

# So, How Familiar Are You With Your NPDES Permit?

**Standard Condition No. 10 in NPDES Permits requires the reporting of all bypass incidents that may occur in the collection system. KDHE requires they be notified within 24 hours of discovering the bypass. A written follow-up letter is also required within five days. KDHE has a standard Incident Reporting Form which can be used for reporting such raw sewage bypasses.**

**I** am surprised when I ask operators for a copy of their NPDES permit, and they don't have a copy. In fact, many are not even really sure what the document looks like. While I realize reading your NPDES permit is “dry” reading, it's very important that you have read and understand what's in your permit as it is the legally-binding document that regulates your wastewater system and discharge.

The acronym “NPDES” stands for National Pollutant Discharge Elimination System.” When the Clean Water Act was passed in 1972, it prohibited the discharge of pollutants

from a point source to “waters of the United States” unless the discharger had a NPDES permit. Each NPDES permit is specific to the wastewater facility and is issued to ensure discharge water quality does not cause nuisance conditions downstream or adversely affect public health. In short, an NPDES permit grants the wastewater system permission to discharge and sets conditions on that discharge.

In Kansas, the Kansas Department of Health and Environment acts on behalf of the Environmental Protection Agency (EPA) to issue NPDES permits. You will notice that your permit has a Federal Permit Number and a State of Kansas permit number. The State permit numbers are based on whether the discharger is a municipality or industry and the river basin into which the discharge flows. If your wastewater facility does not discharge, you will not have an NPDES permit, and just a State-issued permit.

## The NPDES permit

So, what all is included in a typical NPDES permit? The first page is typically general information on the type of facility, information about the owner and legal locations for both the treatment plant and outfall to the receiving stream. The permit will also note the effective dates for the permit with both a starting and ending date. NPDES permits are typically issued for a five-year period and are then renewed.

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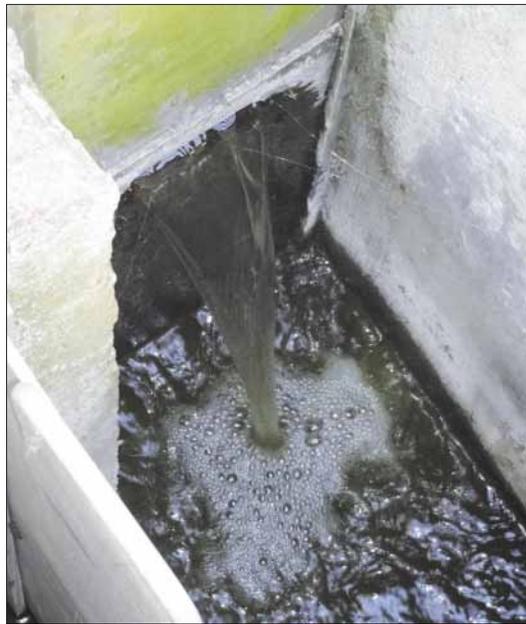
A renewal every five years gives KDHE a chance to see how the facility is performing and to update the permit if any physical changes have occurred to the collection or treatment processes. The permit will then provide specific information on the type of treatment system in use while also providing design flow information, usually stated in “million gallons per day” (MGD). If a mechanical plant, it will list each of the separate treatment units such as the headworks, clarifiers, aeration basins, disinfection process and sludge handling capabilities.

The next page or two are really the guts of the permit as it is here that conditions are placed on the discharge. Starting with page 2, both effluent limits and monitoring requirements are stated. Here, the system finds out how often they must monitor and for what pollutants. Generally, mechanical plants must monitor monthly and discharging lagoons quarterly.

Typically, the effluent limit (monthly average) for mechanical plants is 30 mg/l for BOD and 30 mg/l for TSS. Lagoons typically have a 30 mg/l BOD limit and 80 mg/l TSS limit. The higher TSS limit for lagoons is to compensate for algae in the effluent.

Additionally, limits are placed on ammonia and E. coli in the discharge, although some facilities may not have limits but are simply required to monitor for a specific pollutant. The same is true for nutrients like nitrogen and phosphorous. Setting goals allows the system time to see if in the future, actual nitrogen and phosphorous limits can be met. Some mechanical plants may only have nutrient goals that are not enforceable.

On page 2, information is listed on the submission of periodic monitoring reports. Whether a discharging lagoon or mechanical plant, systems are given 28 days after the monitoring period to submit all data required in their monitoring reports. The permit also states that if no discharge occurs during the monitoring period, written notification is still required to notify



**This photo shows typically outfall structure for discharging lagoon effluent. Notice flow going through opening in top of stop plate, making for good location to collect representative effluent sample. Effluent appears to be of very good quality with few solids and little foaming.**

KDHE that no discharge occurred. This typically only applies to some lagoons that may go a month or even a quarter without discharging. In such cases, KDHE must be notified so they know the system did not fail to monitor but simply did not discharge.

Additionally, requirements found on later pages include statements regarding the land application of sludge and that all monitoring reports must now be submitted electronically unless a waiver has been approved. Another significant part of any NPDES permit can be the Schedule of Compliance. For most systems meeting limits, there is no Schedule of Compliance. However, if a system is not meeting limits and has effluent violations, KDHE may establish a Schedule of Compliance to bring the facility back into compliance. Typically, the Schedule of Compliance will

list dates by which the system must retain an engineer, develop and submit an engineering report, submit plans and both begin and finish construction upgrades to ensure future compliance with all effluent limits. This is why it is so important to read your permit when it is renewed, as it may



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**This is a typical outfall structure for discharge from sewage treatment plant. The best location to collect effluent samples is from flow going over V-notch weir cut into metal stop plate. Also note sample containers used for collecting samples to be analyzed for BOD, TSS, ammonia and *E. coli*.**

have major changes. I have dealt with several systems where neither the elected body nor operating staff reviewed their newly reissued permit, and failed to realize they had a Schedule of Compliance. While KDHE is usually generous in giving the system time to comply with a Schedule of

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Compliance, it is best to start meeting such a requirement sooner rather than later. If you haven't read your new permit and don't realize you have a Schedule of Compliance, the clock is already ticking and valuable time may be lost. So again, read your newly reissued permit each time to make sure there are no significant changes. It may be a good idea to compare your previous permit to your new one to note any major changes.

Last but not least, the final four pages of any NPDES permit include Standard Conditions, which apply to all discharging wastewater facilities. While I am not going to go into detail on each of the Standard Conditions listed, I will highlight a few of the more important ones. These include:

- ◆ All samples must be taken at locations specified in your NPDES permit and be representative samples. Samples must also be taken before any other water or substance dilutes the sample;
- ◆ Under "Definitions" the term "monthly average" is defined. It should be noted that if your lagoon is on quarterly monitoring and you want to collect a second effluent sample because the first one exceeded limits, that second sample must be collected in the same month as the first sample. If the two samples are collected in different months within a quarter, they do not meet the definition of "monthly average."
- ◆ Explains the difference between grab and composite samples;
- ◆ Condition 4 requires that all analysis of wastewater samples must be performed according to Standard Methods and by a laboratory accredited by KDHE. Furthermore, this condition states that if you sample more frequently than required by your permit, you must report all sample results. In other words, if an original sample exceeds effluent limits, you cannot sample again and disregard the original sample results. Both must be reported;

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- ◆ Condition 6 requires that facilities must always be properly operated and maintained. It encourages having redundant facilities where possible. It further requires the system to take all steps to minimize or prevent adverse impacts to human health or the environment through proper operation of the treatment system. Additional monitoring is also encouraged if treatment problems are being experienced;
- ◆ Condition 10 requires the system to report to KDHE, within 24 hours, any unanticipated diversion of the collection system or treatment facility. A follow-up written submission is then required within five days. This Condition applies to all bypasses within the collection system. KDHE has a standard form that can be used for such reporting and can be found at [www.kdheks.gov/water/tech.html](http://www.kdheks.gov/water/tech.html);
- ◆ Condition 12 required the system to provide an alternate power source in order to continue meeting permit requirements during an extended power outage;
- ◆ Condition 15 requires systems to retain copies of all records resulting from monitoring required by your permit for a minimum of three years. This also includes records of maintenance and calibration of laboratory equipment; Biosolids/sludge disposal records must be kept a minimum of 5 years;
- ◆ Condition 23 requires the system to have operators certified by KDHE and to the certification level required for your system.

Hopefully, this article will encourage all operators to obtain a copy of their NPDES permit and review it in detail.

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In order to keep the regulators satisfied with the way your system is operated and maintained, you need to know what they expect. One of the best ways of knowing what's expected is to know what is contained in your permit. If you ever have questions about your NPDES permit or the details it contains, please feel free to contact me. I can be reached at 913-850-8822 or [jeff@krwa.net](mailto:jeff@krwa.net). Other KRWA staff are also available.

*Jeff Lamfers began work for KRWA in November 2008. Jeff has more than thirty years of regulatory experience in the oversight and operation of water and wastewater systems with the Kansas Department of Health and Environment. He is a graduate of the University of Kansas with a degree in Environmental Studies with an emphasis in aquatic biology.*





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TRAINING > Schedule & Register

Today July 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Administrative / Management

Board / Council

Cross Connect / Backflow Prevention

Drinking Water Regulations

NOTE -- This schedule shows the training sessions presently planned by KRWA. For more information, please contact Jeff Lamfers at 913-850-8822 or [jeff@krwa.net](mailto:jeff@krwa.net). **PERSON TRAINING. BRING YOUR OWN, OR KRWA WILL ALSO PROVIDE AT EACH SESSION.**

Search for training by entering a word in topic or city (location) name.

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July 19, 2022	<b>Lead and Copper Rule Revisions - Hydrants &amp; Valves</b>	Grandview Plaza	<b>No Charge</b>	w	<a href="#">view details</a>	
July 20, 2022	<b>Lead and Copper Rule Revisions - Hydrants &amp; Valves</b>	Hays (The Hadley Center)	<b>No Charge</b>	w	<a href="#">view details</a>	
July 21, 2022	<b>Lead and Copper Rule Revisions - Hydrants &amp; Valves</b>	Pratt	<b>No Charge</b>	w	<a href="#">view details</a>	
July 26, 2022	<b>The ABC's of VFDs (by ABB)</b>	Newton (City Service Center)	<b>\$0.00</b>	w & ww	(details coming)	