White River Corridor Restoration in Bethel

Mary Russ, Executive Director
White River Partnership
$5.1M = Irene damages to public infrastructure
Rivers move over time

Keeping structures out of the River Corridor allows the river to move, minimizing erosion, water speed, and damage.

A straightened river becomes deeper, more forceful, and destructive.
## River Corridor Restoration Options

<table>
<thead>
<tr>
<th>Channelization</th>
<th>Active Geomorphic</th>
<th>Passive Geomorphic</th>
<th>Do Nothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain rivers in a channelized state through dredging and bank armoring applications. Includes maintenance of sites where the dimension, pattern, and profile are not consistent with the fluvial processes and geomorphic conditions.</td>
<td>Maintain or restore rivers to a geomorphic state through an active approach that may include human-constructed meanders, floodplains, and temporary bank stabilization practices. Active revegetation and long-term protection of a wooded riparian corridor is imperative to this option.</td>
<td>Restore rivers to a geomorphic state through a passive approach that involves river-constructed meanders and floodplains. Temporary bank maintenance activities may be applied as the geomorphic condition is achieved. Active revegetation and protection of a wooded riparian corridor is imperative to this option.</td>
<td>No maintenance or restoration activities pursued. Erosion of bed and banks allowed to proceed. No revegetation and protection of a wooded riparian corridor is pursued.</td>
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- **Floodplain restoration**
- **Wetland restoration**
- **Buyouts**
- **Easements**
- **Riparian buffers**

Most $$ = ongoing

= MOST CO-BENEFITS

Least $$
Marsh Meadow buyout site
River corridor easement = 3 bundles of rights

- Development rights
- Channel management rights
- Buffer management rights
- Maintain existing buffer
- Plant riparian buffer
- Restore wetland vegetation
VFWD/WRP floodplain/wetland restoration
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<th>O&amp;M: River Corridor Restoration</th>
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<td>• Buyouts = follow deed restrictions; annual stewardship of public access easement</td>
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<tr>
<td>• River corridor easements = annual stewardship</td>
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<tr>
<td>• Riparian buffers = routine monitoring; stewardship as-needed</td>
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<td>• Floodplain/wetland restoration = routine monitoring</td>
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Lessons-learned: River Corridor Restoration

• Need to plan for climate change = more rain, more often
• Importance of well-buffered river corridors = provide lateral & temporal connectivity
• Complex projects require multiple partners at local, state, and regional levels
• Community engagement & buy-in is key
References


• River corridor graphics & restoration alternatives: https://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection/planning

• WRP project designs & site plans

• Questions? Mary Russ, mary@whiteriverpartnership.org