**Conservation Practice Effects**

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| **Saturated Buffer (604) (Ft)**  **Definition: A subsurface, perforated distribution pipe is used to divert and spread drainage system discharge to a vegetated area to increase soil saturation.**  **Major Resource Concerns Addressed: Plant productivity, health and vigor.**  **Benchmark Condition: Wet pastureland.**  **Date: October, 2016 Developer/Location: Hal Gordon, OR** | |
| **Positive Effects** | **Negative Effects** |
| **Soil**   * **Reduced gully erosion because of reduced velocities from water collection.** * **Increased water infiltration and plant uptake, increasing biomass production.** * **Increased infiltration may permit leaching of some salts below the root zone.**   **Water**   * **Buffer removes 60-100% of Nitrogen from drain pipe discharge.** * **Reduced runoff, ponding and increased infiltration.** * **Reduced nutrients, pesticides, pesticides, chemicals and pathogens in runoff and groundwater infiltration.** * **Lower stream water temperatures as diverted water does not generally return to surface water source.**   **Air**   * **No change.**   **Plants**   * **Improved soil moisture facilitates improved health, vigor and productivity of desirable vegetation therefore reducing invasion of noxious weed.**   **Animals**   * **Improved soil moisture may increase plant diversity and food production for wildlife.** * **Improved habitat and cover for wildlife.** * **Forage production will be improved with uniform and consistent application of water.**   **Energy**   * **No change.**   **Human**   * **Increased opportunities for water use.** * **Increase in crop or livestock yields.** * **Increase yields/reduce costs as land becomes more productive.** * **Create sustainability of natural resources that support your business.** * **Increase the property value (real estate) of your property.** * **Conserve soil and water for periods of drought and future use.** * **Prevent off-site negative impacts.** * **Comply with environmental regulations.** * **Save time, money and labor.** * **Promote family health and safety.** * **Make land more attractive and promote good stewardship.** * **May be eligible for cost share.** | **Land**   * **Possible damage to cultural resources.** * **Change in land use or land in production if land is converted to more intensive grazed or crop land.**   **Capital**   * **Earth moving and installation costs.** * **No additional field equipment required, some installation equipment required.** * **Annual operation and maintenance costs to clean-out debris, repair and replace structures and equipment.**   **Labor**   * **Increase in labor to maintain structures.**   **Management**   * **Develop water management plan.**   **Risk**   * **Increase in ponding in low areas.** * **Increased infiltration may permit leaching of some salts below the root zone.** |
| **Net Effect: Improved soil productivity, crop and forage yield at a moderate cost.** | |

**Commonly Associated Practices:** Conservation Crop Rotation, Critical Area Planting, Dam, Dike, Diversion, Integrated Pest Management, Land Smoothing, Nutrient Management, Open Channel, Pond, Precision Land Forming.

**Note:** This worksheet contains general talking points for the conservation planner to discuss with the land user. It is the first step towards an economic or financial analysis. The second step would include identifying a specific site for analysis at the farm or field level, editing the template for local conditions, adding units and quantities of farm inputs and outputs. The third step in the economic analysis is to place a dollar value on as many variables as possible, put all units in the same time frame, using amortization ($/Acres/Year) or net present value ($/Acre), so benefits and costs can be compared. The fourth and final step would be to combine several conservation practices into a conservation system, which is how most conservation practices are applied at the field level. Data for the worksheet comes from the land user, conservation planner, technical specialist and local agricultural supply vendors and contractors. See Economics Technical Note: TN 200-ECN-1, Basic Economic Analysis Using T-Charts (August 2013) for more information.