



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

May 22, 2013

Mr. Zachary Olds
Water Quality Program Manager
Wright-Patterson Air Force Base
1450 Littrell Road, Building 22
Wright-Patterson AFB, Ohio 45433-5209

RE: Storm Water Program Evaluation; NPDES Permit # 1GQ00043*BG

Dear Mr. Olds:

On Thursday, March 15, 2013, I met with you and Emily Erdei to evaluate Wright-Patterson Air Force Base's storm water management program. Following our meeting, I reviewed the current version of the base's storm water management plan along with recent annual reports. Based on our discussions and my cursory review of relevant documents, I offer the following comments and suggestions for each of the 6 "minimum control measures", which collectively provide the framework for municipal storm water programs (SWMP), as well as designated entities such as WPAFB:

MCMs 1 & 2 – Public Education, Outreach, Participation & Involvement

Efforts undertaken at the base to educate various members of "the public", which includes civilian and military base personnel, contractors, students and military dependents, appear to be satisfactory. Copies of storm water articles published in the *Skywriter* newsletter, and other storm water information provided as part of education and outreach efforts, should be included with future annual reports (just the articles, not the entire publication). An alternative approach would be to electronically archive said articles and information, if possible, and provide a web link at which the information can be found. If information provided comes from public sources, such as U.S. EPA or other regulatory agencies, this should be noted in the SWMP as well.

Likewise, a summary or outline of the materials/information made available during training sessions should be provided either as an appendix to a revised storm water management plan (if the same material is provided each year), or with storm water program annual reports (if the information is different each year.) Consider moving this information to the section of the SWMP that addresses MCM 6, which includes requirements for storm water oriented training.

For all of the specific activities listed under MCMs 1 and 2 (in the far left column of Ohio EPA's annual report form), it says in the "% of Target Audience Reached" column that 100% of the target audience was reached. The estimated size of the target audience, however, is not provided. Given the fairly large on-base population involved (27,000), and the fact that some of the outreach is targeting the "outside community"; it seems unlikely that 100% of this population could be reached. The revised storm water management plan should speak to how this 100% figure was arrived at, as well as what comprises the "outside community".

In a related issue, for public involvement/participation activities, a column labeled "Estimate of People Participated" also lists 100% for all the different activities undertaken. Accurate numbers are difficult to come up with, but future annual reports should make the attempt to estimate the number of participants for each activity, instead of saying "100%".

Future annual reports should include information pertaining to the numbers of various brochures or pamphlets that are handed out at events taking place on the base, and at events which involve the "outside community". Totals can be provided in subsequent annual reports.

MCM 3 – Illicit Discharge Detection and Elimination (IDDE)

Maps – A map of the base's storm water drainage system was not requested during this review, but a small scale copy of a map showing locations of storm sewer outfalls is present in the 2011 version of the WPAFB's SWMP.

Home Sewage Septic Systems (HSTS) – There are no discharging septic systems currently in use on the base, but half a dozen standard septic tank-leach field type systems are present in various locations. These are small systems that typically treat less than 200 gallons of flow per day, but specific details regarding age, size and layout are missing. Current storm water program requirements only apply to septic systems that discharge to a regulated storm sewer network.

IDDE Ordinance – WPAFB does not create specific laws or ordinances, but relies instead on general orders issued by the Secretary of the Air Force. Air Force Instruction 32-7041, Chapter 2, Section 2.7, specifically prohibits discharges of non-storm water into base storm sewers. It also speaks to the elimination of cross connections between wastewater and storm water systems. Section 3.4(A) of General Environmental Specification 010220 contains language that, among other things, prohibits on-site contractors from polluting waterways with chemicals or petroleum products.

The revised SWMP must speak to enforcement actions that could be taken against chronic sources of illicit discharges, should any occur. Contractors run the risk of non-payment if they are found to be dumping into storm sewers, but the current SWMP says nothing about potential enforcement consequences for others.

Dry weather screening – It's not clear if all 23 storm sewer outfalls shown in Figure C-1 in the current SWMP actually discharge directly to a surface water of the state. Outfalls 1, 5, 15, 20, 22 and 23 are described in Figure C-1 in ways that suggest they are not discharging directly to a "surface water of the state", but rather to a conveyance, such as an open ditch, which in turn leads to a surface water of the state. If said open ditches are part of WPAFB's storm drainage network, then the point where the ditch hits the receiving waterway is technically where the outfall is located. Given that outfalls are inspected for dry weather flows quarterly, this is a minor point. Information provided for each outfall shown in Figure C-1 should be clarified so that it's clear where the true outfalls are located.

The SWMP should provide more background information about the use of absorbent booms at several of the base's storm sewer outfalls. Are they used as insurance in the event of a spill? Are there still problems with materials usage and management that would prompt the need for booms? How often do deployed booms capture wayward petroleum products? Is there a future end point for use of absorbent booms at the base's storm sewer outfalls?

The current SWMP does not explain what would happen should an unknown substance be observed coming from one of the base's outfalls. Would the source be pursued until it was found, so that sampling and analytical work could be avoided? If a sample of the discharge needs to be collected, could it be analyzed for basic chemical parameters in a lab on base? Or would it have to be sent away to a contract lab? It's not possible to provide a detailed course of action since specific incidents cannot be anticipated, but a general approach for identifying unknown materials being discharged from the base's storm sewers should be provided in the next version of the SWMP.

MCM 4 – Construction Site Storm water Runoff Control

The base relies on language in Section 3.4(C) of General Environmental Specification 010220 to regulate construction contractors working on projects that disturb more than one acre of land. This language, which is incorporated in every construction contract, requires contractors to obtain coverage under Ohio EPA's general construction permit (CGP).

It's not clear within the plan review process (as described in the current SWMP) where attention is focused on erosion and sediment control requirements for a given construction project. The WQPM has final say in approving plans prior to the start of construction, but because site designers are typically unable to customize erosion and sediment controls needed for the duration of a particular project, variations from the erosion control plan initially approved are all but given. In section 5.5 of the current SWMP, it states that inspectors will use "...a checklist that has been tailored to the site...based on measures specified in the ECP or SWP3." The revised SWMP should explain in a bit more detail how the need to adjust erosion and sediment controls is accommodated by the current system of plan review and active site inspections. The

revised plan should also speak to the fact that other materials present at construction sites, such as concrete washout, must also be managed to minimize impact to storm water runoff.

Because Ohio EPA's CGP is revised every 5 years, the SWMP should refer to "the most current version" of the CGP, rather than the specific permit number (which became OHC000004 on April 21, 2013). The base can choose to revise relevant documents each time the permit changes, but broad reference to the "current version" eliminates the need to address this minor detail.

MCM 5 – Post-construction Storm Water Runoff Management

WPAFB understands the requirement to implement post-construction storm water runoff management practices at new construction sites (exceeding one acre in size) within its borders. The current SWMP references the need for federal entities to abide by certain Low Impact Development (LID) practices, per Section 438 of the Energy Independence and Security Act (EISA) of 2007. Because certain LID practices are not found within Ohio EPA's CGP, however, the SWMP seems to suggest that post-construction practices may not be installed in some situations, even as Ohio EPA's CGP allows for "alternative" strategies (i.e., strategies not listed in the CGP) to be used, following approval by Ohio EPA.

As an air base, the site is prohibited from using ponds or basins to meet post construction requirements (presumably because these features attract waterfowl.) But several other post-construction options exist that could be used at the site without compromising the safety of aircraft flying in and out of the base.

During our meeting you mentioned that site designers are slowly beginning to incorporate various post construction storm water runoff management practices into new development that occurs at the base. The SWMP, however, does not appear to address the requirement that new construction projects (which disturb more than one acre of land) treat the calculated "water quality volume" for the site once construction has ended. It does seem clear that on base personnel will be required to inspect and maintain whatever post-construction storm water management techniques are installed, but it's not clear if the chosen techniques address WQv requirements.

It's probably worth rewriting this section of the SWMP, but with all the different players involved in any given project at the base, it's not certain a better explanation could be provided than what's already present.

MCM 6 - Pollution Prevention and Good Housekeeping

Little time was spent discussing this section of WPAFB's storm water plan, but from reviewing recent annual reports it appears all relevant information required by the small MS4 general permit is being provided.

May 22, 2013

Page 5

It's not clear from reading the current SWMP and recent annual reports if downward trends are occurring in the amounts of various materials used (particularly deicing salts, fertilizer, herbicides and pesticides), after factoring in needs based on weather conditions. Training of relevant personnel appears to be adequate in terms of spills, but it's not clear if training staff to become certified applicators of pesticides has resulted in more efficient use of these materials or not. The amount of salt used to deice roads has dropped noticeably in many municipalities in recent years simply because better equipment is now available with which to disperse it. Future SWMPs and annual reports should speak to these kinds of improvements if such have actually occurred. If opportunities to make these kinds of improvements exist, the base's SWMP should discuss them, along with the inevitable barriers that make change difficult.

Conclusions

Overall, it appears the base is doing a satisfactory job of meeting the requirements imposed by the small MS4 general storm water discharge permit. Suggested changes to the base's SWMP can be done at any time, but it is hoped a revised plan could be prepared by the time the next small MS4 general permit is issued, in January, 2014.

If you have questions regarding the letter you can contact me at 937-285-6442, or via email at chris.cotton@epa.ohio.gov.

Sincerely,



Chris Cotton
Environmental Specialist II
Division of Surface Water

CC/tb

cc: Anthony Robinson, Ohio EPA/DSW/CO
Ohio EPA/SWDO/DSW Files

