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Type	oral presentation
Category	Innovative watershed and stream restoration approaches/methods
Title	<i>Innovative Headcut Stabilization Procedure</i>
Abstract	<p>The U.S. Fish and Wildlife Service Chesapeake Bay Field Office (Service) has developed a innovative and cost saving approach to stabilize headcuts in headwater streams. Headwater streams represent a large portion of stream drainage network and are being degraded or lost at an alarming rate. Typically they are located in steeper sections of the watershed with erodible soils and are very sensitive to disturbance.</p> <p>In order to address the challenges found in the headwater streams, the Service will take a cost wise, whole systems approach using natural channel design methods (NCD) to stabilize the headcuts. The strategy is to install grade control structures on first and second order streams to halt headcuts from migrating farther up the stream valleys. As the headcuts progress upstream, a large volume of sediment is released from bed degradation and bank erosion. Stopping the headcut, will prevent additional miles upstream of the headcut from becoming incised with vertical eroding banks, help maintain forest integrity, and keep excessive suspended sediment and associated nutrients from entering downstream reaches.</p> <p>The stabilization of the headcuts will jumpstart the natural recovery processes of streams. Typically instability from the headcuts is localized and stable sections of stream exist upstream and downstream. Once the instability of the headcut is removed, the stream will be able to stabilize on its own.</p> <p>The headcuts will be addressed through the use of small equipment, hand labor, and hardwood logs (cut onsite) or natural sandstone rock. This implementation approach will reduce the construction costs by limiting the amount of channel work and structures. The other key to significantly reducing the overall implementation costs is through the innovative, streamlined permitting process the Service is using. The Service proposes obtaining one programmatic permit from each of the necessary agencies for all of the headcuts. The Service will develop typical headcut design solutions based on the typical headcuts occurring within the project watershed. The typical designs would then be applied to all of the headcuts proposed to be addressed under this watershed restoration effort.</p> <p>The Service in partnership with the Maryland Department of Natural Resources is applying this approach to sub-watersheds of the Corsica River. The Service is also currently working with the South River Federation to apply this approach to sub-watersheds of the South River.</p>