

Stream bank restoration on Lodge Grass Creek



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Introduction:

The “Let’s Pick Berries!” Project was established by Tracie Small (2013) in Lodge Grass, Montana in response to holistic process discussions with Apsaalooke Elders and youth. Project goal was to promote sharing cultural traditions with Apsaalooke youth. Tracie expressed concern that the bank of adjacent Lodge Grass Creek was collapsing (Pers. Comm. 2015).

Specifically, Tracie asked for pre-project assessment such as soil type, climate and average temperature. Information should be gathered from the community on possible solutions or concerns. The goal is to create a healthy river that can sustain vegetation with little maintenance and whose ecological condition is improved after the project is completed. A solution should also contribute in some way to the revitalization of Apsaalooke culture. A post-project assessment should serve to ensure that project is meeting community.

Hypothesis Tested:

Introduction of native plants in the section of Lodge Grass Creek near the berry patch will be beneficial to both the health of the creek and the “Let’s Pick Berries!” Project.

Results:

It was determined that the erosion was a localized problem that could be solved through the introduction of native riparian species. Research was done to find plants that were culturally significant to the Apsaalooke that would fit the requirements of the site. *Shepherdia canadensis*, *Prunus americana*, *Prunus virginiana*, *Salix amygdaloides* and *Mentha arvensis* were chosen as good candidates for a riparian revegetation project because of their fast growth and ability to self colonize the area.



Figure 1. Lodge Grass Creek looking west along the north side of the project berry patch, April 2015 (Julia Eltzroth, 2015).



Figure 2. Lodge Grass Creek looking east along the north side of the Project berry patch, April 2015 (Julia Eltzroth, 2015)



Figure 3. Common willow, *Salix amygdaloides*, suggested for Lodge Grass stream bank stabilization (www.ewu.edu)

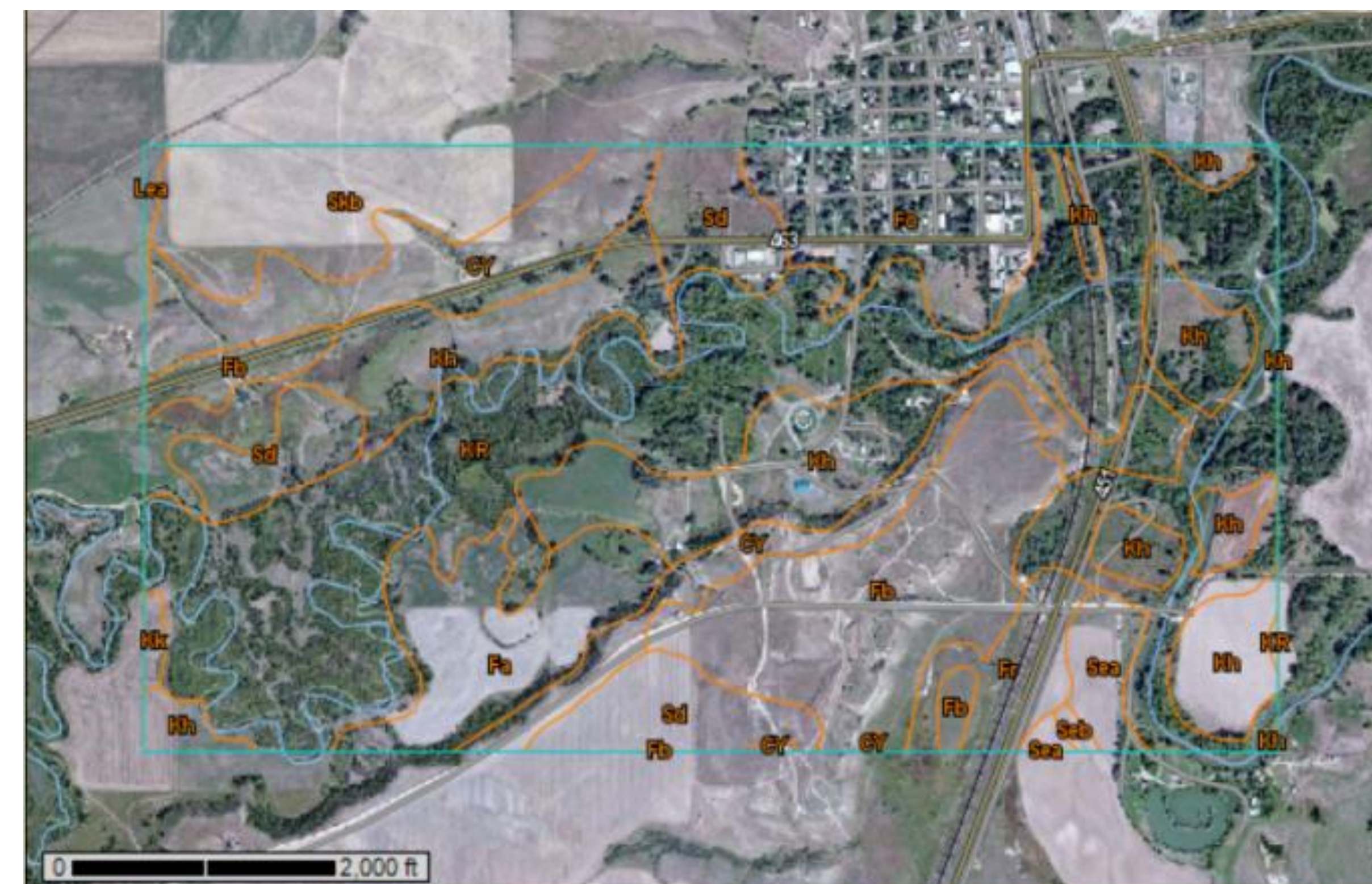


Figure 4. Aerial view of Lodge Grass, MT, Lodge Grass Creek, and Project berry patch site (NRCS Web Soil Survey)



Figure 5. *Mentha arvensis* (NRCS Wetland Science Institute)



Figure 6. **Baalashiisshe**, buffalo berries, *Shepherdia canadensis*, suggested for stream bank stabilization (www.Apsaalookeberries.com)



Figure 7. **Buluhpé**, wild plum. *Prunus americana* suggested for stream bank stabilization (Apsaalookeberries.com)



Figure 8. **Baáchuutaale**, choke cherries, *Prunus virginiana* suggested for stream bank stabilization (www.Apsaalookeberries.com)

Discussion:

Lodge Grass Creek site has loamy soil ideal for a wide range of plants. All six plants suggested are native to the area and could be incorporated into existing project to help perpetuate Apsaalooke culture. Most economical to propagate are *Shepherdia argentea* or *Prunus virginiana* for a restoration project because these shrubs already grow at the berry patch location and could be easily gathered. *Prunus americana* grafted onto Italian plum root stock is by previous AGSC 465R students is growing there, but will not produce fruit for 2-3 years. *Mentha arvensis* would be a good addition to project because it grows quickly and could be used by community in traditional ways. *Salix amygdaloides* would also be an excellent tree for preventing future erosion problems on the stream bank.

References

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