsor” and pays for all costs

- Design/Planning/Assessment
- Permitting/Wetland Delineation
- Needed infrastructure (fencing, crossings, tanks...)
- Construction
- Monitoring and Reporting

Landowner (host) receives benefits for hosting on portion of their property:

- May include portion of sales, an upfront payment, or other negotiated financial compensation
- Improved wildlife habitat, fish/amphibian habitat, and often more water
- In some cases, improved property value
- Noxious weed control within bank boundary
- May include improved infrastructure- tanks for off-site water, improved crossings, upgrade to fencing near bank site, etc.

# Examples of Montana Stream and Wetland Mitigation Banks using Low-tech Restoration





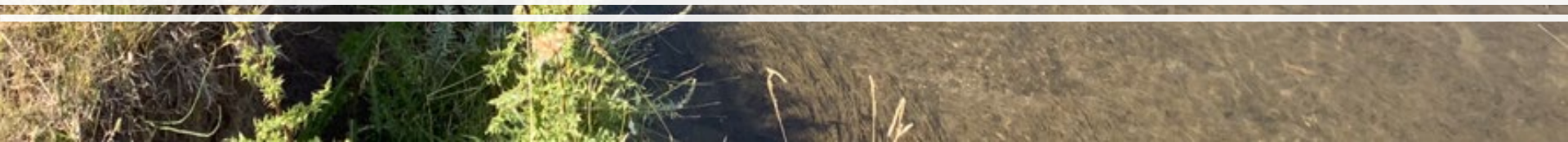


Headwaters/upper foothills stream and wet meadow





Larger stream in broad agricultural valley





Ephemeral drainage with degraded slope wetlands





Large river system oxbow wetlands



## Project elements include:

- Fencing bank site area
- Noxious weed control
- Other long-term maintenance

## Examples of design elements:

- Re-elevating incised channels (using low-tech, process-based restoration, possibly some other grade control)
- Constructed log jams/PALS in stream or on floodplain
- Mitigating head cuts (Post/brush, Zuni bowl, log/fabric)
- Protecting and replanting native vegetation
- Re-designing channel or streambanks when necessary
- Removing ditches draining wetlands

Beaver Dam Analogs and/or  
Deformable Riffles (or a  
combination) to re-elevate  
incised channel



(Gillilan Associates/TNC Project)

# Model for Prairie Systems



Natural beaver dam in area with no woody material



Source: ZooUniverse website:  
<https://www.zooniverse.org/projects/ab-beavers/beavers-from-space/about/research>

## Low Bank-Builder in mountain and prairie stream systems





Thank You

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