

Appendix 4

Riparian Toolbox The “Toolbox” Approach to Riparian Site Restoration

Because of the wide range of riparian conditions and site specific problems that need to be addressed in order to help restore riparian areas, a “toolbox” approach has been developed. This approach allows flexibility in determining the best methods to use for each specific site. This toolbox contains a variety of tools that can be used to mitigate problems, help repair broken systems, and allow riparian areas to reach a Properly Functioning Condition.

While certainly not an all-inclusive list of tools available, the following examples of tools and methods can be used in a variety of situations:

Repairing Existing Fencing – Many of the riparian areas that are not meeting standards have existing fencing that needs maintenance in order to continue to exclude livestock.

Repairing Existing Developments – Many riparian areas contain developments such as water lines, collection systems, troughs, and storage. Some of these developments have been poorly maintained over the years and are in disrepair. By performing maintenance on these existing developments, livestock will be pulled away from the riparian areas through the availability of water in troughs.

Installing Float Valves and Overflows on Troughs – Where appropriate, float valves will be installed on troughs to allow unneeded water to remain in the riparian area. In situations where float valves are not feasible because of freezing, overflows can be installed to return unused water to the riparian area.

Install Shut Off Valves on Water Lines – Pipes that collect water from riparian areas could have a shut off valve installed. This valve would allow the collection system to be shut off when it is not needed or when collection needs to be shut off in order to protect the riparian area from dewatering.

Water Gap Fencing – In lotic reaches where livestock impacts are occurring, but where animals still need access to water, water gap fencing may be installed. These are short pieces of fence that usually run perpendicular to the flow of the stream, and only allow animals to access a very short section of the lotic reach. This fencing excludes the animals from the rest of the riparian area.

Moving Water Troughs Away from Riparian Areas – In some cases it is appropriate to install a collection system and a water trough in order to preserve the riparian area itself by providing water for wildlife and livestock offsite. The water can be piped to a location that is out of the riparian area directing the impacts way from the more delicate vegetation of the riparian area.

Eliminating Livestock from Riparian Areas – In order to protect riparian resources, some situations require that livestock be completely eliminated from the riparian area. This can be done through several methods, including fencing the riparian area, pasture closure, allotment suspension, or allotment closure.

Changing Livestock Season of Use – By changing the time of year that livestock are allowed access to a riparian area, impacts can be reduced.

Using Four Inch Stubble Height Standards – By maintaining a four inch stubble height in riparian areas, enough vegetation remains at the end of the grazing period to help guard against erosion of critical soils, to slow and filter runoff, and to prevent riparian plant mortality due to overgrazing.

Reducing Livestock Numbers – By reducing the number of livestock that use a riparian area, impacts can be trimmed down, allowing the area to recover more quickly.

Using Erosion Control Methods – Through the use of check and spreader dams, vegetation, and other flow control methods many of the erosion problems that damage riparian areas such as headcuts, downcutting, entrenchment, and bank erosion can all be improved or eliminated.

Removal of Exotic and Invasive Species – The removal of exotic and invasive species, such as Tamarisk, in riparian areas helps to reduce the uptake of water by these plants and allows more water to remain available for native riparian vegetation.

No Spring Grazing in Back to Back Years – By only allowing livestock to use a riparian area during the growing season every other year, vegetation will recover faster and will have a chance to make seed at least every other year.