



Riparian Condition Monitoring in City of Rocks National Reserve

Importance:

Riparian Vegetation – interface between upland and streams

There is an intimate connection between riparian areas, stream channels and the surrounding landscape. Riparian vegetation is a product of regional geomorphology, hydrology, stream channel characteristics, upland vegetation, land use and water use. For this reason, riparian vegetation has a profound influence on habitat for both aquatic and terrestrial organisms. This connection between the surrounding landscape, riparian areas and aquatic habitats makes monitoring riparian condition an important aspect of natural resource monitoring in the Upper Columbia Basin Network (UCBN).

2012 Status

In 2012 the UCBN estimated the status of greenline and channel cross-section wetland ratings, effective ground cover, and woody vegetation cover for 2 selected stream reaches on Almo Creek, North Fork, South Fork, and Circle Creeks in Castle Rocks State Park (CRSP) and City of Rocks National Reserve (CIRO). Basic metrics are summarized for sample reaches on Almo Creek and Circle Creek in the table below. These measures provide important baseline indications on the conditions of riparian vegetation, to which future samples will be compared. 2012 was the first year of monitoring in CIRO/CRSP and the stream reaches will be re-sampled in 2015.

Management Applications

- Provide information on the condition of riparian habitats
- Detect habitat degradation and potential concerns to park management
- Provide feedback on the success of park management and restoration activities
- Inform integrated assessments of climate change impacts on park resources

Objectives

- Determine the status and trend of riparian condition, as measured by greenline and channel cross-section wetland ratings (i.e., obligate wetland riparian plant species cover), effective ground cover, and greenline woody vegetation cover for selected wadeable stream reaches.



2012 monitoring on all streams included the assessment of greenline and cross section wetland ratings.



2012 monitoring contributed to the establishment of baseline conditions, which include determining cross section weed cover and effective ground cover.

Castle Rocks State Park and City of Rocks National Reserve - Riparian Condition Summary 2012

Measure	Almo Creek site 3219	Circle Creek site 3226
	Current Condition (July 2012)	Current Condition (July 2012)
Greenline wetland rating (mean)	28.6	81.0
Cross-section wetland rating (mean)	8.5	38.1
Effective ground cover (%) (mean)	95.8	89.8
Greenline woody cover (%) (mean)	57.5	24.2
Reach alien cover (%) (mean)	8.4	3.3