**Conservation Practice Effects**

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| **Mulching (Ft) 484****Definition: Applying plant residues or other suitable materials produced off site, to the land surface****Major Resource Concerns Addressed: Soil productivity.****Benchmark Condition: Depleted intensively farmed row crop land.****Date: October, 2016 Developer/Location: Hal Gordon, OR** |
| **Positive Effects** | **Negative Effects** |
| **Soil*** **Reduced sheet, rill, wind, gully and streambank erosion.**
* **Increased soil organic matter.**
* **Reduced evaporation may reduce salt build-up and added organic matter will buffer salts.**

**Water*** **Increased infiltration reduces runoff, flooding and ponding.**
* **Increased infiltration and decreased evaporation results in more available water from irrigation and precipitation.**
* **Reduced runoff of pesticides, nutrients, salts, sediment, manure, pathogens and other agricultural chemicals improve surface water quality.**

**Air*** **Stabilized the soil surface, reducing the generation of particulate matter.**

**Plants*** **Improved crop production opportunities.**
* **Improve growing conditions and increased plant health and vigor.**
* **Thick and/or impenetrable mulch cover can prevent emergence of undesired weed species.**

**Animals*** **Mulching enhances wildlife food, cover and shelter.**

**Energy*** **None**

**Human*** **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.**
* **Increased profitability in the long run.**
 | **Land*** **Adverse effects on cultural resources possible during planting and/or removal.**
* **No change in land use or land in production.**

**Capital*** **Mulching equipment and materials.**

**Labor*** **Increase in passes over the field.**

**Management*** **No Change.**

**Risk*** **Increase in pests may reduce crop yield.**
* **Increase in seeps and seasonal high water table with increased infiltration.**
* **Impervious mulches may increase runoff and surface water quality problems.**
* **Increased infiltration negatively effects ground water.**
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| **Net Effect: Improved soil productivity at a low cost.** |

**Commonly Associated Practices:** Contour Farming, Critical Area Planting, Integrated Pest Management, Irrigation Water Management, Nutrient Management.

**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.