Table 1 - Available Best Management Practices (BMP) – Enter # used onto Membership Form

1. **Nutrient and Irrigation Water Management Plan (NIWMP):** This plan documents practices and strategies to address natural resource concerns due to excess nutrients. An NIWMP provides procedures used to select and apply crop nutrients (manure and commercial fertilizers) and water, to cropland and pastures. Processed to determine the amount of manure and commercial fertilizer needed for crops is included and a description of when and how nutrients and irrigation water (including reclaimed treated wastewater) are applied.

2. **Tailwater Ditch Checks or Check Dams:** Tailwater Ditch Checks are temporary or permanent dams to hold back water that are placed at intervals in tailwater ditches, especially those with steeper slopes. They increase the cross-section of the steam, decrease water velocity, and reduce erosion, allowing suspended sediment to settle out. Tailwater Ditch Checks may be constructed of plastic, concrete, fiber, metal, or other suitable material. If plastic sheets are used, care must be taken to ensure plastic is not dislodged and carried downstream. To be effective, this MP should be used where water velocity will not wash out check dams, or slopes of the tailwater ditch at dams. The checks act as nutrient MPs by reducing and preventing erosion of soil containing nutrients.

3. **Field to Tailditch Transition:** This practice controls flow from the field into the tailwater ditch through spillways or pipes, without eroding soil. Spillways may be constructed of plastic, concrete, metal or other suitable material. If Plastic sheets are used, care must be taken to ensure plastic is not dislodged and carried downstream. This practice may be useful on fields irrigated in border strips and furrow. The spillways act as nutrient MPs by reducing and preventing erosion of nutrient laden soils from the tailwater ditch.

4. **Furrow Dikes (also known as "C-Taps"):** Furrow dikes are small dikes constructed in furrows that manage water velocity. They may be constructed of earth with an attachment to tillage equipment, pre-manufactured "C-Taps", or other material such as rolled fiber mat, plastic, etc. According to Jones & Stokes (Jones & Stokes Associate 1996), this MP should replace sediment transport at relatively low cost. The C-Taps act as nutrient MPs by reducing and preventing erosion of nutrient laden soils from the tailwater ditch.

5. **Filter Strips:** This practice eliminates borders on the last 20 to 200 feet of the field. The planted crop is maintained to the end of the field, and tailwater from upper lands is used to irrigate the crop at the ends of adjacent lower lands. The main slope on the field's lower end should be no greater than that on the balance of the field. A reduced slope may be better. With no tailwater ditch, very little erosion occurs as water slowly moves across a wide area of the field to the tailwater box. Sediment may settle as the crop baffles the water as it moves across the field.

6. **Irrigation Water Management:** This practice determines and controls irrigation rate, amount, and timing. Effective implementation minimizes erosion and subsequent sediment transport into receiving waters. Irrigation management methods include: surge irrigation, tailwater cutback, irrigation scheduling, and runoff reduction. Irrigation management may include an additional irrigator to better monitor and manage irrigation and potential erosion. The objective is to apply irrigation water efficiently and uniformly to maintain adequate soil moisture for optimum plant growth, without causing excessive erosion of nutrient laden soils.

7. **Irrigation Land Leveling:** This practice involves maintaining or adjusting field slope to avoid excessive slopes or low spots at the tail end of the field. Maintaining a reduced main or cross slope facilitates uniform distribution of irrigation water, reducing salt build-up in soil, increased production, reduced tailwater, and decreased erosion. Jones & Stokes (Jones & Stokes Associates 1996) rate the sediment reduction efficiency of this MP at 10% to 50%, with a medium to high cost. The objective is to apply irrigation water efficiently and uniformly to maintain adequate soil moisture for optimum plant growth, without causing excessive erosion of nutrient laded soils.

8. **Sprinkler Irrigation:** Sprinkler irrigation involves water distribution by means of sprinklers or spray nozzle. The objective is to irrigate efficiently and uniformly to maintain adequate soil moisture for optimum plant growth, without excessive water loss, erosion, or reduced water quality. According to Jones & Stokes (Jones & Stokes 1996) this MP has a positive sediment transport reduction effect (sediment reduction efficiency of 25% to 35% if used during germination, and 90% to 95% for established crops), and a relatively high cost. The objective is to apply irrigation water efficiently and uniformly to maintain adequate soil moisture for optimum plant growth, without causing excessive erosion of nutrient laden soils.

9. **Drip irrigation:** Drip irrigation consists of a network of pipes and emitters that apply water to the soil surface or subsurface, in the form of spray or small stream. The objective is to apply irrigation water efficiently and uniformly to maintain adequate soil moisture for optimum plant growth, without causing excessive erosion of nutrient laden soils.

10. **Reduced Tillage:** This practice eliminates one or more cultivation per crop, minimizing erosion of nutrient laden soils, and sedimentation that may occur in the furrow.

11. **Drainage Channels:** For this practice irrigation drainage channels are constructed with flat slopes so water velocities are non-erosive, and water quality degradation due to suspended sediment is prevented. This practice reduces erosion of nutrient laden soils, and sedimentation in the irrigation drainage channels.

12. **Basin/Flood Irrigation:** The use of small, flat basins which fill with irrigation water and empty due to combination of percolation and/or overflow into an adjacent lower basin. Basins can also be slightly sloping in order to eliminate erosion yet enhance percolation with no surface runoff. Basins can be grassed or bare to encourage water conservation and deep percolation.

13. **Subsurface Tile Drain:** Plastic or cement pipelines or laterals, perforated or simply butted together, to allow salt laden drainage water from saturated soil into small diameter pipelines. Tile drain laterals are spaced from 50 feet to 300 feet, 4 feet to 7 feet deep and laid on a relatively flat slope. The lower end of each subsurface lateral is tied to a larger diameter, buried 6 feet to 12 feet, sloping base line which flows to a vertical sump pump, CVWD main drain pipeline or open drainage channel. Subsurface main drain lines or surface channels discharge into the Salton Sea or CVWD's Lower Whitewater Storm Water Channel.