**Conservation Practice Effects**

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| **Field Operations Emissions Reduction (Ac) 376**  **Definition: Adjusting field operations and technologies to reduce particulate matter (PM) emissions from field operations.**  **Major Resource Concerns Addressed: Air quality.**  **Benchmark Condition: Dryland fallow field in winter wheat crop rotation.**  **Date: October, 2016 Developer/Location: Hal Gordon, OR** | |
| **Positive Effects** | **Negative Effects** |
| **Soil**   * **Techniques may reduce the potential for sheet, rill and wind erosion.**   **Water**   * **None**   **Air**   * **Reduced soil and residue particulates in the air with changes in tillage, harvest and other field operations.** * **Increase carbon sequestration and reduce greenhouse gas emissions.**   **Plants**   * **None.**   **Animals**   * **None.**   **Energy**   * **None.**   **Human**   * **Prolong life of above-ground cultural resources.** * **Prevent off-site negative impacts.** * **Comply with environmental regulations.** * **Save time, money and labor.** * **Promote family health and safety.** * **Promote good stewardship.** * **May be eligible for cost share.** * **Increased profitability in the long run.** | **Land**   * **No change in land use or land in production.**   **Capital**   * **Purchase new equipment.** * **Annual operation and maintenance costs to service and maintain equipment.**   **Labor**   * **No change.**   **Management**   * **No change.**   **Risk**   * **None.** |
| **Net Effect: Improved air quality at a moderate cost.** | |

**Commonly Associated Practices:** Conservation Cover, Contour Buffer Strips, Cover Crop, Critical Area Planting, Cross Wind Trap Strips, Herbaceous Wind Barriers, Integrated Pest Management, Irrigation Water Management, Mulching, Nutrient Management, Pumping Plant, Residue and Tillage Management-Mulch Till, Residue and Tillage Management-No Till/Strip Till/Direct Seed, Residue and Tillage Management-Ridge Till, Residue Management-Seasonal, Terrace, Spoil Spreading, Stream Habitat Improvement and Management, Streambank and Shoreline Protection.

**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.