Riparian Restoration Checklist

1. Goal Setting: Before project implementation begins, identify project goals - erosion control, wildlife habitat, etc. Also, be open to adaptation ... goals can (and often do) change during the life of a project. However, you will never achieve goals if you don't know what you're working towards!

2. Hydrology: Water levels (surface and ground water) and flood duration vary from watershed to watershed, and storm event to storm event. Try to understand the hydrology of your project site so that proposed solutions can withstand the variety of potential conditions.

3. Hydraulics (in streams and rivers): flowing water has energy and can do work, such as erosion and deposition of sediment. How much energy is exerted by floodwaters at your site, and can proposed improvements withstand or dissipate these forces?

4. Wave Action (in ponds, lakes, and other water bodies): Waves can displace soils and create other problems at the land/water interface. Water is the affect of wind and watercraft generated waves on the shoreline environment?

5. Geomorphology: Many riparian landforms are created by flowing water, either as erosional or depositional features. Are existing and/or proposed landforms stable given anticipated hydraulic forces, sediment transport rates, etc.

6. Slope Stability: Steep slopes within the riparian environment may become unstable after rapid draw down floodwaters. What is the probability of slumping, sliding, or other forms of mass wasting? Has a factor of safety been calculated for steep slopes?

7. Soils: Repeated flooding and drying can cause soil structure to collapse in the absence of appropriate vegetative cover, while a nutrient influx can cause eutrophication of floodplain ecosystems. Are floodplain soils capable of supporting desirable vegetation?

8. Vegetation: Does existing vegetation add to or decrease soil stability? What habitat values or water quality benefits do existing plant species provide? The affects of trees, shrubs, and herbaceous groundcover species should all be considered.

9. Biodiversity: Riparian habitats can support a huge diversity of life - flora and fauna. Many animal species including reptiles, amphibians, birds, invertebrates, and mammals may utilize riparian ecosystems for a portion, if not all, of their life cycle. The varied hydraulic regimes of riparian ecosystems can also support diverse assemblages of plant life. How will the project affect all forms of life depending on the site?

10. Human Interaction: People will most likely come in contact with the altered riparian landscape. Has sufficient effort been made to educate the public about what is being done, and what is expected? Are trails and interpretive signage an appropriate part of the project?

11. Phasing: Successful riparian ecosystem restoration usually requires management after initial "remedial" work. Are plans made for control/eradication of undesirable species, prescribed burning, etc.?

12. Evaluation: For several years after project completion, assess how well project goals were met. Learn from this experience so that next time you (or others) can do it ever better!