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The Effects of Regulations on the U.S. Salmonid Industry: Pennsylvania Findings*

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A national survey of the U.S. salmonid (trout, salmon, arctic char) industry was conducted in 2017–2018 to measure the farm-level costs of regulations. This fact sheet reports findings from the state of Pennsylvania (Figure 1).

The total statewide on-farm regulatory cost burden for Pennsylvania was $169,885 per year (adjusted for coverage). Per farm, annual regulatory costs averaged $12,013 and $0.14 per pound. The greatest percentage of the increased regulatory costs on farms was related to manpower (45%), followed closely by direct costs, which included testing for fish health certificates and effluent discharges (42%). The cost of permits constituted 12% of the regulatory cost burden (Table 1).

In addition to the increased on-farm costs, regulatory actions resulted in lost sales revenue that included: $392,000 per year in lost market sales, $270,000 per year in lost revenue from reduced production capacity, and $4,000 per year in lost revenue due to thwarted expansion attempts. Per farm, lost market sales were $27,964 per year, the value of lost production averaged $19,286 per year, and the value of lost revenue due to thwarted expansion attempts averaged $313 per year. Regulatory costs on farms constituted 2% of total costs on Pennsylvania salmonid farms and lost sales revenue 13% of total costs.

Respondents reported that the most problematic regulations were those associated with fish health

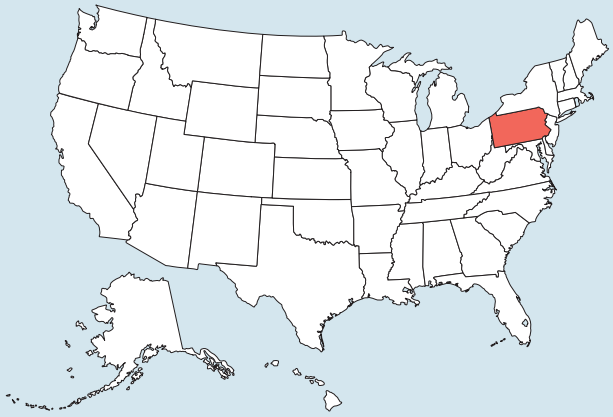

Figure 1. State surveyed

The total on-farm regulatory cost burden for Pennsylvania was $169,885 per year.

Table 1. Pennsylvania on-farm regulatory costs

Cost category	% of total regulatory costs
Direct costs (testing, etc.)	42%
Manpower	45%
Farm-level changes	1%
Permits/licenses	12%

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testing required to obtain certificates for interstate transport to markets, followed by EPA effluent discharge regulations, the U.S. Food and Drug Administration Veterinary Feed Directive, employment-related regulations, transportation (U.S. Department of Transportation), other state regulations, the total regulatory burden, and county and local regulations (Figure 2). In terms of costs, county and local regulations comprised the greatest percentage (48%), followed by effluent discharge regulations (28%) and fish health testing to obtain certificates for interstate transport (24%) (Figure 3).

In summary, on average, the regulatory costs on trout farms in Pennsylvania were less per farm, less per pound of fish, and less as a percentage of total costs than the national average (Table 2). Lost revenue as a percentage of total costs in Pennsylvania was also less than that at the national level. Pennsylvania trout farms tend to be somewhat smaller than those in other states. Many supply recreational fishing markets within the state, while those who sell out of state incur greater regulatory costs associated with interstate transportation.

Study results showed that the regulatory cost burden on the U.S. salmonid industry has increased farm costs substantially and constrained the industry's ability to increase product supply to meet strong market demand, which is being met by increasing trout and salmon imports. Innovative regulatory monitoring and compliance frameworks that reduce the on-farm regulatory cost burden are needed. The types of regulatory reforms with potential to reduce regulatory costs in Pennsylvania include: reduced frequency of testing for effluent discharge and fish health certificates, adoption of uniform fish health testing standards, adoption of risk-based approaches to environmental management, and development of clear appeals processes for aquaculture farmers (Table 3).

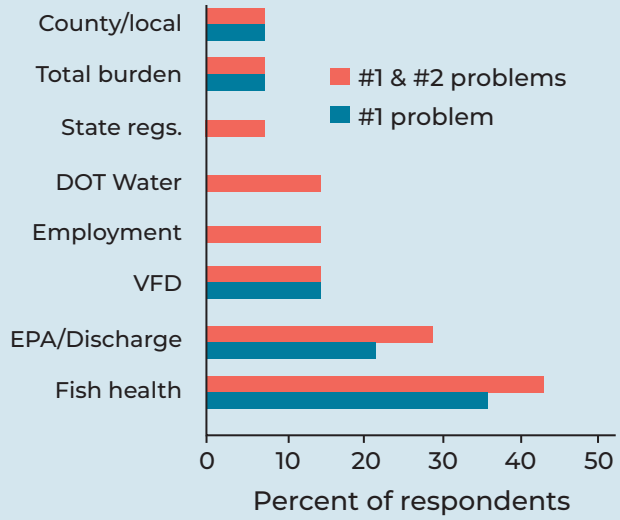

Figure 2. Most problematic regulations in Pennsylvania

In summary, the regulatory costs on salmonid farms in Pennsylvania cost less, on average, per farm, less per pound of fish, and less as a percentage of total costs than the national average.

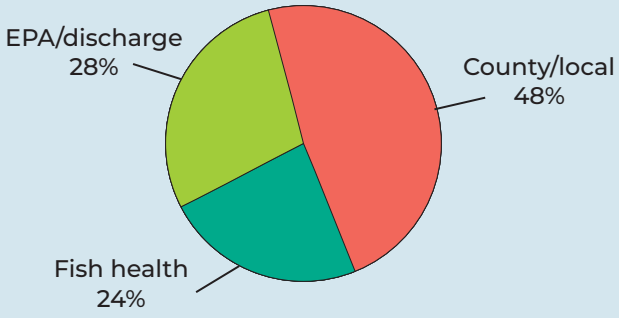

Figure 3. Types of regulations in Pennsylvania: percent of total regulatory costs

Table 2. Summary of national and Pennsylvania study results

Regulatory burdens and impacts	National findings	Pennsylvania
BURDEN		
Total national on-farm regulatory cost burden	$16.1 million/year	$169,885/year
Per farm average regulatory cost	$150,506/farm	$12,013/farm
Average regulatory cost per pound of production*	$1.23/pound	$0.14/pound
Percent regulatory costs of total farm costs	12%	2%
IMPACT		
Lost market sales	$7.1 million/year	$392,000/year
Lost revenue from reduced production	$5.3 million/year	$270,000/year
Estimated lost revenue due to thwarted expansion attempts	$40.1 million/year	$4,000/year
Percent lost revenue sales of total costs	28%	13%

* Averaged by farm

Table 3. Regulatory reforms with potential to reduce regulatory costs

Regulatory reforms

• Reduce regulatory redundancy
• For farms with history of good performance:
  ◦ Reduce frequency of effluent testing
  ◦ Reduce frequency of fish health testing
• Adopt uniform fish health testing standards
• Develop clear appeal procedures for farmers
• Adopt risk-based approaches to environmental management

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