

City of Fairfield
NPDES Phase II Storm Water Program
Permit Number 1GQ00020*AG

Annual Report – Permit Year 4



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Status of Compliance with Permit Conditions

The City of Fairfield has complied with all applicable conditions of its NPDES Phase II permit during this reporting period.

Assessment of Appropriateness of Identified BMP's

At this time, it is the opinion of City staff that Fairfield's approved Storm Water Quality Management Plan includes best management practices that are effective and appropriate for minimizing storm water pollution.

Progress Towards a Reduction in Pollutants Discharged

Based on the achievement of measurable goals for Permit Year 4, it is the opinion of City staff that satisfactory progress has been made towards the goal of reducing the discharge of pollutants to the maximum extent practicable.

Measurable Goals for Permit Year 4

Public Education and Outreach

BMP 1.1 Storm Water Web Page – The City developed content for a storm water web page and activated the site in Permit Year 1. The address of this site is www.fairfield-city.org/PublicWorks/stormwater. Approximately 2100 visits were recorded at this site during the 2006 calendar year. As of February 2007, Fairfield's storm water web page is the only program from Ohio featured at the "Local Links" section of the U.S. EPA's storm water information web-page (see Appendix A).

The City is currently ahead of schedule in meeting its measurable goal of 200 visits to the web site each year in Permit Years 2 – 5.

BMP 1.2 Newsletter Articles – In accordance with Fairfield's storm water plan, a newsletter article was published in the February 2007 edition of the *Fairfield Flyer*.

The City has already met its measurable goal of publishing at least three (3) articles in the *Fairfield Flyer* and *Fairfield Business Booster* during the first 5-year permit cycle. Four (4) articles have been published to date and at least one more is planned for publication in permit year 5.

BMP 1.3 Public Education Display – In 2003, the City purchased materials and developed an educational display for use at the Fairfield Municipal Building, Fairfield Library, and other locations (see Figure 1). The display was presented in Permit Year 4 at the Fairfield Public Library the week of April 17-24, 2006 (Earth Day is April 22) and the City of Fairfield Municipal Building from

September 22-29, 2006. During those times, 250 items were distributed to the public (post-it note pads, flying discs, key chains, flyers, coloring books, and refrigerator magnets). Another 850 items were distributed throughout the year at other locations (Fairfield Intermediate School, Fire Department Headquarters, the Community Arts Center, and the Public Works Facility).

The City is currently on schedule to meet its measurable goal of presenting the storm water display twice annually and distributing 200 promotional items in Permit Years 2 – 5.



Figure 1. Public Education Display.

BMP 1.4 Storm Water Quality Flyer – The City developed and printed 5,000 copies of a flyer describing storm water pollution prevention measures (Appendix A). Approximately 820 flyers were distributed in Permit Year 4 by making them available at a number of City buildings (Public Works Facility, Parks Department, Municipal Building, Fire Dept. Headquarters), the Fairfield Intermediate School and the Fairfield Public Library. An electronic version of the flyer is also featured at the City’s storm water web page (BMP 1.1).

The City is currently on schedule to meet its measurable goal of distributing at least 100 flyers annually in Permit Years 2 – 5.

BMP 1.5 Educational Video – The City coordinated with the local cable company, Time Warner, to present a public service announcement (PSA) on storm water pollution. The PSA, “Protecting Our Communities from Storm Water Pollution,” was produced by the US EPA and was shown in Permit Year 4 in its 4-minute format on local public access channel 18. Weekly presentations included two showings each on Monday, Wednesday, Friday, Saturday, and Sunday. The City’s current plan is to continue weekly presentations of the video for Permit Year 5.

The City is currently ahead of schedule in meeting its measurable goal of monthly presentations of the PSA during the first 5-year permit cycle.

BMP 1.6 School Program – In coordination with the Fairfield City schools, the City developed an educational program to be presented in intermediate school classrooms. This program includes the use of an Enviroscape model (see Figure 2) and a PowerPoint slide presentation (see Appendix A). Presentations were made to 22 fifth-grade classes between April and May of 2006, reaching a total of approximately 550 students.



Figure 2. Enviroscape model.

The City is currently ahead of schedule in meeting its measurable goal of making a presentation to at least two (2) intermediate school classes annually in Permit Years 2 – 5.

BMP 1.7 Pet Waste Collection Stations – In 2006, the City installed and maintained two (2) additional “Dogipot Jr” pet waste collection stations at Water Work’s Park and at the River Road Youth (see Figures 3 and 4).



Figure 3 Water Works Park, picnic shelter.



Figure 4. River Road Youth Soccer Fields

The City is currently on schedule to meet its measurable goal of installing at least two pet waste collections stations annually during the first 5-year permit cycle.

Public Involvement and Participation

BMP 2.1 Public Hearings – In accordance with Fairfield’s storm water plan, no public hearing activity was performed in Permit Year 4.

The City has held one public hearing during the first 5-year permit cycle and is proposing a change to the plan’s measurable goals from two public hearings to one public hearing.

BMP 2.2 Formal Adoption of Plan by City Council - In accordance with Fairfield’s storm water plan, no plan adoption activity was performed in Permit Year 4.

The City has met its measurable goal of having City Council formally adopt the storm water quality management plan that was submitted to the Ohio EPA.

BMP 2.3 Storm Drain Marking – The City coordinated with volunteer groups to install storm drain markers on curb inlets in Fairfield’s public storm sewer system. As part of this program, representatives from the volunteer groups were given a presentation on storm water quality and pollution prevention. In Permit Year 4, approximately 250 markers were installed in the Village Green, Pleasant Ridge Park, Rolling Hills, Hannah Farms, Rolling Meadows, and Reswin Village subdivisions (see Appendix B).

The City is currently on schedule to meet its measurable goal of installing 250 curb inlet markers annually during the first 5-year permit cycle.

BMP 2.4 Tree Planting Program – The City coordinated with a volunteer group to plant approximately 140 trees on public property in 2006. These trees were donated by the Izaak Walton League and planted by City of Fairfield elementary school students.

The City is currently ahead of schedule in meeting its measurable goal of planting at least 50 trees annually during the first 5-year permit cycle.

BMP 2.5 Storm Water Hotline – To encourage participation from the public, the City has designated and publicized the central Public Works Department phone number as a “storm water hotline.” This phone number is featured at the City’s web site, and on the storm water flyer and “post-it” note pads that are being distributed through the Public Education program. Approximately 65 calls were received in 2006; the majority of these concerned flooding and/or drainage problems. Each complaint was responded to either through a telephone

conversation or a site visit. Approximately 45 follow-up letters were sent as needed.

The City is currently meeting its measurable goal of responding to all reported problems and keeping records of site visits.

Illicit Discharge Detection and Elimination

BMP 3.1 Storm Sewer Mapping – The City developed a geographic information system (GIS) map of the storm sewer system in Permit Year 1 that included all publicly-owned components, outfalls that discharge to surface waters of the State, and the names and location of surface waters of the State. Work continued in Permit Year 4 on field-verifying the location of outfalls; approximately 8.1 stream-miles were surveyed in 2006 (see BMP 3.3).

The City is currently on schedule to meet its measurable goal of verifying outfall locations and inspecting all HSTS by the end of the first permit cycle.

BMP 3.2 Prohibiting Illicit Discharges – There was a response to five incidents within the City of Fairfield during Permit Year 4 that involved potential illicit discharges. The City's response in three cases involved site visits from the fire department and in one case, testing by our Waste Water Department and additional fats and oils testing by an outside laboratory of samples taken by the Public Works Department. There also was an incident involving a chemical company within the City. This case was investigated by the Ohio Environmental Protection Agency. (See Appendix C).

The discharges in which the Fire Department responded occurred on July 26, August 23, and October 5, 2006. The response to these discharges was by the Ohio EPA. The fourth discharge involved the investigation of water tested as a result of the outfall inspections. (See Appendix C for correspondence).

The City is currently on schedule to meet its measurable goal of using City Code to respond to illicit discharge / illegal dumping reports.

BMP 3.3 Field Program to Detect and Address Illicit Discharges – In Permit Year 1, the City developed a program for the detection and elimination of illicit discharges. This program includes field inspection of outfalls, limited water quality analysis, and source identification. This work is being conducted as part of the survey work for the GIS map development (see BMP 3.1). The dry-weather outfall screening work was continued in Permit Year 4 with the inspection of 111 outfalls over approximately 4.9 stream-miles. (see Appendix C for figure).

The City is currently on schedule in meeting its measurable goal of performing the outfall inspections over 25% of Fairfield's streams annually in Permit Years 2 through 5.

BMP 3.4 Educate Public Employees – In accordance with Fairfield's storm water plan, no training activity was performed in Permit Year 4.

The City is currently on schedule to meet its measurable goal of having at least one representative from each of the Public Works, Development Services, Public Utilities, Police, and Fire Departments attend three (3) training sessions during the first 5-year permit cycle.

BMP 3.5 Educate Businesses and the General Public – The Public Education and Outreach program includes information on the hazards of illegal discharges and improper waste disposal. This information is presented at the storm water web page (BMP 1.1), the newsletter articles (BMP 1.2), the storm water flyer (BMP 1.4), and in the school program (BMP 1.6).

The City is currently on schedule to meet its measurable goals for BMP's 1.1, 1.2, 1.4, and 1.6.

BMP 3.6 Spill Response Program – The City of Fairfield Fire Department responded to 3 reported material spills in 2006. These typically involved vehicle crashes where absorbent material was used to collect vehicle fluids (antifreeze, oil, transmission fluid, etc.). See Appendix C for sample report and list of spills.

The City is currently on schedule to meet its measurable goal of responding to all reported material spills using the resources of the Fairfield Fire Department and Greater Cincinnati Hazardous Materials Unit, when necessary.

Construction Site Storm Water Runoff Control

BMP 4.1 Erosion and Sediment Control Ordinance – Approximately 28 project site plans were reviewed by City staff through the staff technical review (STR) committee in 2006. Erosion control measures were required for all projects that involved ground disturbance. Nineteen (19) of the projects involved the disturbance of at least 1 acre of ground and, in those cases, verification was provided to the City that they were also covered under an Ohio EPA construction site NPDES permit.

The City is currently on schedule to meet its measurable goal of requiring all new development / redevelopment projects to provide sediment and erosion control measures on-site.

BMP 4.2 Adoption of Erosion Control Manual – The Ohio DNR's "Rainwater and Land Development" manual was officially adopted in Permit Year 1 as the

official erosion and sediment control reference through the revised language of City Ordinance 1117.06. This document currently serves as the City's standard reference for erosion and sediment control practices in Fairfield.

The City is currently meeting its measurable goal of establishing "Rainwater and Land Development" as its standard erosion control reference document used for plan review and field inspection.

BMP 4.3 City Staff Training – The City staff training presentation described in BMP 3.4 includes an erosion control component. The City Engineer attended a Warren County erosion control seminar in June of 2006.

The City is currently on schedule to meet its measurable goal of having select City staff from the Public Works and Development Services Departments attend at least 3 training sessions that include information on sediment and erosion control during the first 5-year permit cycle.

Post-Construction Storm Water Management

BMP 5.1 Storm Water Detention – Approximately 28 project site plans were reviewed by City staff through the staff technical review (STR) committee in 2006. Due to the construction of additional impervious surface, 13 of these site plans included the installation of new detention facilities or expansion of existing facilities. One project utilized the detention waiver fee option because the increase in impervious surface was relatively small and not practical for the existing site. The remainder of the projects did not require detention facilities or a waiver because there was no increase in impervious surface

The City is currently on schedule to meet its measurable goal of reviewing all new development / redevelopment projects for compliance with detention ordinance 1182.

BMP 5.2 Wellhead Protection Program – In 2006, there were not any particular activities that were specifically related to Fairfield's wellhead protection ordinance. The Hamilton to New Baltimore Groundwater Consortium has taken the lead in groundwater monitoring and clean-up in the past.

The City is currently on schedule to meet its measurable goal of applying wellhead protection Ordinance 1192 to applicable development / redevelopment projects within the City.

BMP 5.3 Maintenance of Regional Basins – In Permit Year 4, the City Engineer performed routine inspections at Fairfield's two regional basins on May 5, July 10, and September 29, 2006; and January 5, 2007 (see Appendix D for inspection reports). Additional inspections were made following large storm

events to verify the working condition of the basins and their components. City staff continued mowing each site in accordance with ODNR requirements.

The City is currently on schedule to meet its measurable goal of inspecting, maintaining, and repairing both of the City’s two regional detention basins.

BMP 5.4 Inspection of Residential Subdivision Detention Basins – In Permit Year 4, City staff inspected 21 detention / retention basins located in the following residential subdivisions (see Appendix D for inspection reports):

Subdivision Name	Number of Basins
Augusta Hills	1
Benchway Court	3
Carousel Estates	1
Emerald Lake	1
Fenwick Place	1
Gilmore Reserve	1
Hannah’s Farm	4
Hunter Woods	1
Indian Meadows	1
Lake Manor	2
Miller’s Run	2
The Monastery	1
Rolling Meadows	1
Stockton Station (Section 2)	1

Table 1. Detention / retention basins in residential areas.

The City is currently on schedule to meet its measurable goal of inspecting all retention / basins located in residential subdivisions on a two-year cycle.

BMP 5.5 Stamped Curb Inlets – In 2006, 7 curb inlets were re-constructed through the curb inlet repair program to include a new grate stamped with a fish logo and the text “DUMP NO WASTE” (see Figures 5 and 6). City work crews similarly retrofitted 14 other inlets as part of the street overlay program. The same type of inlet grate was required as part of one residential subdivision project that were approved in 2006, involving a total of over 11 new inlet structures.

The City is currently on schedule to meet its measurable goal of installing at least 15 stamped curb inlets annually during the first 5-year permit cycle.



Figure 5. Curb inlet repair site – before.



Figure 6. Curb inlet repair site – after.

BMP 5.6 Post-Construction BMP's – Based on review comments from the Ohio EPA, this BMP was added to Fairfield's storm water plan. It involves a verification of compliance with part III.G.2.e of the Ohio EPA's general NPDES permit for construction. This verification will take place as part of the City's routine site plan review process. Ohio EPA staff approved the addition of this plan element and the updated plan was formally adopted by City Council.

By law, the post-construction BMP plan update takes effect 30 days following its February 14, 2005 passage by City Council. Therefore, the application of this BMP to new project plans began at the beginning of Permit Year 3.

Approximately 28 project site plans were reviewed by City staff through the staff technical review (STR) committee in 2006.

The City is currently on schedule to meet its measurable goal of ensuring compliance with part III.G.2.e of the Ohio EPA's general NPDES construction permit.

Pollution Prevention / Good Housekeeping

BMP 6.1 Drainage Crew Operations – In 2006, the City's drainage crew inspected 354 catch basins / drywells, cleaned 232 of those structures, and repaired 180 units. Vactor truck cleanings were performed on approximately 80 feet of storm sewer pipe. The crew also completed 40 other drainage projects (structure replacements, swale re-grading, etc.) in 2006 (see Appendix D). As part of their regular operations, the crew checked culverts and bridges for flow blockages and removed fallen trees from the main branch of the Pleasant Run Creek, as needed.

The City is currently on schedule to meet its measurable goal of inspecting at least 150 catchbasins annually and addressing maintenance-related storm sewer system problems as needed.

BMP 6.2 Street Sweeping Program – An outside vendor, Contract Sweepers and Equipment, provided \$75,834.57 in street-sweeping services to Fairfield in 2006. This figure translates into approximately 1070 curb miles of street sweeping based on a cost of \$ \$0.01339 per linear foot. Additional sweeping (approximately 250 hours) was performed by Public Works staff using the City's Tennant Centurion street sweeper. The City of Fairfield has approximately 256 curb miles of public roadways to be swept.

The City is currently meeting its measurable goal of having street sweeping performed in accordance with the schedule specified in the City's contract with Contract Sweepers and Equipment.

BMP 6.3 Leaf / Brush Pickup Programs – In the fall of 2006, work crews from the Public Works Department picked up approximately 8,050 cubic yards of leaves. Brush was picked up at 1,517 residences through the curbside brush pick-up program in 2006. Another yard waste collection program, Operation Dump Truck, was utilized by 299 residents during 2006.

The City is currently meeting its measurable goal of providing leaf and brush removal services to the public in accordance with the City's program guidelines.

BMP 6.4 Fleet Maintenance Program – In 2006, the City's fleet maintenance staff recycled (through an outside vendor) approximately 300 gallons of oil, re-used (as heating oil for the shop facility) approximately 2000 gallons of oil in the waste oil furnace, and recorded approximately 1,200 washes in the enclosed truck wash. Maintenance staff also continued the use of the other pollution prevention measures cited in Fairfield's submitted storm water quality management plan (all work performed in an enclosed garage, spills cleaned up using appropriate equipment, etc.).

The City is currently meeting its measurable goal of conducting all fleet maintenance activities in accordance with the storm water pollution prevention measures cited in the City's storm water plan.

BMP 6.5 Snow Removal Program – In 2006, 949 tons of salt and 365 gallons of calcium chloride were used as part of the City's snow removal program. As cited in the City's storm water plan, the salt was stored in a 4,000-ton capacity salt barn and the calcium chloride was stored in two 6,100-gallon tanks.

The City is currently meeting its measurable goal of storing all salt and calcium chloride in the salt barn and tank, respectively.

BMP 6.6 City Staff Training – In accordance with Fairfield's storm water plan, no City Staff training was held for Permit Year Four.

The City is currently on schedule to meet its measurable goal of having select City staff attend three (3) training sessions during the first 5-year permit cycle.

Activities Planned for Next Reporting Cycle

A summary of the activities planned for Permit Year 5 is presented in Table 2 (See Page 12).

Proposed Changes to SWMP

The following changes / additions were made to Fairfield's storm water program for Permit Year 4:

- **BMP 1.5 Educational Video** – The City of Fairfield showed the video 10 times a week for Permit Year 4. The City showed the video Mondays 10:00 a.m. and 6:00 p.m., Wednesdays 11:00 a.m. and 8:00 p.m., Fridays 10:00 a.m. and 6:00 p.m., Saturdays 10:00 a.m. and 7:00 p.m., and Sundays 2:00 p.m. and 8:00 p.m.

The following changes / additions are planned for Fairfield's storm water program for Permit Year 5:

- **BMP 1.1 Storm Water Web Page** – The City of Fairfield plans to add an advertising campaign throughout the City's public web site during Permit Year 5. The City plans to incorporate banner ads along with voice and video components with public service announcements about storm water pollution prevention.
- **BMP 1.5 Educational Video** – The City of Fairfield showed the video 10 times a week for Permit Year 4. The City plans to show the video 4 times a week for Permit Year 5, Mondays 10:00 a.m. and 6:00 p.m. and Wednesdays 10:00 a.m. and 6:00 p.m.
- **BMP 1.6 School Program** – In coordination with the Butler County Soil and Water Conservation District and the Fairfield City schools, the City will be sponsoring teachers from the school district to attend workshops offered by the BCSCD. These workshops provide the teachers with the tools they need to incorporate storm water quality into their curriculums. Our goal for next year is to send at least two teachers to a storm water quality workshop for educators.
- **BMP 2.1 Public Hearing** – The City of Fairfield's initial public hearing generated very little public comment. The City's initial plan was to hold a second hearing within the first five years. The City is proposing that they not hold a second public hearing.

Table 2. Planned Storm Water Program Activities - Permit Year 5

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Public Education and Outreach		
1.1	Storm Water Web Page	Monitor activity at site and update content, as needed. Add an advertising campaign throughout the City's website with a combination of print, voice and video public service announcements.
1.2	Newsletter Articles	Include storm water articles in the Fairfield Flyer (Optional)
1.3	Public Education Display	Present storm water display at least twice and distribute 200 storm water items (flyers, magnets, coloring books, keychains, post-it notes).
1.4	Storm Water Quality Flyer	Distribute at least 100 flyers
1.5	Educational Video	Continue presentation of video on public access television station
1.6	School Program	Present educational program to at least two (2) intermediate school classes.
1.7	Pet Waste Collection Stations	Install two pet waste collection stations on Fairfield City Park property.
Public Involvement and Participation		
2.1	Public Hearing	No activity planned.
2.2	Adoption of Plan by City Council	No activity planned.
2.3	Storm Drain Marking	Install at least 250 storm drain markers.
2.4	Tree Planting Program	Plant at least 50 trees through volunteer tree planting program.
2.5	Storm Water Hotline	Continue use of storm water hotline and respond to all calls.
Illicit Discharge Detection and Elimination		
3.1	Storm Sewer Mapping	Update storm sewer system map as needed and complete outfall verification work in conjunction with dry-weather screening program (BMP 3.3). Complete inspections of home sewage treatment systems (HSTS).
3.2	Prohibiting Illicit Discharges	Enforce City Ordinances 925.07 and 521.08 with respect to illicit discharges.
3.3	Field Inspection Program	Complete dry-weather outfall screening work over the remaining stream-miles of Fairfield's streams.
3.4	Educate Public Employees	Attend erosion control training program at Soil and Water Conservation Field Day for select staff.
3.5	Educate Businesses and Public	See activity plans for Public Education and Outreach BMP's.
3.6	Spill Response Program	Through the Fire Department, continue implementation of current spill response and control measures.
Construction Site Storm Water Runoff		
4.1	Erosion and Sediment Control Ordinance	Continue enforcement of City Ordinances 1117.06 and 1309.15 with respect to erosion and sediment control issues. Continue existing plan review and site inspection practices.
4.2	Adoption of Erosion Control Manual	Continue use of "Rainwater and Land Development" as standard erosion and sediment control reference document for City.
4.3	City Staff Training	Attend erosion control training program at Soil and Water Conservation Field Day for select staff from Public Works and Development Services Departments.
Post-Construction Storm Water Management		
5.1	Storm Water Detention	Continue enforcement of City Ordinance 1182 with respect to review and approval of detention / retention facilities for new and redevelopment projects.
5.2	Wellhead Protection Program	Continue enforcement of City Ordinance 1192.
5.3	Maintenance of Regional Basins	Continue inspection and maintenance of City's two regional detention basins in accordance with ODNR requirements.
5.4	Subdivision Basin Inspection	Inspect at least 50% of detention / retention basins located in residential subdivisions. Complete or schedule repairs for any damaged structural components.
5.5	Stamped Curb Inlets	Install at least 15 stamped curb inlets.
5.6	Post-Construction BMP's	Ensure compliance with part III.G.2.e of the Ohio EPA general NPDES permit for construction activity. This will apply to projects involving disturbance of at least 1 acre.
Pollution Prevention / Good Housekeeping		
6.1	Drainage Crew Operations	Continue implementation of current storm sewer maintenance program through City's drainage crew. Inspect at least 150 catchbasins.
6.2	Street Sweeping Program	Continue implementation of current street sweeping program, document work performed.
6.3	Leaf / Brush Pick-up Programs	Continue implementation of current leaf / brush pick-up programs, document work performed.
6.4	Fleet Maintenance Program	Continue implementation of current fleet maintenance procedures.
6.5	Snow Removal Program	Continue implementation of current snow removal program.
6.6	City Staff Training	Attend erosion control training program at Soil and Water Conservation Field Day for select staff.