

The Effects of Regulations on the U.S. Salmonid Industry: North Carolina 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 North Carolina (Figure 1).

The total statewide on-farm regulatory cost burden for North Carolina was \$966,940 per year (adjusted for coverage). Per farm, annual regulatory costs averaged \$87,025 and \$0.48 per pound. The majority of the increased regulatory costs on farms were related to farm-level changes that required purchases of additional equipment (57%). Increased manpower costs were 28% of the regulatory cost burden, the cost of testing for effluent discharge permits and fish health was 14%, while the cost of permits constituted only 1% of the regulatory cost burden (Table 1).

In addition to the increased on-farm costs, regulatory actions resulted in lost sales revenues that included: \$100,000 per year in lost market sales, \$738,000 per year in lost revenue from reduced production capacity, and an estimated \$22.5 million per year of lost sales due to thwarted attempts at expansion. Per farm, lost market sales were \$9,091 per year, the value of lost production averaged \$67,076 per year, and the lost sales revenue due to thwarted expansion averaged \$22.5 million. Regulatory costs on farms constituted 6% of total costs on North Carolina salmonid farms and lost sales revenue 38% of total costs.

Respondents reported that the most problematic regulations were those associated with EPA effluent

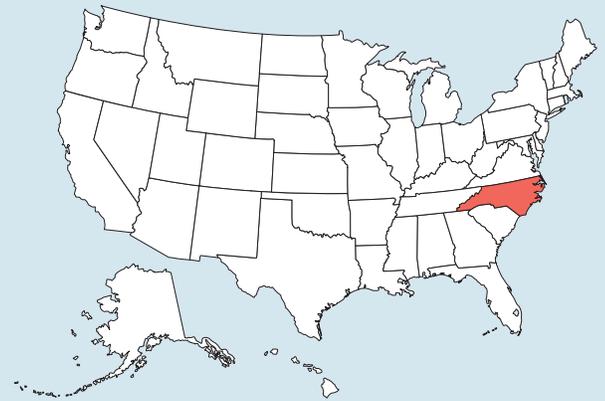


Figure 1. State surveyed

The total statewide on-farm regulatory cost burden for North Carolina was \$966,940 per year.

Table 1. North Carolina on-farm regulatory costs

Cost category	% of total regulatory costs
Direct costs (testing, etc.)	14%
Manpower	28%
Farm-level changes	57%
Permits/licenses	1%

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discharge permits, followed by other federal regulations, testing for fish health certificates for interstate transport, the total regulatory burden, county and local regulations, and processing (Figure 2). In terms of costs, EPA effluent discharge permit regulations were the most costly (85%), followed by county and local regulations (9%), water access (5%), and less than 1% for food safety and fish health testing required for certificates for interstate transport (Figure 3).

In summary, the regulatory costs on salmonid farms in North Carolina cost less per farm, on average, and resulted in a lower average cost per pound of fish and a lower percentage of total costs than the national average (Table 2). Lost revenue as a percentage of total costs was substantially greater than the national average. North Carolina is one of the leading trout-producing states and has benefitted from lower-than-national regulatory costs. The magnitude of the lost sales revenue in North Carolina, however, provides evidence that farms are being constrained by the regulatory framework from meeting growing demand for locally raised trout in the U.S. in spite of abundant water resources.

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 currently 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 North Carolina 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).

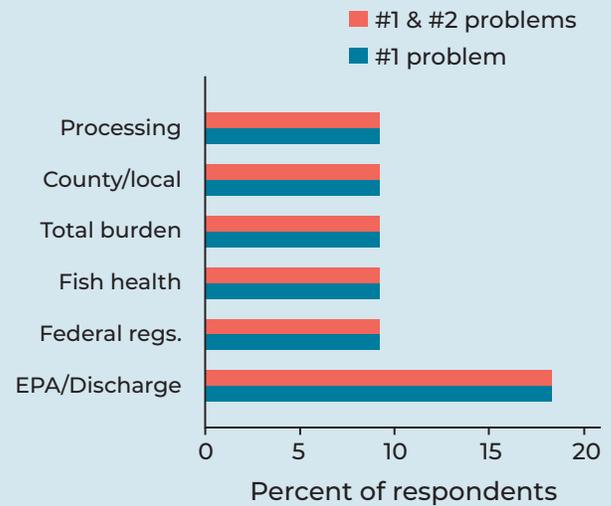


Figure 2. Most problematic regulations in North Carolina

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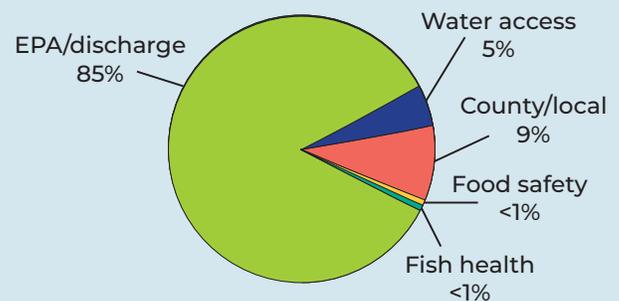


Figure 3. Types of regulations in North Carolina: percent of total regulatory costs

Table 2. Summary of national and North Carolina study results

Regulatory burdens and impacts	National findings	North Carolina
BURDEN		
Total national on-farm regulatory cost burden	\$16.1 million/year	\$966,940/year
Per farm average regulatory cost	\$150,506/farm	\$87,025/farm
Average regulatory cost per pound of production*	\$1.23/pound	\$0.48/pound
Percent regulatory costs of total farm costs	12%	6%
IMPACT		
Lost market sales	\$7.1 million/year	\$100,000/year
Lost revenue from reduced production	\$5.3 million/year	\$738,000/year
Estimated lost revenue due to thwarted expansion attempts	\$40.1 million/year	\$22.5 million/year
Percent lost revenue sales of total costs	28%	38%
* 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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