

further stated that EPA should use manure phosphorus as the basis for setting thresholds for such operations.

*Rationale. Why is EPA including chicken operations with dry manure and litter handling systems in today's regulations?* For some time, poultry operators have been replacing continuous overflow watering systems by more efficient water conserving methods (e.g., on-demand watering). Given this trend, liquid manure systems are used at approximately 25 percent of layer operations and are not generally used at broiler operations. As a result, most chicken operations are not covered by the existing regulations.

For the reasons articulated in the proposed rulemaking (66 FR 3010), and after carefully reviewing the public comments, EPA has determined that including chicken operations with dry manure handling systems is justified to protect water quality. EPA believes that dry poultry operations continue to contaminate surface water and ground water because of rainfall coming in contact with dry manure and litter that is stacked in exposed areas; accidental spills such as from egg-wash facilities and drinking water lines; improper handling of large numbers of mortalities; and improper land application of litter. In addition, included within the coverage of the CAFO regulations are other sectors that use dry technologies, such as ducks, turkeys, and certain swine, beef, and dairy operations using total confinement housing. Inclusion of dry poultry operations is consistent with the regulation of both wet and dry operations within these other animal sectors.

*Why were the size thresholds selected?* EPA believes that it is appropriate to distinguish between potential risk of discharge posed by wet versus dry handling systems, using the pollutant of most concern, i.e. phosphorus, for establishing regulatory thresholds. For nitrogen and BOD, the levels for broilers would result in similar thresholds varying only by 1% to 3%. EPA agrees with commenters who asserted that EPA should determine the chicken threshold values by evaluating phosphorus content in the manure on an annual basis, which takes into account that phosphorus production does not continue during the periods of the year when no manure is generated (i.e., clean out time between flocks when no broilers are present). Traditionally, layers were kept through one year of egg production and sold for meat at 18 to 20 months of age (see Section 4 of the *Technical Development Document*). Depending on the relative

price of eggs to hens, it has become increasingly common to recycle layers through more than one year of production. Flock recycling consists of stopping the flock's egg production, allowing a suitable rest period, and then bringing the flock back into production. The entire process is known as "force-molting". Some producers now keep the birds through two or three complete cycles of egg production. Laying hens are now typically kept for 94 weeks of production. Since layers will continue to produce manure throughout the year the daily phosphorus levels were used in setting thresholds for laying hens. Therefore, EPA is establishing different thresholds based first on wet versus dry manure systems and second on the broad type of poultry, e.g., chickens for meat (broilers) and chickens for eggs (layers) based on phosphorus content of manure generation.

*b. Swine Nurseries and Heifer Operations.* Today's rule regulates swine nurseries and heifer operations that are defined as CAFOs. Specifically, the Agency has adopted a Large CAFO threshold of 10,000 or more immature swine (i.e. weighing less than 55 pounds) and a Medium CAFO threshold of 3,000 to 9,999 immature swine. For heifers, EPA has adopted a Large CAFO threshold of 1,000 head or more and a Medium CAFO threshold of 300 to 999 head.

*What did EPA propose?* EPA is adopting what was proposed for these animal types in a three-tier structure.

*What were the key comments?* While a majority of commenters supported the inclusion of immature swine and dairy cattle in the proposed rule, a number of commenters opposed this change, and preferred to retain the exemption for immature animals. A number of commenters noted that many States already have programs at least as strict as the one EPA is proposing, and that States should be allowed the flexibility to determine if including operations with immature animals would improve water quality.

*Rationale.* Immature swine were not a concern in the past because they were usually part of operations that included mature animals and, therefore, their manure was included in the permit requirements of the CAFO. However, in recent years, these swine operations have become increasingly specialized, increasing the number of large, separate nurseries where only immature swine are raised.

Under the three-phase production pyramids used by most large swine operations, specialized farrowing operations that house only sows and piglets until weaned represent the first

phase of raising swine. The weaned piglets are transferred to a nursery at a separate location until they reach about 55 to 60 pounds, at which time they are transferred to a grow-finish facility at another site. EPA's thresholds for swine weighing less than 55 lbs were established on the basis of the average phosphorus excreted from immature swine in comparison to the average phosphorus excreted from swine weighing more than 55 pounds. (Refer to the *Technical Development Document* for more details).

For dairies, immature heifers are often removed to a separate location until they reach maturity. EPA data indicate that some of these animals are confined, some are pastured, and some move back and forth between confinement and pasture. The previous CAFO definition considered only the mature milking cows in determining whether an operation was a CAFO and did not address operations that separately confine immature heifers. EPA believes that these separately confined heifer operations should be included in the regulatory definition of a CAFO because they may generate as much manure as a CAFO dairy given that the animals are maintained until fully grown, and they confine the animals in a manner very similar to CAFO beef feedlots.

EPA agrees that the number of immature animals kept in confinement with mature animals varies greatly and should not be the basis for determining whether an AFO is a CAFO. In situations where immature animals (e.g. heifers and swine) are confined with mature animals, the immature animals are not counted for purposes of determining whether an AFO is defined as a CAFO based on the number of mature animals. Once an AFO is defined as a CAFO, based on any of the threshold values provided in table 4.1, manure and process wastewater generated by all immature and mature animals in confinement would be subject to NPDES permit requirements.

*c. Horses.* Today's rule retains the animal number thresholds for defining which horse operations are CAFOs. AFOs with 500 or more horses are defined as Large CAFOs, AFOs with 150 to 499 horses are defined as Medium CAFOs under certain conditions (see § 122.23(b)(7)), and AFOs with fewer than 150 horses are Small CAFOs only if designated in accordance with § 122.23(c).

*What did EPA propose?* In the January, 2001 proposed rule, EPA did not consider changing the CAFO definition thresholds for horses. As a result of the comments and data received on the proposal, EPA