National Pollutant Discharge Elimination System: Compilation of Permit Writing Tips and Best Practices

August 31, 2017

I. Introduction

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. If the EPA or a state fails to clearly communicate the requirements of the permit, then it can be difficult to ensure that the permit meets the objectives of the NPDES program. Well written permits with clearly identifiable requirements make it easier for permittees to understand what is needed to be in compliance. Because the people carrying out compliance activities may not be lawyers or engineers, violations may occur where people do not understand the law. Convoluted language may also create defenses that the permit drafters did not intend.

Beyond the interests of the permitting authority and the regulated entity in having clear permit requirements, the public also has a strong interest in understanding what is intended by specific permit requirements. Clearly written permits enable the public to provide meaningful feedback on the protectiveness of permits and establish transparency with respect to the compliance expectations of the permittee.

This document was compiled from existing permit and rule drafting resources in order to provide a repository of tips for writing clear, specific and measureable NPDES permits. While many of the permit tips shared in this document can be applicable to other environmental programs, the intended audience for this document is EPA and state NPDES permit writers. The tips apply to both individual and general NPDES permits.

II. Plain Language

Plain writing techniques help permittees understand the permit requirements by using:

- Common, everyday words;
- Short, but clear and concise, sentences; and
- Logical organization.

<table>
<tr><th>Permit Tip</th><th>Examples</th></tr>
<tr><td>Write in an organized manner.
Keep paragraphs and sentences short.
Use logical organization and informative headings.
Use lists to shorten sentences and add white space.
Use tables to “diagram” complex text.</td><td>Example: We must receive your completed discharge monitoring report (DMR) on or before the 15th day of the month following the month you are reporting if you do not submit your DMR electronically or the 25th day of the month following the month you are reporting if you submit your DMR electronically.

vs.

More organized example:
We must receive your completed discharge monitoring report (DMR) on or before the following dates:<table><tr><th>If you submit your DMR...</th><th>We must receive it by...</th></tr><tr><td>electronically</td><td>the 25th day of the month following the month for which you are reporting.</td></tr><tr><td>other than electronically</td><td>the 15th day of the month following the month for which you are reporting.</td></tr></table></td></tr>
<tr><td>Use common words and phrases rather than complicated ones (i.e., “Plain English”)</td><td>Examples:
”Use” rather than “utilize”
“Make changes” rather than “effect”</td></tr>
</table>

Permit Tip	Examples
Use active voice	*Passive Voice*: A test must be conducted. vs. *Clearer - Active Voice*: The permittee must conduct a test. *Passive Voice*: "EPA gave consideration to the engineering report, but made a finding that it was flawed." vs. *Clearer - Active Voice*: "EPA considered the engineering report, but found that it was flawed." *Examples*: • "Modify" instead of "make a modification" • "Consider" instead of "give consideration to" • "Assess" rather than "conduct an assessment"
Don't use multiple "negative" words (double negative)	*Example*: A company need not make quarterly monitoring reports during the permit term if it did not identify heavy metals as present in the initial samples. vs. *Clearer example*: A company must make quarterly monitoring reports during the permit term only if it identified heavy metals as present in the initial samples.
Use modifiers carefully, keep them close to what they modify	*Example*: "The term 'new source' only applies, for purposes of this regulation, to facilities constructed after 2011…" vs. *Clearer example*: "For purposes of this regulation, the term 'new source' applies only to facilities constructed after 2011…"

Permit Tip	Examples
Pay attention to commas	*Example*: Inspect your facility valves and flanges. vs. *Clearer example*: Inspect your facility, valves, and flanges. (Note: the first option only requires inspection of valves and flanges at the facility, and the second option requires inspection of the whole facility.)
Try to avoid starting with exceptions. Start with the general requirement and then discuss the exceptions and conditions, rather than the other way around.	*Example*: "Except as provided in section 123.4(b), or as otherwise directed by the State agency, permittees must analyze samples using the laboratory method specified below. *Clearer example*: "Permittees must analyze samples using the laboratory method specified below. However, permittees may use a different laboratory method if the exception in 123.4(b) applies, or if the State agency directs them to use a different method."
Do not use pronouns (I, you, he, she, it, we, us, they, their, them) if the reader might be confused about who you are referring to.	*Example*: "EPA must promulgate a regulatory standard for metals within a State if it finds the presence of metals within two or more samples." Who does "it" refer to, EPA or the State?
Avoid using footnotes to articulate requirements in the permit • Use of excessive footnotes make the permit visually cumbersome and harder to understand • Footnotes that provide examples or references to the source of a requirement can be used effectively	*Example*: You must initiate soil stabilization measures within 7 days of when earth-disturbing activities have permanently ceased on any portion of the site. [1] [1]Earth-disturbing activities have permanently ceased when clearing and excavation within any area of your construction site that will not include permanent structures has been completed. *Better use of footnote*: Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.[14] [14]Examples of perimeter controls include filter berms, silt fences, vegetative strips, and temporary diversion dikes.

III. Writing Clear, Specific and Measurable Requirements

The tips in this section are intended to illustrate how to articulate permit requirements in a clear, specific, and measurable manner. The following definitions are meant to further explain what EPA means when it discusses "clear, specific, and measurable" permit requirements.

- Clear permit requirements use permit language that is easily understood and free from ambiguity or obscurity. A permit writer that uses clear terms allows the permittee, the public, and regulators to know what the permit requirements are.
- Specific requirements are those that are clearly defined or identified, further eliminating ambiguity while increasing precision.
- Measurable requirements incorporate a quantifiable or definite compliance objective. What this means is that the requirement answers a few questions:
    - What needs to happen?
    - Who needs to do it?
    - How much do they need to do?
    - When do they need to get it done?
    - Where it is to be done?

Permit Tip	Examples
As a general matter, avoid permit provisions that simply copy the language of the regulations verbatim without providing further detail on the level of effort required or that do not include the minimum actions that must be carried out during the permit term. (Note: This does not apply to standard permit conditions contained at 40 CFR 122.41.) For permits that implement narrative effluent limitations guidelines, narrative regulatory requirements, narrative water quality standards, or other narrative requirements, make sure that these narrative requirements are translated as clear, specific, and measurable permit conditions.	*Example of permit language copied from regulations without associated clear, specific, and measurable requirements*: "The operator of Phase II MS4 must: 1) Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the Phase II MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. … a) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, or local law; b) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices; c) Procedures for site plan review which incorporate consideration of potential water quality impacts; d) Procedures for receipt and consideration of information submitted by the public; and e) Procedures for site inspection and enforcement of control measures."

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<tr><th>Permit Tip</th><th>Examples</th></tr>
<tr><td>If relying on the permittee to develop a wastewater/stormwater management plan to meet key requirements in the permit, make sure that the permit is clear, specific, and measurable about the required outcomes, deadlines, and corresponding milestones that are to be part of the plan. Alternatively, the plan can be proposed for review and approval by the permitting authority.</td><td>*Example*: “If a TMDL is approved for any water body into which the Phase II MS4 discharges, and the TMDL includes requirements for control of stormwater discharges, the operator must review its stormwater management program for consistency with the TMDL allocation. If the Phase II MS4 is not meeting its TMDL allocation, the operator must modify its stormwater management program to comply with the provisions of the TMDL Implementation Plan applicable to the operator in accordance with the schedule in the Implementation Plan.”

vs.

More precise example:

Requirements for Implementing the Tomales Bay Pathogens TMDL Wasteload Allocations

The Tomales Bay pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:
<table><tr><td colspan="3">Fecal Coliform[a] (MPN/100 mL)</td></tr><tr><td colspan="2">For Direct Discharges to Tomales Bay</td><td>For Discharges to Major Tomales Bay Tributaries</td></tr><tr><td>Median[b]</td><td>90th percentile[c]</td><td>Log Mean[b]</td></tr><tr><td><14</td><td><43</td><td><200</td></tr></table>[a] These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.
[b] Based on a minimum of five consecutive samples equally spaced over a 30-day period.
[c] No more than 10% of total samples during any 30-day period may exceed this number.

Municipalities shall, by within 18 months of permit adoption:
i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.</td></tr>
</table>

Permit Tip	Examples
	ii. Pet Waste Management. Develop and implement enforceable means of reducing/eliminating fecal coliform loading from pet waste. iii. Illicit Discharge Detection and Elimination. Develop and implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Tomales Bay. iv. Pollution Prevention and Good Housekeeping. Develop and implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Tomales Bay. Report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. *Examples of plans requiring permitting authority review and approval*: See pp. 25-31 of EPA's *Compendium of MS4 Permitting Approaches – Part 3: Water Quality-Based Requirements* (2017).
Use clear terms that allow the permittee, public, and regulators to know what the requirements are • Definitions of terms need to be precise, and, to the extent possible, not left open to interpretation. For instance, the permit writer should avoid using language that requires further interpretation. • Use specific numerical ranges or percentages, instead of words that require further definition (e.g., using the term "significant" in a definition)	*Examples of clearly defined terms*: • "Arid Areas" – areas with an average annual rainfall of 0 to 10 inches • "Existing Site" – a site where earth disturbance commenced prior to February 16, 2017. • "New Source" – for the purposes of this permit, a construction project that commenced earth disturbance after February 1, 2010.
Don't use different words that mean the same thing (e.g., avoid interchanging "permit requirements" and "effluent limitations" if they are synonymous)	*Example*: "The **quality of produced water effluent** discharged by the facility shall, at a minimum, meet the **limitations** set forth below:" vs. *Clearer example*: "The following effluent limits apply at all times at Outfall 001:"

Permit Tip	Examples
Use language that avoids ambiguity and is clear about what is required • As a general matter, permit requirements that include ''caveat'' language (such as those listed below) should be defined to enable an objective determination of compliance: – ''if feasible'' – ''if practicable'' – ''to the maximum extent practicable'' – ''as necessary'' – ''as appropriate''	*Example*: **Where practicable**, provide cover or appropriate temporary stabilization to avoid direct contact with precipitation or to minimize sediment discharge. vs. *More precise example*: **For piles that will be unused for 14 or more days**, provide cover or appropriate temporary stabilization. *Example*: "The permittee shall implement BMPs to reduce to the Maximum Extent Practicable the discharge of the TMDL regulated pollutants to the impaired watershed stream and/or lake as described below …" vs. *More precise example*: "For applicable TMDLs listed in Appendix 2, affected Permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology. Each annual report shall include a summary of relevant SWMP and Appendix 2 activities conducted in the TMDL area to address the applicable TMDL parameter(s). <u>Appendix 2</u>: For the Rockfish Creek Watershed Bacteria TMDL, the City of Springville shall continue bacteria sampling under the state-approved monitoring plan. – Once the City reduces fecal coliform bacteria below state water quality standards in the current outfall sampling area, the City shall designate a new representative area for continued fecal coliform sampling at MS4 outfalls. – With each annual report, the City shall submit an up to date Stormwater Capital Improvement plan to address existing deficiencies in the stormwater treatment and conveyance system."

Permit Tip	Examples
If compliance with a permit provisions is mandatory, use "must" or "shall" and avoid permit provisions that preface the requirement with non-mandatory words, such as: • ''should'' • ''the permittee is encouraged to'' • "generally" • "substantially"	*Clear example*: "Inspections must be conducted while the facility is in operation." *Clear example*: "You must design, install, and maintain erosion and sediment controls that minimize the discharge of pollutants from earth-disturbing activities."
Avoid compliance deadlines that are conditioned on the occurrence of site factors that could be avoided	*Example*: "within 180 days of reaching the maximum production rate . . . emissions and opacity of the kiln shall be measured by an approved testing service" Note: this example allows a facility to avoid making a compliance determination by claiming that it had "not yet reached its maximum production rate."
Avoid permit terms that are susceptible to multiple interpretations	*Example*: "sampling required 4x/month" vs. *Clearer example*: "sampling required 1x/week" Note: Permittee may interpret first option as allowing sampling 8 days in a row. Second option uses more precision in specifying desired frequency. *Clear example:* 2017 CGP Part 4.4.1(b) Reductions in Inspection Frequency: For "linear construction sites" where disturbed portions have undergone final stabilization at the same time active construction continues on others, you may reduce the frequency of inspections to **twice per month for the first month, no more than 14 calendar days apart,** in any area of your site where the stabilization steps in 2.2.14a have been completed.

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<tr><th>Permit Tip</th><th>Examples</th></tr>
<tr><td>In presentation of applicable effluent limits:
Include summary tables for effluent limits and applicable monitoring, requirements corresponding to specific outfalls; consider cross-referencing in these tables applicable reporting and recordkeeping requirements.
Avoid splitting limits that apply to the same outfall in different sections of the permit
Be clear that such limits apply at all times during discharge, not just when monitoring occurs</td><td>Example table with clear presentation of related elements of permit requirements:

<table>
<tr><th rowspan="2">Effluent Characteristic</th><th rowspan="2">Units</th><th colspan="2">Discharge Limitation</th><th colspan="2">Monitoring Requirements</th></tr>
<tr><th>Average Monthly</th><th>Maximum Daily</th><th>Measurement Frequency</th><th>Sample Type</th></tr>
<tr><td>Flow Rate Effluent</td><td>GPD</td><td>47,000</td><td>315,000</td><td>Continuous</td><td>Recorder</td></tr>
<tr><td>Oil and Grease (O&G)</td><td>mg/L</td><td>---</td><td>15</td><td>1/Month</td><td>Grab</td></tr>
<tr><td>pH</td><td>SU</td><td colspan="2">6.0-8.3</td><td>Continuous</td><td>Recorder</td></tr>
<tr><td>Benzene</td><td>µg/L</td><td>---</td><td>51.0</td><td>1/Month</td><td>Grab</td></tr>
<tr><td>TSS</td><td>µg/L</td><td>---</td><td>100.0</td><td>1/Month</td><td>Grab</td></tr>
<tr><td>Surfactants</td><td>mg/L</td><td>---</td><td>Report only</td><td>1/Month</td><td>Grab</td></tr>
<tr><td>Toluene</td><td>µg/L</td><td>---</td><td>Report only</td><td>1/Quarter</td><td>Grab</td></tr>
</table></td></tr>
<tr><td>Whenever possible, use permit requirements with a measurable or quantifiable component. There are a number of approaches to making requirements more quantifiable, such as using numeric effluent limitations to meet water quality standards.</td><td>Example: There shall be no discharge of floating debris, scum or other surface materials in quantities sufficient to harm existing beneficial uses of the receiving water.

vs.

More measurable example: There shall be no discharge of floating debris, scum or other surface materials.

Example: Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to prevent any reasonable loss of the material from entering discharged waters or waters of the United States.

vs.

More measureable example: Bulk storage structures for petroleum products and other chemicals shall have secondary containment designed to hold 150% of the volume of the largest tank in the containment.</td></tr>
</table>

Permit Tip	Examples
BMPs or pollution prevention practices should have measured and objective standards.	*Clear example*: "The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of stormwater treatment and flow control BMPs/facilities that are permitted and constructed pursuant to (b) above. … Each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in the Stormwater Management Manual."
To assess compliance with a narrative limitation, permit should state what expectations are for monitoring and determining compliance.	*Example*: The permittee must inspect all control measures at the facility to ensure they are in good operating conditioning, and conduct corrective maintenance as required. vs. *More precise example*: To assess compliance with the narrative "no floating oil, film, or visible sheen" limitation, the permit requires visual inspection of the discharge 1x/week to determine the presence or absence of a visible sheen and documentation of the result.
Clearly express compliance deadlines. Use express compliance dates, not relative time such as "within a reasonable period" or "within 180 days from…"	*Example*: 180 days from permit issuance vs. *Clearer example:* October 1, 2017 Note: Under the first option, the permit writer needs to update final permit with actual compliance date when issued.
Sampling requirements should be clearly defined, as required by 40 CFR 122.41. In addition, consider: • Type: instantaneous, grab, composite (if composite: is it time or flow proportional; over what time period; minimum number of aliquots) • Frequency: 1 per week, 1 per quarter, etc. • Location: where do they need to sample? Clearly define the outfalls. • Test method that is plainly identified and sufficiently sensitive, consistent with 40 CFR Part 136	*Clear example:* 24-hour time proportional composite collected every hour. Outfalls 001 The effluent discharge pipe following UV disinfection that discharges treated effluent to the East River.

Permit Tip	Examples
List all outfalls and associated effluent limits and monitoring requirements in the permit – failure to list an outfall in the permit that was mentioned in the application, could be interpreted to require no limitations for that outfall.	
For reporting, requirements should specify: • Content—be specific about what you want to see in reports • Specific deadlines for submission of annual reports, data sets, and any additional requirements for alignment with the renewal application	*This example has specific deadlines but vague content on what goes into the DMR*: "Effluent monitoring results obtained during the previous six months shall be summarized and reported on one Discharge Monitoring Report Form (EPA No. 3320-1)." vs. *More specific example*: "Effluent monitoring results obtained during the previous six months shall be summarized and reported on one Discharge Monitoring Report Form (EPA No. 3320-1). If you sample multiple times in a reporting period, report the highest value and then mark the number of exceedances in that column. DMRs must be postmarked no later than the 28th day of the month following the completed reporting period (i.e. tests performed January through June shall be reported July 28th). If no discharge occurs during the reporting period, "no discharge" shall be reported.""
For individual permits, use identifiers (name of water body, titles, etc.) and specific operational processes when possible.	*Example:* Outfalls: 001 The effluent discharge pipe following UV disinfection that discharges treated effluent to the river. vs. *Clear example*: Outfalls: 001 The effluent discharge pipe following UV disinfection that discharges treated effluent to the East River.

Permit Tip	Examples
Include specific conditions for self-inspections that includes frequency, areas to be inspected, and reporting requirements, as well as conditions to look for during self-inspection	*Example:* For each inspection required by this Part, the permittee must complete an inspection report. vs. *More measurable example*: For each inspection required by this Part, the permittee must complete an inspection report within 24 hours of completing any site inspection. Note: The first option requires an inspection report to be prepared, but does not give a time-frame for preparing the report. *Clear example:* During your site inspection, you must at a minimum: 4.6.1 Check whether all stormwater controls (i.e., erosion and sediment controls and pollution prevention controls) are properly installed, appear to be operational, and are working as intended to minimize pollutant discharges; This includes the requirement to inspect for sediment that has been tracked out from the site onto paved roads, sidewalks, or other paved areas consistent with Part 2.2.4. Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site; 4.6.3 Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 2 and/or 3; 4.6.4 Check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to your discharge at points of discharge and, if applicable, the banks of any waters of the U.S. flowing within or immediately adjacent to the site;

Permit Tip	Examples
Include specific conditions that trigger the need for operators to take corrective actions: • Specific triggers • Deadlines for action • Follow-up reporting requirements Avoid implying that the corrective action removes responsibility for any underlying permit violations that triggered the corrective action.	*Clear example:* A WET limit exceedance is a permit violation. By establishing a trigger value for a TIE/TRE as a follow up to WET testing, the source of the toxicity can be identified prior to a WET limit violation. 2017 CGP Part 5.2.3: When the problem requires a new or replacement control or significant repair, install the new or modified control and make it operational, or complete the repair, **by no later than seven (7) calendar days** from the time of discovery. 2017 CGP Fact Sheet: Part 5.2 describes the deadlines the operator must meet when addressing any of the corrective action triggering conditions described in Part 5.1. EPA notes that if the condition identified in this Part constitutes a permit violation, **correcting it does not eliminate the original violation.**