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**Legal Authority:** Natural Resources and Environmental Protection Act, PA 451 of 1994, Part 24 Rules and Part 31, as amended

**Description of the Program:**

- Biosolids are nutrient-rich organic materials resulting from the controlled treatment of sewage sludge. Because of that treatment, biosolids can be safely recycled and applied to farm fields for crop production as fertilizers for their nutrient value. The Michigan Department of Environmental Quality, Water Resources Division, regulates the land application of biosolids in Michigan. The Michigan Department of Agriculture and Rural Development provides education and technical assistance to farmers, locally elected officials, and other stakeholders on the use of biosolids as fertilizer for crop production.
- Current program activities include quarterly meetings with the Biosolids Coordinating Committee, an annual conference, and participation at the Michigan Township’s Association Annual Conference, Michigan Joint EXPO, and the Michigan Association of Conservation Districts. In a typical year, approximately 175 waste water treatment plants generate over 85,000 dry tons of biosolids which are applied to approximately 18,000 acres of agricultural land in Michigan.



**Why it Matters:**

- Increasing energy and fertilizer costs continue to add value to the nutrients made available for crop production by the on-farm utilization of biosolids.

**Key Stakeholders**

- 175 municipally-owned wastewater treatment facilities that land apply biosolids
- Farmers utilizing biosolids in their crop production
- Rural residents near the crop fields where biosolids are land applied
- State, county, and township elected officials

**Key Deliverables**

- 3,500 tons of nitrogen utilized as fertilizer
- 1,800 tons of phosphorus used as fertilizer
- 300 tons of potassium utilized
- \$10 million in fertilizer value to farmers
- Nutrients in biosolids used as fertilizer rather than disposed of as a solid waste
- \$10 million in savings to the biosolids industry

## FY15 Accomplishments:

- Developed and maintained Michigan Biosolids Team Partnership with Michigan Water Environment Association (MWEA), Michigan State University Extension, MDEQ, and MDARD to promote the beneficial use of biosolids.

## Measuring Success:

Metric	2011	2012	2013	2014	2015
Land area for biosolids application (acres)	18,000	20,000	19,000	18,000	16,500
Biosolids applied (tons)	81,000	91,000	88,000	82,000	76,000
Nitrogen used as fertilizer (tons)	3,450	3,900	3,750	3,500	3,250
Phosphorus used as fertilizer (tons)	1,750	2,000	1,950	1,800	1,650
Potassium used as fertilizer (tons)	300	330	320	300	275
Farm value of biosolids used as fertilizer- \$ millions	10	12	11	10	10
Wastewater treatment plant cost savings- \$ millions	10	12	11	10	10
New farmers signed up at MSU Ag Expo	13	24	12	11	N/A
Participants attending Biosolids Conference	114	N/A	103	88	N/A

## Dashboards and Scorecards:

- The Biosolids Program did not have an item on the departmental scorecard for FY15. Staff is working with MDARD's Director of Strategy and Business Performance to design measures toward this end.

## FY16 Program Goals:

- Update existing and develop new printed biosolids educational materials.
- Produce display banners to use at conferences and education/outreach meetings.
- Provide training to conservation district technicians on the beneficial use of biosolids so they can provide education and targeted technical assistance to farmers and local officials in their districts.
- Work with MSU Extension and MWEA to promote the beneficial use of biosolids.
- Work with Michigan Agriculture Environmental Assurance Program Cropping Committee to distribute a biosolids supplement to Field\*A\*Syst to farmers in close proximity to sources of biosolids.
- Work with Biosolids Coordinating Committee to organize and participate in a facility tour of the Detroit Water and Sewage District Waste Water Treatment Plant and biosolids processing facility.