

EMS Objective, Target and Action Plan

| EMS Participant Name | | | | | | Document No. | |
|---|--|---|-------------------------|------------------------------|---|----------------|----------------|
| Metro Waste Authority | | | | | | 137 | |
| Common Name for Objective/Target | | | | | | MPE Bioreactor | |
| Objective Description | | | | | | | |
| Action | Subject | | | Aspect | Adoption Date | | |
| Improve | Water quality | | | Water quality | 7/1/2020 | | |
| Target 1 Description (Add sections for additional targets as needed.) | | | | | | | |
| Action | Subject | | | Qty to | Metric | | |
| Reduce | Nitrate runoff | | | 2.54 | ppm | | |
| Time Period | Time Period Type (Select) | | | Component Area (Select) | | | |
| 7/1/20 - 10/1/22 | Multi-Year | | | Water Quality | | | |
| Results/Baseline (Update periodically, including each fiscal year by June 30th. Add rows for additional results as needed.) | | | | | | | |
| Criteria | Applicable Time Period | Qty for Period | Qty for Target To Date | % from Baseline (Calculated) | Narrative Description | | Date of Update |
| Baseline | 2014-2019 | 4.32ppm | | | baseline is an average of 190 samples pulled from 4 area locations from 2014 through 2019 | | |
| 1 | Results Update | | | | | | |
| 2 | Results Update | | | | | | |
| 3 | Results Update | | | | | | |
| 4 | Results Update | | | | | | |
| Closure/Final | | | | | | | |
| Closure Status (Select) | | | | | | | |
| Action Plan Task/Milestone Descriptions (Add rows for additional tasks/milestones as needed.) | | | | | | | |
| 1 | Task Description | Time Period | Responsibility | | Key Resources | | |
| | Meet with Polk County Soil to discuss installation options | 7/1/2020 | Art Kern, Michael McCoy | | | | |
| | Notes | Discussed funding model option and doing fall installation | | | | | |
| 2 | Task Description | Time Period | Responsibility | | Key Resources | | |
| | Signing CPA 1236 and 1199 forms for federal funds for installation | 8/1/20 - 9/30/20 | Michael McCoy | | | | |
| | Notes | Signed docs giving funding to Polk County Soil to oversee installation and payments | | | | | |
| 3 | Task Description | Time Period | Responsibility | | Key Resources | | |
| | Project Install | Fall 2020 - Fall 2021 | | | wood chips | | |
| | Notes | Install delayed due to equipment needed to make wood chips | | | | | |
| 4 | Task Description | Time Period | Responsibility | | Key Resources | | |
| | Consider Internal chipping of wood for install on MWA project. If applicable MWA may also provide wood chips for a total of 5 install projects | Spring 2021 | Art Kern | | wood chips | | |

| Notes | | | |
|--------------------|-------------------|---|--------------------|
| Task Description | Time Period | Responsibility | Key Resources |
| Install Bioreactor | Spring 2021 | Art Kern | |
| 5 | Notes | <p>Still waiting for confirmation of installation date from Polk County.</p> <p>1/07/2021 Polk County WFPO Agency Scoping Meeting. Discuss timeline of installation and Scope of work. Looking into spring 2021 installation.</p> <p>Receive specs for wood chips needed:</p> <p>The best information we have is in the 605 Denitrifying Bioreactor construction spec.</p> <ol style="list-style-type: none"> 1. Wood material shall be chipped, not shredded. The chips shall be well-graded with at least 80% in the 1-2" range by weight. 2. Wood chips shall be less than 120 days old. Decomposed or partially decomposed wood chips shall not be used. 3. Wood chips shall be free from objectionable material such as dirt, fines, stones, leaves, long stringy material, etc. 4. Wood must not be treated for ground contact. 5. Wood made from high tannin content species such as oak, cedar, or redwood is to be avoided. NRCS will reject any proposed wood chips with more than trace amounts of the high tannin content materials. The contractor is advised to check with NRCS in advance for acceptance of the media to be used in the bioreactor. <p>Basically, they need to be newish, clean (not a bunch of leaves or dirt), chipped in 1-2" pieces (not shredded nor huge chunks), and not a bunch of oak. Some oak is OK, but you wouldn't want much in there.</p> <p>587 Cubic Yards Needed for Eastern Polk County project installations.</p> <p>Reached out to Vermeer for pricing on rental of a Woodchipper and also cost for attachments to convert our current grinders over to woodchippers.</p> <p>Monthly Rental of a WC2300 Trailer Unit: \$25,000.00 Chip Drum Kit for HG4000: \$85,150.76 Chip Drum Kit for HG6000: \$93,321.47</p> <p>3/04/2021 MWA signed an agreement to donate 400 Cubic Yards of wood chips for 5 Eastern Polk County Bioreactor installation projects.</p> <p>4/22/2021 Scheduling rental of woodchipper from Vermeer. Scheduled to start grinding as soon as Chipper has been delivered.</p> <p>4/20/2021 Spoke with Polk County and plan to have test monitoring grab points installed at inlet and outlet of the Bioreactor. This will provide a way to get testing results from input and output for tracking efficiency of the unit. We believe this will also show trends of the potential life span of the unit.</p> <p>6/10/2021 MWA is unable to rent a Macro Drum woodchipper to make the spec wood chips needed for the MWA installation. Polk County will work with another vendor who is supplying wood chips for all other projects.</p> <p>6/10/2021 Polk County had delayed installs on the East side of Polk County until Fall of 2021. Early Summer installs will start in Western Polk County and finish Eastern Polk County installs in the Fall.</p> | |
| Task Description | Time Period | Responsibility | Key Resources |
| Water sampling | 10/1/21 - 10/1/23 | Art Kern | sampling equipment |
| 6 | Notes | <p>Fall sampling for Nitrate levels will be done in October before typical average temperature of soil is Below 50F. Nitrogen loss is reduced when soil temperatures are continuously below 50F.</p> <p>Spring sampling for Nitrate levels will be done in May after potential Nitrate application and planting. Planting is normally done in April when the soil is warm enough to germinate the seeds but not so early that the young plants are likely to be damaged by frost.</p> <p>Summer sampling to be done in July or August. Largest reductions rates will come during the warmer dryer months. less water flow and warmer temps allows the Bioreactor to work more efficiently.</p> | |