

Office of Regulatory Management
Economic Review Form

Agency name	Board of Wildlife Resources
Virginia Administrative Code (VAC) Chapter citation(s)	4 VAC 15-360
VAC Chapter title(s)	Fish: Aquatic Invertebrates, Amphibians, Reptiles, and Nongame Fish
Action title	Requirements for crayfish collection; minnow and chub permits
Date this document prepared	October 11, 2022

Cost Benefit Analysis

Table 1a must be completed for all actions. Tables 1b and 1c must be completed for actions (or portions thereof) where the agency is exercising discretion, including those where some of the changes are mandated by state or federal law or regulation. Tables 1b and 1c are not needed if **all** changes are mandated, and the agency is not exercising any discretion. In that case, enter a statement to that effect.

- (1) Direct Costs & Benefits: Identify all specific, direct economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (A direct impact is one that affects entities regulated by the agency and which directly results from the regulatory change itself, without any intervening steps or effects. For example, the direct impact of a regulatory fee change is the change in costs for these regulated entities.) When describing a particular economic impact, specify which new requirement or change in requirement creates the anticipated economic impact. Keep in mind that this is the proposed change versus the status quo. One bullet has been provided, add additional bullets as needed.
- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of total (overall) direct costs described above.
 - (b) Enter estimated dollar value of total (overall) direct benefits described above.
 - (c) Enter the present value of the direct costs based on the worksheet.
 - (d) Enter the present value of the direct benefits based on the worksheet.
- (3) Benefits-Costs Ratio: Calculate d divided by c OR enter it from the worksheet.
- (4) Net Benefit: Calculate d minus c OR enter it from the worksheet.
- (5) Indirect Costs & Benefits: Identify all specific, indirect economic impacts (costs and/or benefits), anticipated to result from the regulatory change. (An indirect impact is one that results from responses to the regulatory change, but which are not directly required by the regulation. Indirect impacts of a regulatory fee change on regulated entities could include a change in the prices they charge, changes in their operating procedures or employment levels, or decisions to enter or exit the regulated profession or market. Indirect impacts also include responses by other entities that have close economic ties to the regulated entities, such as suppliers or partners.) If there are no indirect costs or benefits, include a specific statement to that effect.

- (6) Information Sources: Describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.
- (7) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Table 1a: Costs and Benefits of the Proposed Changes (Primary Option)

<p>(1) Direct Costs & Benefits</p>	<ul style="list-style-type: none"> <p>• Reducing crayfish possession limit from 50 to 20.</p> <p>Direct Costs: No direct economic cost is believed to be experienced from this change.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from this change.</p> <p>• Requiring crayfish collected for bait to be used in the waterbody that they were collected from.</p> <p>Direct Costs: No direct economic cost is believed to be experienced from this change.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from this change.</p> <p>• Not allowing take of crayfish in the Big Sandy River Basin.</p> <p>Direct Costs: No direct economic cost is believed to be experienced from this change.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from this change.</p> <p>• Not allowing take of minnows and chubs for sale</p> <p>Direct Costs: Minimal direct economic cost is believed to be experienced from this change, as only one of six previous permit holders reported catch of minnows or chubs for sale.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from this change.</p>
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(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) Indeterminate	(c) Indeterminate	
Direct Benefits	(b) Indeterminate	(d) Indeterminate	
(3) Benefits-Costs Ratio	Indeterminate	(4) Net Benefit	Indeterminate
(5) Indirect Costs & Benefits	Are there any indirect costs to the economy from this? What about benefits? These actions are unlikely to have indirect costs, as it is currently unlawful to sell crayfish in Virginia. As only a single permit holder reported catch of minnows and chubs for sale, it is unlikely that any bait shop would have been dependent on these catches for business needs, and unlikely that this would contribute to changes in price of bait.		
(6) Information Sources	Department of Wildlife Resources freshwater fisheries management data and permits database		
(7) Optional			

Table 1b: Costs and Benefits under the Status Quo (No change to the regulation)

This table addresses current requirements and the implications of not making any changes. In other words, describe the costs and benefits of maintaining the current regulatory requirements as is.

(1) Direct Costs & Benefits	<ul style="list-style-type: none"> • Reducing crayfish possession limit from 50 to 20. <p>Direct Costs: No direct economic cost is believed to be experienced from the status quo.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from the status quo.</p> <ul style="list-style-type: none"> • Requiring crayfish collected for bait to be used in the waterbody that they were collected from.
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	<p>Direct Costs: No direct economic cost is believed to be experienced from the status quo.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from the status quo.</p> <ul style="list-style-type: none"> • Not allowing take of crayfish in the Big Sandy River Basin. <p>Direct Costs: No direct economic cost is believed to be experienced from the status quo.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from the status quo.</p> <ul style="list-style-type: none"> • Not allowing take of minnows and chubs for sale <p>Direct Costs: No direct economic cost is believed to be experienced from the status quo.</p> <p>Direct Benefits: No direct economic benefit is believed to be experienced from this change.</p>		
(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) Indeterminate	(c) Indeterminate	
Direct Benefits	(b) Indeterminate	(d) Indeterminate	
(3) Benefits-Costs Ratio	Indeterminate	(4) Net Benefit	Indeterminate
(5) Indirect Costs & Benefits	<p>Unlikely to have indirect costs or benefits on bait or tackle shops, as sale of crayfish currently unlawful in Virginia. Unlikely to have indirect costs on guides, as allowances for 20/person for crayfish still allow sufficient possession for use as bait. Unlikely to have indirect cost on purchasers of minnows and chubs, as other alternatives are readily available and only a single permit holder would have supplied any minnow or chubs to the market.</p>		
(6) Information Sources	<p>Department of Wildlife Resources freshwater fisheries management data and permit records</p>		

(7) Optional	
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Table 1c: Costs and Benefits under an Alternative Approach

This table addresses an alternative approach to accomplishing the objectives with different requirements. These alternative approaches may include the use of reasonably available alternatives in lieu of regulation, or information disclosure requirements or performance standards instead of regulatory mandates.

(1) Direct Costs & Benefits	<ul style="list-style-type: none"> <p>• Reducing crayfish possession limit from 50 to 20.</p> <p>Direct Costs: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>Direct Benefits: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>• Requiring crayfish collected for bait to be used in the waterbody that they were collected from.</p> <p>Direct Costs: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>Direct Benefits: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>• Not allowing take of crayfish in the Big Sandy River Basin.</p> <p>Direct Costs: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>Direct Benefits: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>• Not allowing take of minnows and chubs for sale</p> <p>Direct Costs: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p> <p>Direct Benefits: No alternatives other than the change or the status quo are believed to have any alternative economic impacts.</p>
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(2) Quantitative Factors	Estimated Dollar Amount	Present Value	
Direct Costs	(a) Indeterminate	(c) Indeterminate	
Direct Benefits	(b) Indeterminate	(d) Indeterminate	
(3) Benefits-Costs Ratio	Indeterminate	(4) Net Benefit	Indeterminate
(5) Indirect Costs & Benefits	Alternative approaches are unlikely to have significant costs to users. A few anglers may be inconvenienced by not being able to capture crayfish off site for use in another water body, but these are offset by the reduced risk of transfer of an invasive crayfish or a crayfish pathogen, which could upset the aquatic ecosystem and harm valuable sportfisheries.		
(6) Information Sources	Department of Wildlife Resources freshwater fisheries management data		
(7) Optional			

Impact on Local Partners

- (1) Describe the direct costs and benefits (as defined on page 1) for local partners in terms of real monetary costs and FTEs. Local partners include local or tribal governments, school divisions, or other local or regional authorities, boards, or commissions. If local partners are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of total (overall) direct costs described above.
 - (b) Enter estimated dollar value of total (overall) direct benefits described above.
- (3) Indirect Costs & Benefits: Describe any indirect benefits and costs (as defined on page 1) for local partners that are associated with all significant changes. If there are no indirect costs or benefits, include a specific statement to that effect.
- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why they are not.

- (5) Assistance: Identify the amount and source of assistance provided for compliance in both funding and training or other technical implementation assistance.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 2: Impact on Local Partners

(1) Direct Costs & Benefits	Local partners are not anticipated to be affected by these regulatory changes.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) N/A
Direct Benefits	(b) N/A
(3) Indirect Costs & Benefits	N/A
(4) Information Sources	Department of Wildlife Resources freshwater fisheries management data
(5) Assistance	N/A
(6) Optional	

Economic Impacts on Families

- (1) Describe the direct costs and benefits (as defined on page 1) to a typical family of three (average family size in Virginia according to the U. S. Census) arising from any proposed regulatory changes that would affect the costs of food, energy, housing, transportation, healthcare, and education. If families are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of direct costs.
 - (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe any indirect costs and benefits (as defined on page 1) to a typical family of three that are most likely to result from the proposed changes.

- (4) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (5) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 3: Impact on Families

(1) Direct Costs & Benefits	Families are not anticipated to be affected directly by these regulatory changes.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) N/A
Direct Benefits	(b) N/A
(3) Indirect Costs & Benefits	No indirect costs and benefits are anticipated.
(4) Information Sources	Department of Wildlife Resources freshwater fisheries management data
(5) Optional	

Impacts on Small Businesses

- (1) Describe the direct costs and benefits (as defined on page 1) for small businesses. For purposes of this analysis, “small business” means the same as that term is defined in § 2.2-4007.1. If small businesses are not affected, include a specific statement to that effect and a brief explanation of the rationale.
- (2) Quantitative Factors:
 - (a) Enter estimated dollar value of direct costs.
 - (b) Enter estimated dollar value of direct benefits.
- (3) Indirect Costs & Benefits: Describe the indirect benefits and costs (as defined on page 1) for small businesses that are most likely to result from the proposed changes.
- (4) Alternatives: Add a qualitative discussion of any equally effective alternatives that would make the regulatory burden on small business more equitable compared to other affected business sectors, and how those alternatives were identified.

- (5) Information Sources: describe the sources of information used to determine the benefits and costs, including the source of the Quantitative Factors. If dollar amounts are not available, indicate why not.
- (6) Optional: Use this space to add any further information regarding the data provided in this table, including calculations, qualitative assessments, etc.

Note: If any of the above information was included in Table 1, use the same information here.

Table 4: Impact on Small Businesses

(1) Direct Costs & Benefits	No direct impacts on small businesses are anticipated.
(2) Quantitative Factors	Estimated Dollar Amount
Direct Costs	(a) Indeterminate
Direct Benefits	(b) Indeterminate
(3) Indirect Costs & Benefits	Indeterminate
(4) Alternatives	Indeterminate
(5) Information Sources	Indeterminate
(6) Optional	

Changes to Number of Regulatory Requirements

For each individual VAC Chapter amended, repealed, or promulgated by this regulatory action, list (a) the initial requirement count, (b) the count of requirements that this regulatory package is adding, (c) the count of requirements that this regulatory package is reducing, (d) the net change in the number of requirements. This count should be based upon the text as written when this stage was presented for executive branch review. Five rows have been provided, add or delete rows as needed.

Table 5: Total Number of Requirements

	Number of Requirements
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Chapter number	Initial Count	Additions	Subtractions	Net Change
4 VAC 15-360-10	7 (possession limits and liberation requirements for invertebrates)	2	0	2
4 VAC 15-360-20	3 (permit requirements for capture of minnows and chubs for sale)	0	3	-3