

Instream vegetation survey of Marsh Creek

By Kyndra Hawke, Sara Stalder, & Rebecca Hale

Agriculture can have a vast impact on stream ecosystems through increasing erosion and nutrient inputs. Vegetation influences an array of ecosystem characteristics in streams, including concentrations of dissolved oxygen and nutrients. Physical characteristics can be influenced as well, including flow velocity, turbidity, light penetration, and turbulence. Using the Braun-Blanquet cover scale we measured instream vegetation cover at six sites along Marsh Creek, a stream in southeastern Idaho that has seen strong anthropomorphic influences through the development of agriculture, both croplands and pastures. We found that in stream vegetation cover was high overall, but varied across sites. Mean vegetation cover across all sites was 25-50%. The highest cover observed was 75-100% and the lowest was 5-25%. From this data we can see variations from site to site as you move downstream but no discernible patterns are evident. Surveys will be continued through the summer to assess temporal trends across sites, and vegetation cover will be compared with dissolved oxygen and turbidity data to assess relationships between vegetation and water quality. This study will yield important information about stream ecosystem responses to agriculture and the role of instream vegetation.