



CHAPTER 4.

UNDERSTANDING WATER POLLUTION SOURCES



UNDERSTAND RESPONSIBILITIES AND REQUIREMENTS FOR MANAGING WATER POLLUTION SOURCES

Wastewater

Printing companies typically discharge wastewater to a publicly owned treatment works (POTW). It is important for printers to know where the wastewater from their shop is going, and to minimize pollution going “down the drain.” In addition, POTWs are not equipped to treat all types of industrial wastes (e.g., some solvents cannot pass through a POTW without being removed or treated). There are three typical sources of water pollution from printing operations:

- 1) **Photo developing rinses can contain silver, strong acid or alkaline wastes, or other hazardous components.** Removing silver often is cost-effective, and necessary for printers to comply with state and local wastewater discharge limits. However, many local discharge limits are so low, no removal technologies will meet those limits.
- 2) **Inks or solvents can be a problem if dumped down the drain.** Do not dump solvents into any drains, regardless of whether they discharge to a sanitary sewer or a septic system, because such disposal is usually prohibited by state and local regulations.
- 3) **Materials discharged to floor drains or storm sewers.** Storm sewers often flow directly into rivers or streams without treatment. Remove any inks, chemicals, oils, etc., before wet rinsing areas that have open floor drains. You can minimize the potential for any unintended releases to the sewer system by putting removable, sealed covers on your floor drains.

The most serious concern with wastewater discharges from print shops is the high level of silver contained in photographic fixer solutions and rinsewaters. These solutions won't meet wastewater treatment plant discharge limits unless the silver is removed. Every print shop that performs image processing operations should be recovering silver from these solutions and know whether they are required to obtain an industrial waste discharge permit from their local POTW.

Take the following steps to determine whether your water wastes meet sewer discharge limits in your area. For each water pollution source identified on your “*Water Pollution Sources Inventory*” worksheet, enter “yes” or “no” in the column “Determined to Meet Sewer Discharge Limits” on the worksheet. If unsure, you may need to have a “water test” done for each water pollution source in question.



Step 1: Determine if wastewater is hazardous — The one fail-safe way to determine if your wastewater is considered hazardous is to have a laboratory test the wastewater. Refer to your local telephone directory to find a laboratory, or see ***Appendix B: Contacts List*** to find out who to call in your area. Testing the wastewater before discharge allows you to see which chemicals, and their concentrations, are found in the wastewater. After you have determined the concentrations of certain chemicals in the wastewater, you can compare those with the limits set by your local sewerage agency (refer to your telephone directory to find out who to call). If the wastewater is determined to meet sewer discharge limits, remember to record “yes” on your “*Water Pollution Sources Inventory*” worksheet.

Step 2: Estimate quantity generated — Regardless of the waste quantity you generate, your wastewater must be treated as a hazardous waste if it does not meet your local sewer agency’s discharge limits. In that case, it cannot be discharged to the sewer, storm drains or in any other way that would expose the environment to the wastes.

Step 3: Identify requirements — A permit may be required depending on the area your business resides in and the discharge limits set at the local level. Consult your local sewerage agency to determine what requirements apply.

Stormwater

In addition to wastewater discharges, printers should be concerned about stormwater discharges. You can reduce the potential for stormwater contamination at your property by storing raw materials and wastes indoors. If there is no potential for contaminating stormwater on your facility’s grounds, then you are not required to obtain a permit. However, you should apply for a stormwater permit if there is the possibility that stormwater, rainfall, or snow melt water will come in contact with: material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products or industrial machinery that have the potential of contaminating stormwater. Refer to your telephone directory to find the local agency that handles stormwater permitting.

If you have questions about your responsibilities and requirements for having water pollution sources, refer to ***Appendix B: Contacts List*** to find out who to call in your state.

Once you understand the responsibilities and requirements for having water pollution sources, check off the actions on the Checklist on page 2.

Having completed Chapters 1-4, you should now understand your hazardous wastes, air emission sources and water pollution sources. Refer to ***Appendix E: Other Federal and State Regulations*** to be sure you understand all of the environmental requirements associated with the wastes you identified. Then, proceed to ***Chapter 5: Identifying & Implementing Best Management Practices and Pollution Prevention Opportunities*** to find out how you can reduce your regulatory burden.