

Two sides of the Coin Disturbance and Succession

Submitted by: Gravelly Landscape Collaborative
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If there is one thing we can count on, it is change.

Our environment is dynamic and changing constantly. It changes at all scales, from individual trees to entire watersheds. It is transformed by death, disease, drought, fire, human development and plate tectonics.

Often our human response to ecological change is negative. We use words like destruction and devastation and damage. But these changes are important, they are necessary for maintaining a healthy environment. These changes are ecological disturbances that support the processes and resiliency of our watersheds.

Perhaps, it is time to see these disturbances as a positive force.

Take the example of a flood event. Flood water inundate uplands and riparian areas, cause erosion and new channel development, remove trees that were stabilizing banks, washes woody debris downstream and causes vegetation to die due to too much water. These results can have “negative” impact on fish, wildlife and vegetation, forcing relocation, loss of rearing habitat or even death. But the results are also building new habitat and re-starting the cycle of succession.

“The variety of seral or successional stages across the landscape is what maintains the healthy fish and wildlife populations we have” David Stout of the Ruby Valley Watershed Council shared.

Restarting the cycle of succession ensures that there are a variety of habitat types that will support different species of flora and fauna at different life stages. “Disturbances are critical as they are responsible for the mosaic of habitat types in our watershed”, David Stout explained that many of the restoration efforts sponsored by the Watershed Council and Conservation District work to restore a variety of succession stages intermixed across the Ruby Watershed.

Revisiting the site of a past flood or fire annually reminds us of the impact disturbances have. Initially the event may leave an area raw and exposed, however in short order emergent grasses and pioneer species sprout, followed by disturbance loving trees, like cottonwoods, and gradually the place transitions through a variety of habitat types and associated fish and wildlife species.

To have succession you need disturbance, they go hand in hand.