

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

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The U.S. salmonid (trout, salmon, arctic char) industry was surveyed in 2017–2018 to measure the farm-level costs of regulations. Salmonid producers in the 17 top-producing states were interviewed (Figure 1). The survey captured 94% of national production, with a response rate of 63% that represented all salmonid farm sizes.

The total national on-farm regulatory cost burden was \$16.1 million per year. Per farm, annual regulatory costs averaged \$150,506 and \$1.23 per pound. The majority of the increased regulatory costs on farms were related to direct costs that included testing for fish health certificates and effluent discharges (68%). Increased manpower costs were 23% of the regulatory cost burden, while permits constituted only 2% of the regulatory cost burden (Table 1)

In addition to the increased on-farm costs, regulatory actions resulted in lost sales revenue that included: \$7.1 million per year in lost market sales, \$5.3 million per year in lost revenue from reduced production capacity, and an estimated \$40.1 million per year of lost sales due to thwarted expansion attempts. Per farm, lost market sales were \$66,274 per year, the value of lost production averaged \$49,064 per year, and the value of lost sales from thwarted expansion attempts averaged \$375,459 per year. Regulatory costs on farms constituted 12% of total costs on U.S. salmonid farms and lost sales revenue 28% of total costs.

Respondents reported that the most problematic regulations were those associated with fish health certificates for interstate transport and those associated with discharge permits issued by EPA and the designated state enforcement agencies, followed by state regulations,

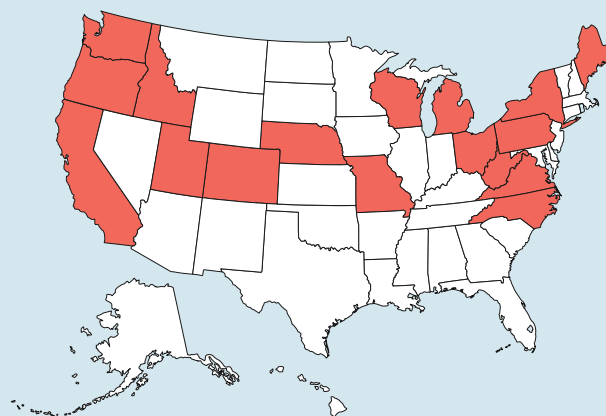


Figure 1. States surveyed

The total national on-farm regulatory cost burden was \$16.1 million per year.

Table 1. National on-farm regulatory costs

Cost category	% of total regulatory costs
Direct costs (testing, etc.)	68%
Manpower	23%
Farm-level changes	7%
Permits/licenses	2%

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processing, U.S. Food and Drug Administration Veterinary Feed Directive, transportation (Department of Transportation), the Lacey Act (enforced by the U. S. Fish and Wildlife Service), the total regulatory burden, county and local regulations, bird depredation permits (U.S. Fish and Wildlife Service), water access, other federal regulations, and employment-related regulations (Figure 2).

In terms of costs, effluent discharge regulations and associated testing costs comprised the greatest percent of total regulatory costs (62%), followed by county and local regulations (26%), fish health certificates for interstate transport (7%), water access (4%), and food safety (1%) (Figure 3). Small-scale producers were found to be disproportionately affected by regulatory costs (Figure 4). Given that the majority of regulatory costs identified in the

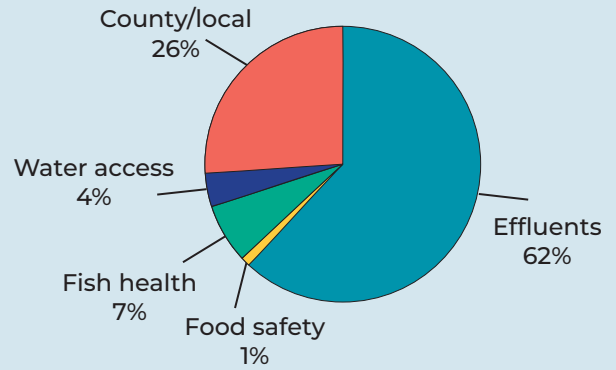


Figure 3. Types of regulations: percent of total regulatory costs

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.

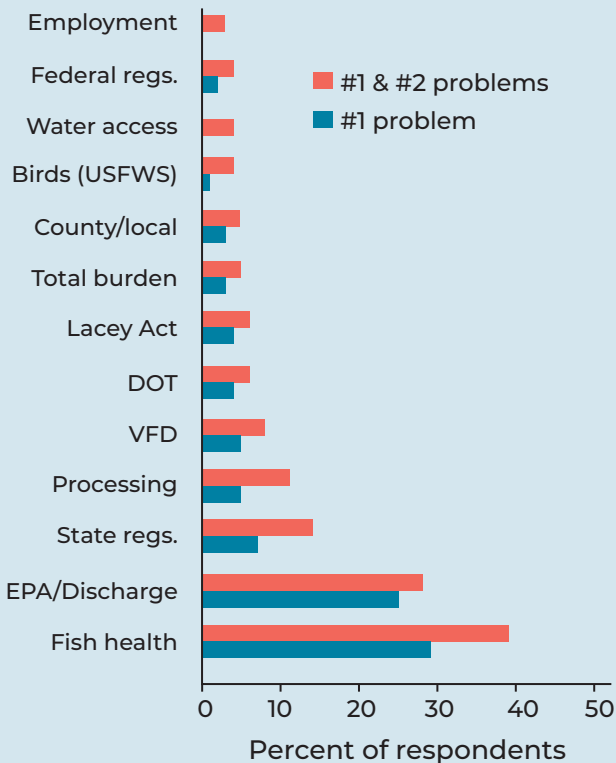


Figure 2. Most problematic regulations

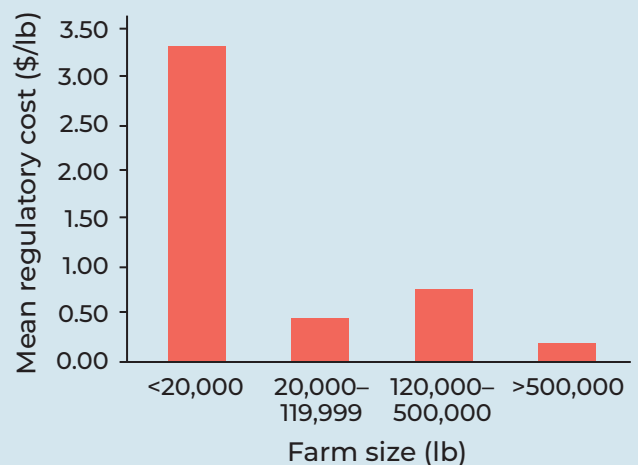


Figure 4. Average regulatory cost by farm size (\$/lb)

study were fixed costs, smaller producers had to spread these costs over much smaller production volumes, resulting in a greater burden.

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. About half of the U.S. supply of trout products is from imports, resulting in a 2018 trade deficit of \$140,218,834 (Table 2).

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 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).

Table 2. Summary of national study results

Regulatory burdens and impacts	National findings
BURDEN	
Total national on-farm regulatory cost burden	\$16.1 million/year
Per farm average regulatory cost	\$150,506/farm
Average regulatory cost per pound of production*	\$1.23/pound
Percent regulatory costs of total farm costs	12%
IMPACT	
Lost market sales	\$7.1 million/year
Lost revenue from reduced production	\$5.3 million/year
Estimated lost revenue due to thwarted expansion attempts	\$40.1 million/year
Percent lost revenue sales of total costs	28%
2018 trout imports trade deficit to meet U.S. demand	-\$140,218,834
* Averaged by farm	

Table 3. Regulatory reforms with potential to reduce regulatory costs

Regulatory reforms
<ul style="list-style-type: none"> • Reduce regulatory redundancy • For farms with history of good performance: <ul style="list-style-type: none"> ◦ 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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