



**Chris Sorflaten**

**Leave it to Beavers Contracting, LLC  
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## Low-Tech Creek Restoration in Southeast Iowa: Listening to the Clay

**Overview:** With 53% of nutrients feeding the Gulf Dead Zone coming from Iowa, our creeks are dismal. Parents warn children and dogs to not go near and stay out of the water. Weed trees and bushes have long taken over most native ecology. This shade has shrunken the magnificent native wetland grasses into bonsai size at best. Their 13 foot deep erosion resistant roots have failed and seasonal creek channels routinely collapse 20 foot deep through topsoil and into clay.

**Hypothesis:** Sunlight is the primary tool for creek restoration in Iowa. Basic sunlight will transform native struggling grasses into thriving soil builders. Planting local genotype marsh grass and bulrush plugs into bare soil and clay are ideal for creating a stable substrate for aggradation. Emergent grasses add orders of magnitude to surface areas of bacterial denitrification. Normal BDA posts will not hold up in 10'-20' depth spring floods, so posts against a fallen tree are necessary. Due to the current propensity for stream widening and soil loss, build a short 1' tall weave with imported clay and rocks, and then heighten the weave as aggradation occurs. Deep roots sequester carbon into non utilized soil for net reversing of climate change.

**Procedure:** Remove invasive bushes and stack into rabbit piles. Double girdle invasive trees. Leave native lowland trees. Plant 8" deep plugs. BDAs every 100-200' of creek or every 1-2' elevation drop. Leave girdled trees standing for migratory bird nesting and bat holes. Remove leaves from weave sticks for less drag and clay homogenization.

**Legislation:** We are under observation by researchers from U of I and ISU with goals of conducting a nutrient reduction study and achieving state funding for interested landowners.



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A prairie pasture and beaver wetland tax abatement bill has been submitted to Iowa congress. Our sponsor, Congressman Shipley, is on the environmental committee and a hearing is expected.

Summary of 1st year sites around Fairfield: East Lowe - Water leveling device scheduled October '19. Cypress Village - BDAs. Birdwatching.com - BDAs. Little Walnut Creek - BDAs. Lamson bridge planting and clearing. Cedar Creek sand bar wetland volunteer planting, canoe access only. Little Lick Creek - Our first 3 BDAs, a heavy weave yielded stream widening and post loss.

**Education and Awareness:** Currently beavers are not supported in Iowa and creek restoration is largely a new term. Even at our prized Neal Smith National Bison Range, beaver dams cannot last a year. Farmers complain that a single beaver will remove 10 acres of corn per year, for dam building. A local wetland researcher equates selling beaver services to selling a \*\*#@ sandwich. However, our brochures are well appreciated by like minded individuals and students. Due to resistance of most, we have begun pre-production of a children's television show for ages 5-10. We plan to launch crowdfunding for a pilot segment this winter. Episodes have been written and a local professional animation studio has been lined up.