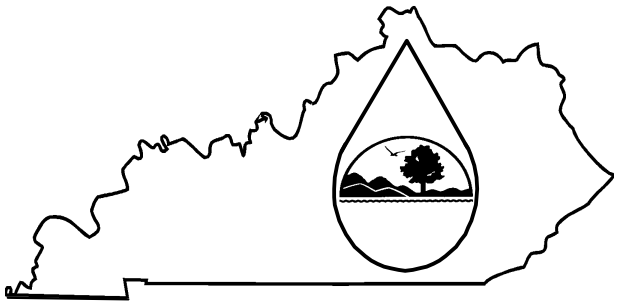
# KPDES FORM SC



## KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

## PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact: Surface Water Permits Branch, (502) 564-3410.

NAME OF FACILITY:

| **I. FACILITY DISCHARGE FREQUENCY** | AGENCY USE | | | | | | | |
|---|---|---|---|---|---|---|---|---|

A. Do discharge(s) occur all year? Yes ☐ No ☐
(Complete Item IX for intermittent discharges.)

B. How many days per week?

II. A. Give the basis of design for sizing of the wastewater facility (see instructions):

B. If new discharger, indicate anticipated discharge date:

C. Indicate the design capacity of the treatment system: MGD

**III. Outfall Location (see instructions)**

| Outfall (list) | LATITUDE | | | LONGITUDE | | | RECEIVING WATER (name) |
|---|---|---|---|---|---|---|---|
| | Degrees | Minutes | Seconds | Degrees | Minutes | Seconds | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Method used to obtain latitude/longitude
(i.e. GPS unit, USGS topographic map coordinates, etc.)

**IV. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (see instructions)**

| OUTFALL NO. (list) | OPERATION(S) CONTRIBUTING FLOW | | TREATMENT | |
|---|---|---|---|---|
| | Operation (list) | Avg/Design Flow (include units) | List treatment components | List Codes from Table SC-1 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**V. Check the type(s) of wastewater discharged.**

☐ Domestic (60% or more sanitary sewage) ☐ Oil field waste

☐ Noncontact cooling water ☐ Other (list):

**VI. Does all water used at facility (except for human consumption) flow to a treatment plant?** ☐ **Yes** ☐ **No**

**VII. Discharge to other than surface waters. Check appropriate location:**

☐ Publicly-owned lake or impoundment Name of lake:

☐ Publicly-owned treatment works (POTW). Name of POTW:

☐ Land application of Effluent

☐ Surface injection (Check term and identify on map) ☐ lateral field; ☐ sinkhole; ☐ sinking stream; ☐ deep well

☐ Closed Circuit (Check appropriate term) ☐ Holding tank; ☐ Mechanical evaporation; ☐ Waste impoundment

**VIII. Check the metals present in the discharge if applicable and indicate the quantity discharged per year. (Indicate units).**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ☐ | Antimony | | ☐ | Copper | | ☐ | Silver | |
| ☐ | Arsenic | | ☐ | Lead | | ☐ | Thallium | |
| ☐ | Beryllium | | ☐ | Mercury | | ☐ | Zinc | |
| ☐ | Cadmium | | ☐ | Nickel | | ☐ | | |
| ☐ | Chromium | | ☐ | Selenium | | ☐ | | |

| IX. INTERMITTENT DISCHARGES (Complete this section for intermittent discharges.) | | |
|---|---|---|
| A. Number of bypass points: | | (If bypass points are indicated, information below must be completed for each bypass.) |

| Check when bypass occurs: | ☐ Wet Weather | ☐ Dry Weather |
|---|---|---|
| Give the number of bypass incidents | per year | per year |
| Give average duration of bypass | hours | hours |
| Give average volume per incident | 1,000 gallons | 1,000 gallons |
| Give reason why bypass occurs: | | |

B. Number of Overflow Points: (If discharge is from an overflow point, the information below must be completed.)

| Check when overflow occurs: | ☐ Wet Weather | ☐ Dry Weather |
|---|---|---|
| Give the number of overflow incidents: | per year | per year |
| Give average duration of overflow: | hours | hours |
| Give average volume per incident: | 1,000 gallons | 1,000 gallons |

| | |
|---|---|
| C. Number of seasonal discharge points | |
| Give the number of times discharge occurs per year | |
| Give the average volume per discharge occurrence | (1,000 gallons) |
| Give the average duration of each discharge | (days) |
| List month(s) when the discharge occurs | |

**X. AREA SERVED (see instructions)**

| NAME | ACTUAL POPULATION SERVED |
|---|---|
| | |
| | |
| | |
| **TOTAL POPULATION SERVED** | |

## XI. COOLING WATER ADDITIVES AND THEIR COMPOSITIONS

| Additive | Composition | Concentration (mg/l) |
|---|---|---|
| | | |
| | | |
| | | |

## XII. EFFLUENT CHARACTERISTICS

A. Indicate results of analysis for pollutants listed below.

| POLLUTANT/PARAMETER | MAX DAILY VALUE | AVG DAILY VALUE | NUMBER OF SAMPLES |
|---|---|---|---|
| $BOD_5$ | | | |
| TOTAL SUSPENDED SOLIDS | | | |
| FECAL COLIFORM ☐<br>Or E.COLI ☐ | | | |
| TOTAL RESIDUAL CHLORINE | | | |
| OIL AND GREASE | | | |
| CHEMICAL OXYGEN DEMAND | | | |
| TOTAL ORGANIC CARBON | | | |
| AMMONIA | | | |
| DISCHARGE FLOW | | | |
| pH | | | |
| TEMPERATURE (WINTER) | | | |
| TEMPERATURE (SUMMER) | | | |

| | |
|---|---|
| B. Frequency and duration of flow: | |

## XIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| | |
|---|---|
| NAME AND OFFICIAL TITLE (type or print):<br><br>Mr. ☐ Ms. ☐ | TELEPHONE NUMBER (area code and number): |
| SIGNATURE | DATE |

# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
# FORM SC -- INSTRUCTIONS

Listed below are explanations of select Short Form C questions. If further information is needed concerning any question, please contact the Division of Water, Surface Water Permits Branch at (502) 564-3410.

## I. WHO MUST APPLY

This application is to be completed by services, wholesale and retail trade establishments, and other commercial establishments including subdivisions and schools that propose construction or operation of a wastewater treatment facility or expansion and/or upgrading of an existing treatment plant.

A. Indicate if discharge(s) occur all year. Complete Item IX for any intermittent discharges.

## II. BASIS OF DESIGN FOR SIZING THE WASTEWATER TREATMENT FACILITY

A. Give the basis of design for sizing the wastewater treatment facility. Indicate the **actual** number of population served, **actual** number of students for schools, square feet of space, etc. used in determining the size of the wastewater treatment plant.

B. If application is being submitted by new discharger, indicate date of expected commencement of discharge.

C. Indicate the design capacity of the treatment system in million gallons per day (mgd).

## III. OUTFALL LOCATION

For each outfall listed, list the latitude and longitude of its location to the nearest fifteen seconds and list the name of the receiving water. Latitude and Longitude readings should be taken at the last point prior to discharge to receiving water.
The method used to obtain latitude and longitude should be listed also (i.e. GPS unit, USGS topographic map coordinates, etc).

## IV. FLOWS, SOURCES OF POLLUTION AND TREATMENT TECHNOLOGIES

For each outfall provide: (1) a description of all operations contributing wastewater to the effluent, including sanitary wastewater and storm water runoff; (2) the average and design flows contributed by each operation; and (3) the treatment received by the wastewater.

Operations may be described in general terms for storm water. You may use any reasonable measure of duration, volume, or frequency. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order of occurrence and you should select the proper code from Table SC-1 and fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list.

If you are applying for a permit for a privately-owned treatment works, you must also identify all of your contributors in an attached listing.

**V.** Check the type(s) of wastewater being discharged.

**VI.** Indicate whether all water used at the facility (except for human consumption) flows to a treatment plant.

**VII.** Indicate discharge(s) to other than surface waters.

**IX. Intermittent Discharges**
Indicate the number of bypasses, overflows, and controlled releases that result in point discharges. Items A-C (as appropriate) must be completed for each intermittent discharge indicated.

**X.** For each area served by the wastewater treatment plant, enter the actual population served at the time of application.

.

**XI.** List any cooling water additives (if applicable), their composition, and approximate concentration.

**XII. EFFLUENT CHARACTERISTICS**

This part must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm water runoff. However, at your request, the Division of Water may waive the requirements to test for one or more of these pollutants based upon a determination that testing for the pollutant(s) is not appropriate for your effluent(s).

**A.** List quantitative data for the pollutants or parameters listed. The data may be collected over the past 365 days if they remain representative of current operations. Applicant must collect and analyze samples in accordance with 40 CFR Part 136. Grab samples must be used for pH, temperature, oil and grease, total residual chlorine, Fecal Coliform, and E. coli. For all other pollutants, 24-hour composite samples must be used.

New dischargers should include estimates for the pollutants or parameters listed instead of actual sampling data, along with source of each estimate. All levels must be reported or estimated as concentration and as total mass, except for flow, pH and temperature.

**B.** Describe the frequency of flow and duration of any intermittent discharge (except for storm water runoff, leaks, or spills).

**XIII. CERTIFICATION**

The certification is to be signed as follows:
**Corporation:** by a principal officer of at least the level of vice president.
**Partnership or sole proprietorship:** by a general partner or the proprietor, respectively.
**Municipality, state, federal, or other public agency:** by either a principal executive officer or ranking elected official

**TABLE SC-1**
**CODES FOR TREATMENT UNITS**
(For use with Form SC, Item IV)

**PHYSICAL TREATMENT PROCESSES**

1-A.....Ammonia Stripping
1-B .....Dialysis
1-C .....Diatomaceous Earth Filtration
1-D.....Distillation
1-E .....Electrodialysis
1-F.....Evaporation
1-G.....Flocculation
1-H.....Flotation
1-I .....Foam Fractionation
1-J .....Freezing
1-K.....Gas-Phase Separation
1-L .....Grinding (Comminutors)
1-M .....Grit Removal
1-N.....Microstraining (Microscreening)
1-O.....Mixing
1-P .....Moving Bed Filters
1-Q.....Multimedium
1-R.....Rapid Sand Filtration
1-S .....Reverse Osmosis (Hyperfiltration)
1-T .....Screening
1-U.....Sedimentation (Settling)
1-V.....Slow Sand Filtration
1-W.....Solvent Extraction
1-X.....Sorption
1-Y.....Equalization
1-Z.....Intermittent Sand Filters

**CHEMICAL TREATMENT PROCESSES**

2-A.....Carbon Adsorption
2-B .....Chemical Oxidation
2-C .....Chemical Precipitation
2-D.....Coagulation
2-E .....Dechlorination
2-F.....Disinfection (Chlorine)
2-G.....Disinfection (Ozone)
2-H.....Disinfection (Other)
2-I .....Electrochemical Treatment
2-J .....Ion Exchange
2-K.....Neutralization
2-L .....Reduction
2-M.....Odor Control
2-N.....Chemical Hydrolysis

**BIOLOGICAL TREATMENT PROCESS**

3-A.....Activated Sludge
3-B .....Aerated Lagoons
3-C .....Anaerobic Treatment
3-D.....Nitrification-Denitrification
3-E .....Pre-Aeration
3-F.....Spray Irrigation/Land Application
3-G.....Stabilization Ponds
3-H.....Trickling Filtration
3-I .....Rotating Biological Contractors
3-J .....Polishing Lagoons
3-K.....Biological Hydrolysis
3-L .....Post Aeration
3-M.....Treatment by Plain Aeration
3-N.....Holding or Detention Pond
3-P .....1-Cell Lagoon
3-Q.....2-Cell Lagoon
3-R.....3-Cell Lagoon
3-S .....4-Cell Lagoon
3-T .....Septic Tanks

**OTHER PROCESSES**

4-A.....Discharge to Surface Water
4-B .....Ocean Discharge Through Outfall
4-C .....Reuse/Recycle of Treated Effluent
4-D.....Underground Injection
4-E.....Reuse or Sale of Wastewater
4-F .....Temperature Control
4-G.....Eutectic Freezing
4-H.....Grease Removal

**SLUDGE TREATMENT AND DISPOSAL PROCESSES**

5-A.....Aerobic Digestion
5-B .....Anaerobic Digestion
5-C .....Belt Filtration
5-D.....Centrifugation
5-E .....Chemical Conditioning
5-F.....Chlorine Treatment
5-G.....Composting
5-H.....Drying Beds
5-I .....Elutriation
5-J .....Flotation Thickening
5-K.....Freezing (Sludge Treatment)
5-L .....Gravity Thickening
5-M.....Heat Drying
5-N.....Heat Treatment
5-0 .....Incineration
5-P .....Land Application (Sludge)
5-Q.....Landfill
5-R.....Pressure Filtration
5-S .....Pyrolysis
5-T .....Sludge Lagoons
5-U.....Vacuum Filtration
5-V.....Vibration
5-W.....Wet Oxidation