DEPARTMENT OF
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State of Washington

Small Business Economic Impact Statement

Chapter 173-518 WAC
Water Resources Management Program for the Dungeness Portion of the Elwha-Dungeness Water Resources Inventory Area (WRIA) 18

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Water Resources Management Program for the Dungeness Portion of the Elwha-Dungeness Water Resources Inventory Area (WRIA) 18

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Executive Summary

Based on research and analysis required by the Regulatory Fairness Act – RCW 19.85.070 – the Department of Ecology (Ecology) has determined the proposed rule to the Dungeness Watershed rule (Chapter 173-518 WAC) is not likely to have a disproportionate impact on existing small businesses. Therefore, Ecology was not required to include small-business cost-minimizing features in the rule where it is legal and feasible to do so.

A small business is defined as having 50 or fewer employees. Estimated impacts are determined as compared to the existing regulatory environment—the way water would be regulated and used in the absence of the proposed rule.

The existing regulatory environment is called the "baseline" in this document. It includes only existing laws and rules at federal, state, and local levels, and how they would be applied in context.

The proposed rule does not impact existing water users who continue using water for the same purposes in the same amounts. This is true of adjudicated water rights, or water rights based on claims, permits, certificates, and the groundwater permit exemption.[1] Only new uses of water would be required by the rule to meter and to mitigate for the impact of the consumptive use of water. Therefore, the proposed rule cannot have disproportionate impacts on existing small businesses, unless they choose to expand their use of water and not seek water service from a public water system or municipal supplier with adequate capacity.

In the future, however, as the population of the area affected by the proposed rule grows (as is estimated in the Cost-Benefit Analysis, Ecology publication # 12-11-020), new population will likely require new goods and services, as well as new jobs in the area. It is those not-yet-existing businesses (home-based goods and services, domestic water use in independent commercial establishments, small production industry) that may incur compliance costs under the proposed rule, and those costs may be disproportionately large for small businesses.

In the appendices, Ecology has illustrative discussion of the prospective compliance costs to:

- A single business that does not yet exist, but might locate in the Dungeness in the future.
- A Dungeness economy that would grow twice as large as it currently is (and is otherwise identical).

[1] For in-depth discussion of permit-exempt water use, please see the associated Cost-Benefit Analysis (Ecology publication #12-11-020)

Section 1: Introduction and Background

Based on research and analysis required by the Regulatory Fairness Act – RCW 19.85.070 – the Department of Ecology (Ecology) has determined the proposed rule to the Dungeness Watershed rule (Chapter 173-518 WAC) is not likely to have a disproportionate impact on existing small businesses. Therefore, Ecology was not required to include small-business cost-minimizing features in the rule where it is legal and feasible to do so.

This document is intended to be read with the associated Cost-Benefit Analysis (Ecology publication # 12-11-020), which contains more in-depth discussion of the analyses, as well as references and appendices.

A small business is defined as having 50 or fewer employees. Estimated impacts are determined as compared to the existing regulatory environment—the way water would be regulated and used in the absence of the proposed rule.

The existing regulatory environment is called the "baseline" in this document. It includes only existing laws and rules at federal, state, and local levels, and how they would be applied in context.

Section 2: Description of the Proposed Rule

The proposed rule:

- Sets instream flow levels for the Dungeness mainstream, tributaries, and independent drainages.
- Closes subbasins to new surface water withdrawals for at least part (if not all) of the year.
- Requires mitigation of all new groundwater uses, and provides for a water exchange to facilitate mitigation. This includes permitted and permit-exempt uses.
- Requires metering of all new withdrawals. This includes permitted and permit-exempt uses.
- Establishes reservations ("reserves") under RCW 90.54.050(1) for domestic (indoor) use.
- Establishes maximum depletion amounts to limit temporary adverse impacts for non-domestic water use under an approved mitigation plan, and set a limit on total impacts from all new water uses to closed surface waters.
- Establishes maximum allocation amounts for interruptible purposes from high flows from the Dungeness mainstem.
- Includes a provision allowing storage projects for environmental enhancement.

Section 3: No Disproportionate Impacts on Existing Businesses

The proposed rule does not impact existing water users who continue using water for the same purposes in the same amounts. This is true of adjudicated water rights, or water rights based on claims, permits, certificates, and the groundwater permit exemption.[2] Only new uses of water would be required by the rule to meter and to mitigate for the impact of the consumptive use of water. Therefore, the proposed rule cannot have disproportionate impacts on existing small businesses, unless they choose to expand their use of water and not seek water service from a public water system or municipal supplier with adequate capacity.

In the future, however, as the population of the area affected by the proposed rule grows (as is estimated in the Cost-Benefit Analysis, Ecology publication # 12-11-020), new population will likely require new goods and services, as well as new jobs in the area. It is those not-yet-existing businesses (home-based goods and services, domestic water use in independent commercial establishments, small production industry) that may incur compliance costs under the proposed rule, and those costs may be disproportionately large for small businesses.

While Ecology determined that the proposed rule will not likely have disproportionate impacts on existing businesses (and, therefore, cannot discuss compliance costs, mitigation of disproportionate impacts, or jobs impacts in this document), Ecology felt the public would benefit from a discussion in addition to the required Small Business Economic Impact Statement (SBEIS) determinations, addressing not-yet-existing businesses that might locate in the Dungeness watershed in the future.

In the appendices, Ecology has illustrative discussion of the prospective compliance costs to:

- A single business that does not yet exist, but might locate in the Dungeness in the future.
- A Dungeness economy that would grow twice as large as it currently is (and is otherwise identical).

Again, these appended examples are not compliance impacts of the proposed rule on existing businesses in an industry; they illustrate how the proposed rule would impact hypothetical businesses in the future. This illustration is not possible for all proposed rules, but is possible for the proposed Dungeness rule.

[2] For in-depth discussion of permit-exempt water use, please see the associated Cost-Benefit Analysis (Ecology publication #12-11-020).

Appendix A: A Hypothetical Business

For illustrative purposes, Ecology looked at the impacts of the proposed rule on a hypothetical business locating in the Dungeness watershed in the future. Existing businesses would not be affected by the proposed rule, and Ecology was not required to include elements in the proposed rule to reduce impacts to small businesses.

In broad terms, a future business might incur compliance costs under the proposed rule, up to:

- Metering costs of $500.
- Mitigation costs for new permit-exempt water use, of $1,500 – $16,500 per acre-foot (AF), or $1.68 – $18.48 per gallon.[3]

Metering costs would likely be constant, regardless of water use or business size. In that case, the proposed rule's metering requirement would impose disproportionate costs on small new businesses.[4]

Using a report from the Pacific Institute on prospective water-saving measures for businesses, Ecology assumed water use to be linearly related to the number of employees (given an industry). In that case – if water use, cost per unit of water, and number of employees are linearly related – the proposed rule's mitigation requirement would not impose disproportionate costs on small new businesses, by industry. Because different industries would use different amounts of water per employee, however, or have differently sized businesses, the proposed rule's mitigation requirement might have disproportionate impacts across new businesses in different industries.[5]

Overall, looking at a hypothetical business that might locate in the Dungeness in the future, the proposed rule is likely to impose disproportionate impacts on small new businesses (compared to large new businesses). This means that future growth in jobs could be reduced; though job growth would still be positive when a new business moved to the area, it might be smaller job growth than without the proposed rule, if we look at only compliance costs.

Looking beyond compliance costs, in the absence of the proposed rule, litigation could result in reduced development in the watershed. This would be a large reduction in future jobs as well – impacting small and large businesses alike, and perhaps not allowing a new business to locate in the Dungeness at all – and the proposed rule would help to avoid those job and development losses.

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[3] See the Cost-Benefit Analysis for sources of these costs.

[4] Simply, a constant $500 cost divided by a small number of employees means a larger cost per employee at small businesses.

[5] Additionally, water use mitigation is based on CONSUMPTIVE use, which would also vary across industries.

Appendix B: A Hypothetical Economy

For illustrative purposes Ecology has estimated the impacts of the proposed rule on prospective businesses entering a hypothetical affected market in the future. This is intended to illustrate how compliance costs would be distributed in a Dungeness economy that would grow twice as large as it currently is, but was otherwise identical in the types of businesses located there. Existing businesses would not be affected by the proposed rule, and Ecology was not required to include elements in the proposed rule to reduce impacts to small businesses.

A business locating in the Dungeness could incur compliance costs under the proposed rule, up to:

- Metering costs of $500.
- Mitigation costs for new permit-exempt water use, of $1,500 – $16,500 per acre-foot (AF), or $1.68 – $18.48 per gallon.[6]

Ecology assumed the following water uses based on business type by Standard Industrial Classification (SIC) code, and limited to those industry categories that exist in the Dungeness watershed, and which might be impacted by the proposed rule if new businesses locate in the affected area.[7]

Table 1: Water Use per Employee by Industry (gpd/employee)

Category	SIC Code	Water use (gpd/employee)
construction and contractors	15 and 87	250
food and kindred products	20	1,967
textile mill products	22	1,530
apparel and other textile products	23	37
lumber and wood products	24	2,144
furniture and fixtures	25	53
paper and allied products	26	1,000
printing and publishing	27	98
rubber and misc. plastics products	30	120
leather and leather products	31	32
stone, clay, glass, and concrete products	32	1,304
fabricated metal products	34	738
industrial machinery and equipment	35	110
electrical and electronic equipment	36	284
transportation equipment	37	228
instruments and related products	38	142
misc. manufacturing industries	39	86
water transportation	44	994
electric, gas, and sanitary services	49	52
wholesale trade -- nondurable goods	51	390
furniture, home furnishings	57	129

[6] See the Cost-Benefit Analysis for sources of these costs.
[7] Most values based on estimates from Gleick, et al. (2003) for urban water use.

Category	SIC Code	Water use (gpd/employee)
hotels, rooming houses, camps	70	302
personal services	72	1,091
business services	73	162
miscellaneous repair services	75	256
health services	80	155
educational services	82	237
social services	83	341
misc. services	89	178

For various size categories of prospective new business (1 – 4 employees; 5 – 9 employees; 10 – 19 employees; etc.), Ecology then calculated the typical water use by multiplying the minimum number of employees for each SIC (converted to NAICS) by the typical per-employee water use.[8] Ecology determined which industries (by 4-digit NAICS) had employers in eastern Clallam County, in the area affected by the proposed rule, using Washington State Employment Security Department data.

For each NAICS-to-business-size combination that would likely have to comply with the proposed rule, and was in the area regulated by the proposed rule, Ecology calculated per-employee costs of compliance based on the fixed and per-gpd costs discussed at the beginning of this section. These costs would be paid in the first year only. Costs each year after that would be identical per-employee costs within each industry.

Table 2: Average Present Value Cost per Employee by Affected Hypothetical Employer Size

Employees	Low Cost	High Cost
1 to 4	$1,290	$9,191
5 to 9	$469	$4,158
10 to 19	$343	$3,272
20 to 49	$299	$3,036
50 to 99	$18	$102
100 to 249	$517	$709

It is clear from Table 2 that the proposed rule would have disproportionate impacts on small businesses that could prospectively locate in the affected area, as compared to large businesses that could locate there. Small business costs per employee could range from $300 to $9 thousand, while the largest is likely to have a per-employee compliance cost of $18 to $1 thousand.

The largest ten percent of businesses (across all industries) that could likely be impacted would overlap with the set of small businesses, and using the required comparison of the largest ten percent of businesses to small businesses, the respective comparison of cost ranges is $18 – $4,158 and $299 – $9,191. While these ranges overlap, it is still possible that small businesses

[8] In this way – by using the MINIMUM number of employees in each category – Ecology ensured the MAXIMUM number of businesses would fall under the 5,000 gpd usage allowed for domestic and industrial under a permit-exempt groundwater right.

would pay more per employee to comply with the proposed rule than large businesses would. This would only be true in the first year, when constant metering costs are incurred. Again, existing businesses are not likely to be impacted by the proposed rule, but this illustrative example of an economy doubling over time indicates that new small businesses could experience disproportionate costs.

In this example to illustrate the disproportionate impacts of first-year compliance costs, Ecology expects the following industries to be required to comply with the proposed rule.

Table 3: NAICS Codes of Industries Likely to be Impacted by the Proposed Rule in Future

1133	2371	3132	3231	3342	3363	5629	6215	8121
1151	2372	3149	3273	3345	3371	6111	6221	8122
2213	3112	3212	3279	3352	5413	6113	6244	8123
2361	3117	3219	3322	3361	5419	6115	7212	
2362	3121	3221	3339	3362	5622	6214	8111	

To complete this example of possible impacts to businesses that do not currently exist, Ecology used the Washington State Office of Financial Management's Input-Output model to estimate the impact of the proposed rule's compliance costs on jobs across the state.[9]

In this illustrative example, Ecology estimated jobs impacts if the economy of the Dungeness doubled from its current state under the proposed rule. Ecology estimated the proposed rule could result in the loss of 64 – 96 new jobs over 20 years.[10] A doubling economy, however, would still otherwise create 5 thousand to 15 thousand local jobs[11] in industries that might be impacted by the proposed rule if new businesses use new permit-exempt water. If there was no growth in businesses and their permit-exempt water use, there would also be no job losses. Similarly, Ecology does not expect existing businesses to be impacted by the proposed rule, based on their existing water use and behavior (see Section 3).

Looking beyond compliance costs, in the absence of the proposed rule, litigation could result in reduced development in the watershed. This would be a large reduction in future jobs as well – impacting small and large businesses alike, and perhaps not allowing new businesses to locate in the Dungeness at all – and the proposed rule would help to avoid these job and development losses.

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[9] Normally, Ecology would treat payments for water mitigation from one sector to another as a transfer (with negative impacts on one industry, and positive impacts on the other industry), but Ecology could not confidently determine between which industries these transfers would flow, and so calculated jobs impacts based only on treating those payments for mitigation and compliance as losses to the state economy. This means the negative jobs impacts likely overestimate the actual impact on jobs. In reality, as these payments are transfers, net job losses will likely be smaller, and jobs across all industries may actually increase. The jobs impacts presented here are highly conservative overestimates of cost impact.

[10] This value is across the entire state economy; not just in the Dungeness. This value is across all industries in the state. Ecology could not determine how many of these jobs would be in the Dungeness watershed.

[11] This value is in the Dungeness watershed affected by the proposed rule.

References

Washington State Department of Ecology (2012). Preliminary Cost-Benefit and Least Burdensome Alternative Analyses for Chapter 173-518 Water Resources Management Program for the Dungeness Portion of the Elwha-Dungeness Water Resources Inventory Area (WRIA) 18. May 2012. Ecology publication no. 12-11-020.

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Washington State Employment Security Department (2012). Workforce Explorer industry information for likely affected industries. https://fortress.wa.gov/esd/employmentdata/