

Riparian Notes

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The Right Question

On several occasions, the similarities of fixing up an old truck and fixing a creek have been noted. It has now been about one year since buying the dilapidated 1950 pickup truck.

Well meaning people often ask the question: “*Are you going to restore it?*” This question is somewhat irritating. After all, countless hot sweaty hours, numerous busted knuckles and daily trips to the auto parts stores have been invested getting it to this point. From my own perspective, the truck is at least somewhat restored. It is registered, insured and inspected and driven nearly every day. It is definitely not restored to showroom quality. Everyone seems to have their own idea about what constitutes a restored truck (mostly based on outward appearance).

Recently, someone finally asked the right question. Steve Jester, with The Nature Conservancy of Texas, and Director of The Blanco River Project, is a good ecologist, wildlife biologist and riparian mechanic. He asked about the truck during our last visit: “*Is it functional?*” To that question, I could answer, yes. The engine runs and all of the associated components operate properly (starter, generator, water pump, radiator, etc). All of the required safety features are up to standard (tires, brakes, lights and exhaust system). The truck is functional, at least for now. It is not restored to 100% of its potential, but it functions properly.

We need to be asking the same question when looking at a creek or riparian area. *Is it functional?* Fortunately, there is a good set of criteria against which to assess the functionality of creeks and rivers. Lest we go off in our own direction when defining stream restoration, the PFC method keeps us honest and consistent with a time tested and technically based set of questions. Proper Functioning Condition refers to the methodology used to determine functionality, as well as to define that point on the scale when a creek or river is working in the way it is supposed to. The PFC method has proven itself to work well on streams from Alaska to Alabama and Mexico to Maine.

For those who have not yet been exposed to PFC, here is the standard set of criteria that are considered by an interdisciplinary team with local expertise in hydrology, vegetation and erosion-deposition processes:

1. Floodplain above bankfull is inundated in relatively frequent events
2. Where beaver dams are present, they are active and stable
3. Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting
4. Riparian-wetland area is widening or has achieved potential extent
5. Upland watershed is not contributing to riparian-wetland degradation
6. There is diverse age-class distribution of riparian wetland-vegetation
7. There is diverse composition of riparian-wetland vegetation
8. Species present indicate maintenance of riparian-wetland soil moisture characteristics
9. Streambank vegetation is composed of those plants or plant communities that have root masses capable of withstanding high streamflow events
10. Riparian-wetland plants exhibit high vigor
11. Adequate riparian vegetative cover is present to protect banks and dissipate energy during high flows
12. Plant communities are an adequate source of coarse and/or large woody material
13. Floodplain and channel characteristics are adequate to dissipate energy
14. Point bars are revegetating with riparian-wetland vegetation
15. Lateral stream movement is associated with natural sinuosity
16. System is vertically stable
17. Stream is in balance with the water and sediment being supplied by the watershed

These are the things to be looking for when examining creeks for functionality. Asking the right question(s) is important. For a fuller explanation and details about PFC, order the following 126 page publication: TR 1737-15; available free upon request by contacting: Don_Prichard@blm.gov