

a direct hydrologic connection to surface water.

At the time of proposal, EPA considered, but rejected, requiring CAFOs to sample surface waters adjacent to feedlots and/or land under control of the feedlot to which manure is applied. This option would have required CAFOs to sample surface waters both upstream and downstream from the feedlot and land application areas following significant rainfall. In this final rule, EPA is continuing to reject imposing surface water monitoring requirements on CAFOs through the effluent guidelines because of concerns regarding the difficulty of designing and implementing through a national rule an effective surface water monitoring program that would be capable of detecting, isolating, and quantifying the pollutant contributions reaching surface waters from individual CAFOs; and because the addition of in-stream monitoring does not by itself achieve any better controls on the discharges from CAFOs than the controls imposed by this rule. In-stream monitoring could be an indicator of discharges occurring from the CAFO; however, unless conditions are appropriate and a well-designed sampling protocol is established, it is equally possible that the in-stream monitoring considered at proposal would measure discharges occurring from adjacent non-CAFO agricultural sources. These non-CAFO sources would likely be contributing many of the same pollutants considered under the sampling option. EPA considered alternative parameters that would isolate constituents from CAFO manure and wastewater from other possible sources contributing pollutants to a stream. Pathogens were considered as potential indicator parameters that could be used if adjacent operations do not also have livestock or are not using manure or biosolids as fertilizer sources. As discussed in the preamble for the proposed rule, however, there are concerns about the ability of CAFOs to collect and analyze samples for these pollutants (unless the sampling program is appropriately designed and tailored to the CAFO) because of the technical difficulty in obtaining representative samples and because of holding time constraints on collected samples associated with the analytical methods for these parameters. Accordingly, EPA believes that the imposition of in-stream monitoring requirements is more appropriately addressed through NPDES permit conditions established by the permitting authority. Although EPA has rejected the inclusion of in-stream

monitoring requirements in this rule, the permitting authority retains the authority to include them in NPDES permits as either technology-based requirements based on BPL, or water quality-based requirements, where the permitting authority determines they are necessary.

Another option considered, and rejected, at proposal would have required large dairy (and swine) operations to install anaerobic digester systems to treat their manure. Requiring anaerobic digester systems was not considered for beef and heifer operations because the wastes from these facilities would not support the operation of digester systems. (Refer to the *Technical Development Document* for more information on the operation of digester systems.) As discussed at proposal, anaerobic digesters offer certain benefits to CAFOs (e.g., energy recovery, control of methane emissions), but they would not necessarily lead to significant reductions for many of the pollutants discharged to surface waters from CAFOs. Mandating the use of anaerobic digesters could divert resources from or complicate the installation of other technologies that can achieve even better performance. Further, use of an anaerobic digester does not eliminate the need for liquid impoundments to store dairy parlor water and barn flush water and to capture storm water runoff from the open areas at the dairy. Digesters do not necessarily reduce the nutrients in animal wastes. Most of the phosphorus removed from the effluent is concentrated in the digested solids, which are still subject to land application requirements. Similarly, metals present in the animal waste are not reduced and remain in the digester effluent and solids.

Although the ELG requirements in this rule are not specifically designed to reduce the pathogens in animal wastes, today's rule may achieve some reductions of pathogens in CAFO discharges by applying manure at rates that ensure appropriate agricultural utilization of nutrient and establishing setbacks or buffers where manure, litter, and other process wastewater are not applied. Pathogen die-off can also occur during the period manure is stored prior to land application, and further die-off of pathogens is expected to occur when the animal waste is exposed to sunlight following application to land. Because of the presence of pathogens in animal wastes and the potential risk they pose to human health and the environment, EPA continues to be concerned about the potential for transmission of pathogenic disease from CAFOs. This

concern is substantiated by information in the rulemaking record regarding instances of foodborne and waterborne disease outbreaks. However, based on the current state of the science, a quantified link has not been established between pathogenic diseases outbreaks and CAFO discharges and runoff. EPA has a number of research efforts underway to better understand and reduce the environmental impact resulting from the discharge and runoff of manure from these facilities. This research will help inform future decisions to address pathogens in CAFO discharges.

*d. What are the production area requirements for Large swine, poultry, and veal CAFOs (Part 412, Subpart D)?* (1) Existing Large swine, poultry and veal CAFOs. Today's final rule establishes ELGs for existing swine, poultry, and veal operations that are the same as those described above in Section IV.C.2.c. for beef and dairy operations. Consistent with the 1974 ELG regulation, EPA is continuing to establish BMPs for the CAFO production area, which includes the animal confinement areas and the manure storage and containment areas. These BPT, BCT, and BAT requirements are being established for the reasons discussed in this section, and consistent with the factors for consideration under the Clean Water Act, as discussed in Sections II.A.2 and IV.C.2.f of this preamble.

EPA is retaining the current effluent guidelines that apply to swine, poultry, and veal operations, and adding language extending these requirements to immature swine, and to chicken operations with dry litter management practices. These regulations, which are codified at 40 CFR Part 412, Subpart D, prohibit the discharge of manure, litter, and other process wastewater, except for allowing discharge when rainfall causes an overflow from a facility designed, maintained, and operated to contain all manure, litter, and process wastewaters, including storm water, plus runoff from the 25-year, 24-hour rainfall event. In addition, today's rule requires Large CAFOs to comply with certain BMPs described above in Section IV.C.2.c.

*What did EPA propose?* EPA proposed to establish production area effluent guidelines for existing swine, poultry, and veal operations that would prohibit all discharges from CAFO production areas. Under the proposed rule, existing operations subject to the requirements of Part 412, Subpart D, would not have been allowed to discharge any manure, litter, or other process wastewaters, including the overflow of manure and other process