Jun 21st, 2:00 PM - 2:15 PM

Case Studies II: Amethyst Brook Restoration Projection: Co-Evolution of a Project and a River with Two Dam Removals

Michael Chelminski  
*Stantec Consulting Services Inc.*

Robin MacEwan  
*Stantec Consulting Services Inc.*

Follow this and additional works at: [http://scholarworks.umass.edu/fishpassage_conference](http://scholarworks.umass.edu/fishpassage_conference)
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS

Project Partners
HRD Press - Project Owner
Tom Laderle - Landowner
Massachusetts Division of Ecological Restoration
American Rivers
U.S. Fish and Wildlife Service
National Oceanic and Atmospheric Administration
Town of Amherst
Clean Water Action
Fish America Foundation
Holyoke Coal Tar NRD Trustee Council
Massachusetts Environmental Trust
Trout Unlimited

Consulting Team
Stantec Consulting Services Inc.
Foresight Land Services
Public Archaeology Laboratory
NDT Corporation

Construction Contractor
SumCo Eco-Contracting

Fish Passage 2016
Case Studies II

Michael Chelminski, PE
Robin MacEwan
Stantec Consulting Services Inc.
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS:
BARTLETT ROD SHOP COMPANY DAM (BRSCD)
AMETHYST BROOK RESTORATION PROJECT
CO- EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: GOALS, OBJECTIVES, AND DESIGN AT BRSCD

PROJECT GOALS:
• Decommission aging infrastructure
• Restore upstream fish passage
• Enhance aquatic & riparian habitat
• Restore riverine function

DESIGN CRITERIA:
Achieve project goals with an approach that...
• Minimizes impacts and
• Maximizes benefits
• In a safe, sustainable, cost-effective manner.

DESIGN DEVELOPMENT CONSIDERATIONS COMMON TO DAM REMOVALS:
• Infrastructure
• Sediment
• Cultural Resources
• Ecological Resources
• Site Use
• Constructability
• Health and Safety
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: INFRASTRUCTURE AT BRSCD
AMETHYST BROOK RESTORATION PROJECT

CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: DESIGN AND PERMITTING FOR BRSCD
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: REMOVAL OF BRSCD

<table>
<thead>
<tr>
<th>BRSCD</th>
<th>Year</th>
<th>Timber Dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconnaissance Survey</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>Design &amp; Permitting</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>Post Construction</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td></td>
</tr>
</tbody>
</table>
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: AMETHYST BROOK DOWNSTREAM FROM BRSCD

ECOLOGICAL RESOURCES Post-Removal of BRSCD

October 26, 2012
November 9, 2012
December 6, 2012
April 14, 2013
May 10, 2013
June 6, 2013
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: PRELIMINARY ASSESSMENT AT TIMBER DAM
AMETHYST BROOK RESTORATION PROJECT
CO- EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: 2ND RECONNAISSANCE STUDY OF AMETHYST BROOK

Riverwalk and Reconnaissance Assessment

![Amethyst Brook Elevation Profile](image)
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: DESIGN FOR REMOVAL OF TIMBER DAM

<table>
<thead>
<tr>
<th>BRSCD</th>
<th>Year</th>
<th>Timber Dam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconnaissance Survey</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>Design &amp; Permitting</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>Timber Dam Exposed / Reconnaissance Survey</td>
</tr>
<tr>
<td>Design &amp; Permitting</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRSCD</td>
<td>Year</td>
<td>Timber Dam</td>
</tr>
<tr>
<td>----------------</td>
<td>------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Reconnaissance Survey</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>Design &amp; Permitting</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2013</td>
<td>Timber Dam Exposed /</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reconnaissance Survey</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Design &amp; Permitting</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Construction</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>Post Construction</td>
</tr>
</tbody>
</table>
AMETHYST BROOK RESTORATION PROJECT
CO-EVOLUTION OF A PROJECT AND A RIVER WITH TWO DAM REMOVALS: AMETHYST BROOK