

For species produced, EPA estimates that 78 percent of the surveyed population grow trout and/or salmon, 11 percent grow catfish, 3 percent grow tilapia, 2 percent grow striped/hybrid bass, 1 percent grow shrimp, 5 percent grow "other" species such as walleye, sturgeon, sunfish, ornamentals, baitfish. We estimate that about 16 percent of the population produce more than one species.

For geographic regions, EPA found that the surveyed population is widely distributed throughout the United States. We estimate that 10 percent of the population are located in Region 1, 1 percent in Region 2, 6 percent in Region 3, 16 percent in Region 4, 13 percent in Region 5, 8 percent in Region 6, 5 percent in Region 7, 11 percent in Region 8, 11 percent in Region 9, and 19 percent in Region 10.

TABLE II.D.2.—PRODUCTION SYSTEMS

Production system	Percentage of facilities
Flow-through .....	70
Recirculating .....	3
Ponds .....	11
Net Pens .....	2
Multiple production systems .....	14

TABLE II.D.3.—OWNERSHIP TYPE

Ownership type	Percentage of facilities
State governments .....	34
Federal facilities .....	14
Academic facilities .....	1
Tribal facilities .....	2
Private non-profit .....	1
Private commercial .....	48

TABLE II.D.4.—SPECIES IDENTIFIED AT FACILITY IN SURVEY SAMPLE

Species*	Percentage of facilities
Trout/Salmon .....	78
Catfish .....	11
Tilapia .....	3
Hybrid Striped Bass .....	2
Shrimp .....	1
Other (walleye, sturgeon, sunfish, etc.) .....	5

\*Based on predominant species, facility may produce more than one species.

TABLE II.D.5.—GEOGRAPHICAL DISTRIBUTION

EPA region	Percentage of facilities
1 (CT, ME, MA, NH, RI, VT) .....	10

TABLE II.D.5.—GEOGRAPHICAL DISTRIBUTION—Continued

EPA region	Percentage of facilities
2 (NJ, NY, PR, VI) .....	1
3 (DE, DC, MD, PA, VA, WV) .....	6
4 (AL, FL, GA, KY, MS, NC, SC, TN) .....	16
5 (IL, IN, MI, OH, WI) .....	13
6 (AR, LA, NM, OK, TX) .....	8
7 (IA, KS, MO, NE) .....	5
8 (CO, MT, ND, SD, UT, WY) .....	11
9 (AZ, CA, HI, NV, AS, GU) .....	11
10 (AK, ID, OR, WA) .....	19

Although EPA received and used responses from 205 surveys for various analyses, we use only a subset to estimate national CAAP costs for the industry sectors affected by the proposed rule. From the cost analyses, we excluded eight responses from facilities that discharge indirectly or do not discharge, because these facilities are not affected by the rule. For salmon net pens, the detailed questionnaire responses confirmed our assumptions at proposal (*i.e.*, no costs would be incurred in eight net pen facilities as a result of the proposed option). EPA will continue to evaluate cost and impacts for other net pen systems. We excluded pond data from the costs analyses because ponds were not within the scope of the proposed rule. However, EPA is using the pond information from 33 detailed questionnaires to validate assumptions on the applicability of the proposed regulation to ponds. EPA generated cost and loadings information for 13 facilities, but we excluded these from the economic analysis because the facilities produced less than 20,000 pounds of aquatic animals per year. As a result of these exclusions, EPA used the data from 143 facilities in its costs and loading analyses to evaluate economic impacts presented in this notice.

#### *E. Literature Searches and Other Information Collection Activities*

EPA continued to collect technical, scientific, and regulatory information from many sources on key issues about the CAAP industry, including those described in the preceding subsections of Section II of today's notice. In some cases, EPA started targeted literature searches or other types of investigations to assess issues raised by stakeholders and commenters (*see* Section III for a summary of major issues raised in comments). Several of these efforts are:

#### 1. Net Pens

EPA received several comments about the relative significance of environmental impacts from net pen operations, as well as whether or not there is a need to establish requirements to mitigate environmental impacts (*see* Section III.B.2. of today's notice). To address these comments, EPA is updating its literature evaluation for net pen impacts and current practices and requirements. We placed a draft preliminary reference list in the public record (DCN 62399). EPA is examining new and re-examining previously available literature on the environmental impacts of discharges of solids, nutrients, BOD, and drugs and chemicals from net pen facilities. This updated literature search will examine existing permit requirements and other practices used by net pen facilities. This new information will improve EPA's understanding of environmental concerns with net pen systems and the actual impacts of present-day operations in the U.S., in light of existing State requirements and industry practices. However, current EPA analysis indicates that practices to minimize solids released at most net pen facilities are at least as stringent as the requirements we are considering. EPA does not expect further reductions in solids and pollutants associated with solids from net pens to result from this rule.

#### 2. Chemicals, Including Therapeutants, Used at CAAP Facilities

EPA also received comments about the application of chemicals, including therapeutic substances, at CAAP facilities. These comments address:

- Antibiotics (residues in fish, antibiotic resistance, estimated volumes of antibiotic use in the U.S. CAAP industry).
- Regulatory authority and need for action (asserting that EPA should or should not include requirements about the use of chemicals, including therapeutants, at CAAP facilities; that FDA, American Veterinary Medical Association, and other entities' requirements or guidelines already ensure environmental safety of therapeutant applications).
- Chemicals in fish feed (including color additives).

These comments are further discussed in Section III.C. In some cases, supporting materials and referenced literature were also provided to EPA.

To address these comments, EPA is updating its literature search about environmental fate and effects studies of chemicals/therapeutic substances