

LESS THAN 2000
GALLONS OF
WASTEWATER
DISCHARGED TO
SEWER DAILY

SMALL ALCOHOL PRODUCTION WASTEWATER GUIDANCE

WASTEWATER DISCHARGES TO SANITARY SEWER FROM ALCOHOL PRODUCTION

POTENTIAL PROBLEMS

- pH
- Sewer Odors
- Temperature
- Solids

Wastewater from breweries, wineries, and distilleries typically contains high concentrations of solids from grains, yeast, hops, and sugars that can affect the biological processes used to treat wastewater at the City's treatment plant. These solids can also cause odor problems, blockages, and overflows in the city sewer. Wastewater with a high temperature can have an adverse effect on bacteria used to treat wastewater. Alcohol production wastewater can have low pH that can corrode sewer lines. Caustics, acids, and other chemicals used for cleaning and sanitizing equipment can have very low or high pH and cause corrosion and affect wastewater treatment as well.

APPLICABLE CITY CODE

Phoenix City Code (PCC) Chapter 28 (Sewers) has several sections that apply to wastewater discharge from alcohol production:

- It is unlawful for any user to discharge or cause to be discharged to the publicly owned sanitary sewer system any water with a pH less than 5 or greater than 10.5. **PCC Sec. 28-8 (a)(5)**
- It is unlawful to discharge solid or viscous pollutants that may cause interference with wastewater treatment, cause obstruction to sewer flow, or other damage. **PCC Sec. 28-8 (a)(3)**
- Discharging water with a temperature greater than one hundred fifty degrees is prohibited. **PCC Sec. 28-8 (a)(6)**
- pH and temperature readings need to be documented prior to discharge. The records must be kept on site for a minimum of 3 years. **Sec. 28-44 (d)**

REQUIREMENTS

Alcohol production facilities must have a method to ensure the pH of their wastewater is between 5 and 10.5 Standard Units (SU) and less than 150 degrees Fahrenheit before discharging it to the City sewer. Dilution of wastewater by adding additional water to neutralize pH is PROHIBITED by Federal, State, and Municipal laws.

- Use a tank dedicated to collecting all process wastewater and bad batches so the pH and temperature can be checked, neutralized, and cooled if necessary, prior to being discharged to the City sewer. This is the best way to ensure only compliant wastewater is discharged to the sewer.
- The tank should be made of a non-corrosive material and sized depending on the size of the operation (e.g., a 55-gallon drum, tote, or large under- or above-ground tank).

- If a single tank capable of containing all the facility's wastewater is not feasible, separate tanks can be used for different waste streams.
- Smaller tanks may use manual mixing methods to ensure all the contents of the tank are neutralized.
- Larger tanks need a mechanical mixer to ensure chemicals are thoroughly mixed and the contents are neutralized.
- Automated systems that monitor and adjust pH can be used, or it can be done manually if there is the ability to verify the wastewater is within limits prior to discharge.
- Consider the potential for growth of the operation prior to selecting the tank, especially if installing an underground tank.
- Place fine gauge screens or sediment baskets at any entry point to the sewer where solids could be introduced. Designs that filter out solids prior to transfer to a holding tank should be considered as well. Also consider ease of removal and cleaning of these screens when designing the facility.
- Keep all sewer piping from alcohol production separate and upstream from sanitary and kitchen waste.
- Facilities with a food service establishment must have an appropriately sized grease interceptor.
- Consider beneficial reuse of spent yeast, grains, hops and trub (fertilizer, compost, livestock feed).

PLAN REVIEW AND PERMITTING

If you are planning to build or remodel an alcohol production facility in the City of Phoenix you will need construction permits from the Planning and Development Department. Visit Planning and Development's Website phoenix.gov/pdd

Facilities that discharge or are projected to discharge over 2,000 gallons of wastewater a day may need to be permitted by the City of Phoenix Water Department, Environmental Services Division, Industrial Pre-treatment Section. Contact Information: 602-495-5926 or IPP.PlanReview@phoenix.gov.

STANDARD OPERATING PROCEDURES

A hardcopy submittal of written Standard Operating Procedures (SOPs) is Required to be submitted to the City prior to opening for business and must include:

- Title of staff responsible for ensuring the Wastewater SOPs are implemented.
- Method(s) used to ensure that solids will not be introduced to the municipal sewer (e.g., settled, filtered, screened) and disposal method.
- Method for disposal of bad batches
- Method for pH monitoring
- Method and location(s) for pH neutralization and mixing
- Statement that all pH readings will be logged prior to discharge and that the logs shall be retained onsite for no less than 3-years.
- Wastewater log storage location

- Method for safely isolating and disposing of accidental spills and leaks of concentrated chemicals, liquids, and solids to prevent discharge to the sewer system via exposed drains
- Statement that the facility is aware of the requirement to notify the City of Phoenix Industrial Pretreatment Program (602-495-5926) in writing should BMPs be revised, operations be expanded, or should production increase to where an average of 2,000-gallons per day of wastewater is discharged to the sanitary sewer.
- The following certification statement followed by date and signature:

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.

SOP must be signed by (1) a responsible corporate officer if business is a corporation; (2) a general partner or proprietor if the business is a partnership or sole proprietorship; or (3) a duly authorized representative of the responsible corporate officer, or general partner or proprietor.

Mail the original signed hard copy the SOP to:

City of Phoenix Environmental Services Division
Industrial Pretreatment Program
2474 South 22nd Avenue, Building 31
Phoenix, Arizona 85009-6918

For more information, contact:

WATER SERVICES DEPARTMENT
ENVIRONMENTAL SERVICES DIVISION
Phone:(602) 262-1859
Website: phoenix.gov/esd
Email: IPP.PlanReview@phoenix.gov.