This appendix contains an examination of the extent to which the analytic results presented in the main report reflect impacts to small entities. The analysis of the effect on small entities is conducted pursuant to the Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996. The appendix also contains an analysis of the effects of the rulemaking on energy markets, as required by Executive Order No. 13211.

POTENTIAL EFFECTS ON SMALL ENTITIES

Under the RFA (as amended by SBREFA), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities. However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.[1] SBREFA amended the RFA to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. Accordingly, the following represents a screening level analysis of the potential effects of CHD on small entities.

Small entities include small businesses, small governments, or small organizations, as defined by the U.S. Small Business Administration (SBA). Size standards for small businesses are established for different types of economic activity or industry within the North American Industry Classification System (NAICS), and are commonly expressed in terms of the number of employees or annual receipts. These size standards were most recently published by the SBA in "Table of Small Business Size Standards Matched to North American Industry Classification System Codes," effective January 28, 2004.[2] Small organizations are defined as "any non-profit enterprise … which is independently owned and operated and not dominant in its field."[3] These may include organizations such as irrigation districts, water associations, public utilities, or agricultural co-ops. A small government is defined as any government serving populations of 50,000 or less, and might include county, city, town, or school district governments.

This analysis is intended to facilitate determination of whether this critical habitat designation potentially affects a "substantial number" of small entities in counties and/or supporting critical habitat areas. It is

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1 Thus, for a regulatory flexibility analysis to be required, impacts must exceed a threshold for "significant impact" *and* a threshold for a "substantial number of small entities." See 5 U.S.C. § 605(b).

2 This table and other information on size standards are available from http://www.sba.gov/size.

3 Regulatory Flexibility Act, 5 U.S.C. § 601 *et seq*.

also intended to quantify, to the extent possible, the probable number of small entities that are likely to experience a "significant effect."

Federal courts have held that an RFA analysis should be limited to impacts on entities subject to the requirements of the regulation (i.e., participants in the section 7 consultation process).[4] These entities include participants in the section 7 consultation process, but not entities suffering the downstream effects of consultation outcomes. In spite of these rulings, in its guidance to Federal agencies on conducting screening analyses, the SBA recommends considering impacts to entities that may be indirectly affected by the proposed regulation.[5]

In the sections that follow, a screening process is used to identify and describe the small entities that would be subject to this analysis. This is followed by a determination of the effects on the small entities.

DEFINITION OF SMALL ENTITIES

The SBA defines three types of "small entities:" small business, small organization, and small governmental organization. Within the category of small business, the SBA has developed size standards that vary depending upon the business type. For most industries, the size standard is based upon annual revenue for the business. The revenue standard varies from $750,000 for agriculture to $28.5 million for general and heavy construction. The size standard is based on number of employees for two industry types: manufacturing (500 employees) and wholesale trade (100 employees). The SBA publishes a table of current small business size standards on their website (www.sba.gov/size).[6] The SBA definition of "small government organization" includes governments of cities or counties with a population of fewer than 50,000 persons.

IDENTIFICATION OF ACTIVITIES THAT MAY INVOLVE SMALL ENTITIES

The analysis in the main report determined that costs involving conservation measures for the bull trout would be incurred for activities involving residential and commercial development, hydroelectric and non-hydroelectric projects, federal lands, state and private forestlands, road maintenance and transportation, commercial and recreational mining, utilities, dredging and instream activities, and federal agencies. This section considers the extent to which the costs presented in the main report reflect impacts to small entities.

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4 U.S. Small Business Administration, Office of Advocacy, May 2003, "A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act," pp. 69-70.

5 U.S. Small Business Administration, Office of Advocacy, May 2003, "A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act."

6 U.S. Small Business Administration, "Table of Small Business Size Standards Matched to North American Industry Classification System Codes," January 28, 2004, http:// www.sba.gov/size/indextableofsize.html.

Residential and Commercial Development

CHD is expected to result in additional costs to real estate development projects in the Coastal-Puget Sound region in terms of incremental costs associated with stormwater permits that may be required. Some of the affected land may be in ownership by individuals who undertake a development project on their own, or by individuals holding land for investment purposes. Individuals may not be businesses; as such, they would not fall within the criteria of the screening process under the RFA. In this analysis, all of the affected landowners are assumed to be development companies. This will likely overstate the actual impacts to development related sectors.

Hydroelectric Projects and Other Water Storage Dams

There are 27 operating hydroelectric facilities in the Coastal-Puget Sound area located on or near streams within the proposed critical habitat, and 20 of which incur costs. All of the operating hydroelectric facilities are regulated by the Federal Energy Regulatory Commission (FERC), and are owned by public or large private entities. There are also approximately 198 non-hydroelectric dams in the proposed critical habitat; of these, 24 non-hydro dams were assigned costs due to bull trout conservation activities, including 6 Federal dams and 18 non-Federal dams. For those facilities, fish passage and fish screens are the predominant costs incurred.

Among the 18 non-Federal dams, three are owned by the state of Washington, one by Quinault Indian Nation, and four by the cities of Seattle, Tacoma (two), and Bellingham, each of which exceed the criteria for small entity. Of the remaining ten facilities, at least one is owned by a large entity.[7] The size of entities owning the remaining nine dams is not known, or whether an entity owns more than one dam. The identified "primary purpose" of use includes "recreation" for three structures, "water supply" for three, "fire protection or stock" for two, and "other" for two. In none of these cases is the purpose identified as "commercial," "industrial," or "irrigation." As such, there is no information available to indicate that these structures are associated with a business entity or its operation, and are not considered further in this analysis.

Private Forest Lands

There are approximately 2.3 million acres of private forest lands not covered by an existing HCP in the bull trout CHD, representing approximately 24 percent of the CHD. These lands are subject to following recommendations in the Forest and Fish Report of 1999. As noted in section 3.2.2.2, these include a curtailment of harvests in the Riparian Management Zone (RMZ) near streams, and additional road maintenance, stream crossing, and harvesting setup costs incurred. Although specific information about the ownership of the affected lands is not readily available, there is evidence that a considerable amount is

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[7] Personal communication with Brian Benson, Manager, Fish Passage and Diversion Screening Inventory Database, Washington Department of Fish and Wildlife, Habitat Division, February 11, 2005.

owned by small businesses.[8] However, these lands are proposed to be excluded from CHD; as such, there will be no additional impacts from the proposed rule.

Forest Lands with HCPs

Forest lands covered by HCPs include lands owned by several large timber companies, lands owned and managed by the cities of Seattle and Tacoma, and Washington State DNR lands. Although retrospective costs were incurred in both the development of, and forest management practices within, the respective HCPs, these lands were excluded from CHD. As such there are no costs associated with this rulemaking.

Road Maintenance and Transportation

Effects on road maintenance and transportation include costs of conservation measures associated with road widening, bridge reconstruction, and maintenance of existing infrastructure. The conservation measures include consultation with the Service, sediment control, spill prevention, monitoring, bull trout relocation, and other such measures. In the Coastal-Puget Sound region, the costs would be incurred by Washington Department of Transportation, which exceeds the size threshold for small entities.

A road construction project is also being considered in the Jarbidge River region. The project would take place within the USFS, and the rule would not affect small entities.

Commercial and Recreational Mining

Sand and gravel are important and abundant economic resources in western Washington that support development activities such as residential and commercial construction and road building. Ten sand and gravel mines in the proposed Coastal-Puget Sound CHD operate within 200 feet of active stream channels proposed for critical habitat. They range in size from 2 to 45 acres. Required conservation measures include implementing a wash water clarification process, reclamation plan design, and habitat protection and enhancement measures. Individual sand and gravel operators are likely to include those that fall within the threshold for small entities.

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8 A study by Perez-Garcia, et al., examining the effects of the Forests and Fish Report included a spatial analysis of private land ownership of forest lands in Western Washington. The authors concluded that approximately 41 percent of affected lands were owned by "small businesses," which were defined in the study as businesses with fewer than 50 employees. Their sample included 1,327 businesses from Western Washington, and only 25 were classified as "large businesses." The current size standard for both Timber Tract Operations (NAICS code 113110) and Forest Nurseries and Gathering of Forest Products (NAICS code 113210) is $6.0 million in annual revenue.

Dredging and Other Instream Activities

Dredging is permitted, and often conducted by, the US Army Corps of Engineers (USACE), although they can also be associated with large construction projects. USACE permits are also required for a variety of other instream activities that affect waterways. These projects include construction and repair of piers, boat ramps, pilings, as well as bank stabilization and fill activities, among others. These activities would be commissioned by Federal or State agencies, and would not be fall within the criteria of small entities.

Ranching

Grazing activities began in the Jarbidge River Basin in the late 1800s and continues to be a major land use activity. There are some 460,000 acres of grazing allotments within the watersheds containing proposed critical habitat in the Jarbidge River region, including more that 411 thousand on Federal lands. The grazing allotments have been leased on long term contracts to private ranchers. The proposed rule could result in a requirement for additional fencing on one USFS allotment, and may require additional planning and monitoring by Federal agencies. These costs are not anticipated to affect ranchers, some of whom may fall within the category of small entity, or the assessed grazing fees charged to ranchers.

Agriculture

Although agricultural activity is present within each of the three regions, only in the Saint Mary-Belly River region is there an economic effect on agricultural producers. This would be the result of potential changes in the water supply available to growers in the Milk River Irrigation Project. There is a cost to farmers in terms of foregone crop production. Many farmers would fall below the SBA small business revenue threshold, and therefore be considered small entities.

Summary – Bull Trout Conservation Activities that Affect Small Entities

Based upon the analysis of all activities related to bull trout conservation measures, the only activities that may affect small entities are land development businesses in the Puget Sound, sand and gravel mining businesses in the Coastal-Puget Sound region, and irrigated farms in the Milk River basin of Montana. There are no anticipated effects on small entities in the Jarbidge River region. The remainder of this appendix concerns the effects on these entities.

ESTIMATED NUMBER OF POTENTIALLY AFFECTED SMALL ENTITIES

Land Development and Sand and Gravel Mining

Information on establishments and small businesses in Metropolitan Statistical Areas (MSAs) containing critical habitat is available from the SBA, as is shown in Table A-1. The MSAs that are relevant for development impacts in the proposed critical habitat in the Coastal-Puget Sound region are Seattle-Bellevue-Everett (King and Snohomish counties), Tacoma (Pierce County), and Bellingham (Whatcom County). In addition, specific revenue data on land development businesses in each county are available from Dun and Bradstreet. In this analysis, land development businesses are considered synonymous with the NAICS classifications 237210 (Land Subdivision) and 236117 (New Operative Builders). These industry groups comprise establishments "primarily engaged in servicing land and subdividing real property into lots, for subsequent sale to builders" and "responsible for the entire construction of new houses…also known as speculative or merchant builders."[9] As discussed below, there may be businesses in other sectors that could be affected by stormwater management regulations.

As shown in Table A-1, small businesses predominate among land developers in the affected counties. King County has the most with 479 small land development businesses. Within the eight counties combined representing the Puget Sound Unit containing critical habitat, there are a total of 864 land developers that are classified as small businesses.[10]

All thirteen counties in the Coastal-Puget Sound region are relevant for impacts on sand and gravel mining businesses in proposed critical habitat. Most of these businesses are small with fewer than 500 employees, the threshold for small businesses. Within the thirteen counties of the Coastal-Puget Sound region, there are a total of 35 sand and gravel mining businesses that are classified as small businesses.

Table A-2 provides details on the number and sales profiles of small and large land development businesses. In the eight eastern Puget Sound counties containing proposed critical habitat, small businesses represent 93 to 100 percent of all land developers in each county, but only 57 percent of annual sales for land developers in all eight eastern Puget Sound counties combined.

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9 U.S. Census Bureau, November 13, 2002, 2002 NAICS Codes and Titles, available at: http://www.census.gov/epcd/naics02/naicod02.htm, accessed February 22, 2005.

10 The eight counties in the Puget Sound Unit include King, Snohomish, Pierce, Whatcom, Skagit, Thurston, Island, and Kitsap counties.

Table A-1
All Establishments, Construction Establishments, Land Subdivision Businesses, Mining Establishments and Sand and Gravel Businesses, Coastal-Puget Sound Region

<table>
<tr><th rowspan="2"></th><th colspan="6">County</th></tr>
<tr><th>King</th><th>Snohomish</th><th>Pierce</th><th>Whatcom</th><th>Other Puget Sound[a/]</th><th>Olympic Peninsula[b/]</th></tr>
<tr><td>All Establishments</td><td colspan="2">76,737</td><td>15,550</td><td>5,386</td><td></td><td></td></tr>
<tr><td>Fewer than 20 Employees</td><td colspan="2">55,779</td><td>11,473</td><td>4,163</td><td></td><td></td></tr>
<tr><td>Construction Establishments[c/]</td><td colspan="2">8,982</td><td>2,287</td><td>785</td><td></td><td></td></tr>
<tr><td>Fewer than 20 Employees</td><td colspan="2">8,114</td><td>2,097</td><td>728</td><td></td><td></td></tr>
<tr><td>Land Subdivision Businesses</td><td>517</td><td>124</td><td>115</td><td>47</td><td>113</td><td></td></tr>
<tr><td>Number of Small Businesses[d/]</td><td>479</td><td>121</td><td>111</td><td>46</td><td>107</td><td></td></tr>
<tr><td>Mining Establishments[e/]</td><td colspan="2">54</td><td>11</td><td>3</td><td></td><td></td></tr>
<tr><td>Fewer than 20 Employees</td><td colspan="2">40</td><td>4</td><td>2</td><td></td><td></td></tr>
<tr><td>Sand & Gravel Businesses</td><td>11</td><td>7</td><td>9</td><td>2</td><td>13</td><td>5</td></tr>
<tr><td>Number of Small Businesses[f/]</td><td>10</td><td>6</td><td>6</td><td>2</td><td>11</td><td>5</td></tr>
</table>

a/ Includes Skagit, Thurston, Island, and Kitsap counties.

b/ Includes Clallam, Grays Harbor, Jefferson, Mason, and Pacific counties.

c/ Establishments classified by the NAICS code 23. Within this larger classification code is "Land Subdivision," NAICS code 237210.

d/ Defined by the Small Business Administration as businesses with annual revenue of $6 million or less.

e/ Establishments classified by the NAICS code 21. Within this larger classification code is "Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying," NAICS code 21232.

f/ Defined by the Small Business Administration as businesses with fewer than 500 employees.

Source: U.S. Small Business Administration, Office of Advocacy, July 2004, "Firm Size Data: Statistics of U.S. Businesses and Nonemployer Statistics," http://www.sba.gov/ADVO/stats/data.html; and Dun and Bradstreet, January 2004, accessed through a Dialog search of File 516, Dun and Bradstreet, "Dun's Market Identifiers."

Table A-2
Profile of Land Subdivision Businesses (NAICS 237210)
Counties in Eastern Puget Sound,
Number and Sales

	County					
	King	**Snohomish**	**Pierce**	**Skagit**	**Whatcom**	**Other Puget Sound**[a/]
Small Businesses:[b/]						
Number of small businesses	479	121	111	21	46	86
Annual Sales (in $000s)	$420,539.6	$84,865.6	$84,111.2	$17,660.9	$32,620.0	$107,881.4
Average annual sales (in $000s)	$878.0	$701.4	$757.8		$709.1	$1,254.4
Large Businesses:						
Number of large businesses	38	3	4	0	1	6
Annual Sales (in $000s)	$509,528.4	(D)	(D)	$0	(D)	$45,636.0
Average annual sales (in $000s)	$13,408.6	(D)	(D)	$0	(D)	$7,606.0
Total:						
Number of businesses	517	124	115	21	47	92
Small as percent of total	*93%*	*98%*	*97%*	*100%*	*98%*	*93%*
Annual Sales (in $000s)	$930,068.0	$84,865.6	$90,611.2	$17,660.9	$32,620.0	$153,517.4
Small as percent of total	*45%*	*<100%*	*93%*	*100%*	*<100%*	*70%*
Average annual sales (in $000s)	$1,838.1	$701.4	$809.2	$841.0	$709.1	$1,668.7

(D) – Data not shown to avoid disclosure of individual businesses, or revenue data not available.

a/ Includes Thurston, Island, and Kitsap counties.

b/ Defined by the Small Business Administration as businesses with annual revenue of $6 million or less.

Source: Dun and Bradstreet, February 2005, accessed through a Dialog search of File 516, Dun and Bradstreet, “Dun’s Market Identifiers.”

Table A-3 provides details on the number and sales profiles of sand and gravel mining businesses. Information is available for the thirteen counties in the Coastal-Puget Sound region. The number of small businesses is 85 percent of all sand and gravel mining businesses in the region, but only 59 percent of annual sales.

Table A-3
Profile of Sand, Gravel, Clay, and Ceramic and
Refractory Minerals Mining and Quarrying Businesses (NAICS 21232)
Counties in Coastal-Puget Sound Region,
Number and Sales

	County					
	King	**Snohomish**	**Pierce**	**Whatcom**	**Other Puget Sound**[a/]	**Olympic Peninsula**[b/]
Small Businesses:[c/]						
Number of small businesses	10	6	6	2	11	5
Annual Sales (in $000s)	$8,543.1	$9,042.9	$13,420.0	$2,870.0	$6,939.0	$6,057.0
Average annual sales (in $000s)	$854.3	$1,507.1	$2,236.7	$1,435.0	$630.8	$1,211.4
Large Businesses:						
Number of large businesses	1	1	3	0	2	0
Annual Sales (in $000s)	(D)	(D)	(D)	(D)	(D)	-
Average annual sales (in $000s)	(D)	(D)	(D)	(D)	(D)	-
Total:						
Number of businesses	11	7	9	2	13	5
Small as percent of total	*91%*	*86%*	*67%*	*100%*	*85%*	*100%*
Annual Sales (in $000s)	$26,062.9	$11,942.9	$16,880.0	$2,870.0	$16,109.0	$6,057.0
Small as percent of total	*33%*	*76%*	*80%*	*100%*	*43%*	*100%*
Average annual sales (in $000s)	$2,369.4	$1,706.1	$1,875.6	$1,435.0	$1,239.2	$1,211.4

(D) – Data not shown to avoid disclosure of individual businesses, or revenue data not available.

a/ Includes Skagit, Thurston, Island, and Kitsap counties.

b/ Includes Clallam, Grays Harbor, Jefferson, Mason, and Pacific counties.

c/ Defined by the Small Business Administration as businesses with fewer than 500 employees.

Source: Dun and Bradstreet, February 2005, accessed through a Dialog search of File 516, Dun and Bradstreet, "Dun's Market Identifiers."

Agriculture

As noted earlier, irrigated farms in Montana that are served by water diverted from the Saint Mary River could be affected by the proposed designation. Information on farms in the Milk River Irrigation Project Service Area, Montana, is available from the U.S. Department of Agriculture "2002 Census of Agriculture," and specific data on farms and sales are presented in Table A-4. Data are presented for the four-county area, including Blaine, Hill, Phillips, and Valley. Although the SBA threshold for the agricultural businesses of concern is $750,000, the Census of Agriculture provides information on farms with sales above and below $500,000.

Therefore, the number of small farms by SBA standards is understated in this table. In addition, the average sales per small farm is understated (lower than actual) because it does not include those farms with annual sales of $500,000 to $750,000. As shown in Table A-4, small farms predominate in number (98 percent of all farms in the four county area have revenues less than $500,000), and overall revenues for these farms represent 76 percent of all sales.

Specific farm size data are not available by commodity group. The Milk River Irrigation Project area serves farms growing small grains or pasture and hay in support of livestock operations. For the two commodity groups considered in this analysis, the average sales per farm indicate that most would be considered small farms by SBA standards.

Table A-4
Market Value of Agricultural Products Sold, by Farm Size and Select Commodity Groups, Milk River Irrigation Project Service Area, 2002
(Blaine, Hill, Phillips, and Valley Counties, Montana)

Farm Type	No. of Farms	Annual Sales	Average Sales/Farm
All Farms	2,692	$201,996,000	$75,036
Farms with sales less than $500,000	2,644	$153,297,000	$57,979
Farms with sales $500,000 or more	48	$48,699,000	$1,014,563
By Commodity Group:			
Crops – Grain, oilseed, dry beans, and dry peas	1,081	$90,877,000	$84,068
Crops – Other crops and hay	476	$11,390,000	$23,929

Source: U.S. Department of Agriculture, 2004, *2002 Census of Agriculture – County Data, Montana*, National Agricultural Statistics Service, http://www.nass.usda.gov/census/census02/volume1/mt/index2.htm.

Governments

“Small entities” include not only small businesses, but governments or quasi-government districts (such as water agencies or irrigation districts) serving populations of fewer than 50,000. Within each of the three regions addressed in this report, there are small governments (cities and/or counties) that are adjacent to, and potentially affected by, proposed CHD. Table A-5 provides a summary of these government entities by region. There are a total of 131 small cities and nine small counties in the three regions.

Table A-5
Small Governments Potentially Affected by
Bull Trout Proposed Critical Habitat

Region	Number of Small Cities	Number of Small Counties
Coastal-Puget Sound	111	2
Jarbidge River	7	2
Saint Mary – Belly River	13	5
Total	**131**	**9**

ESTIMATED EFFECTS ON SMALL ENTITIES

Land Development

According to the development effects model presented in section 3.3 of the main report, an average of 5,792 acres would be developed per year within proposed critical habitat in eastern Puget Sound. The annual prospective cost associated with this development is $13,793,000 within the proposed CHD. Table A-6 provides a summary, distributed by county, of the anticipated annual development costs associated with adherence to higher stormwater management guidelines. These guidelines include provisions for controlling erosion and sediment transport during construction, as well as permanent facilities for treating and controlling peak runoff flows from development sites beyond those for conventional stormwater systems. A very high proportion of these costs are associated with commercial development, which are estimated to be $73,000 per acre as compared to $1,600 per acre for residential development (see section 3.3.1.2 for derivation of these costs).

As shown in Table A-6, average annual prospective costs on development are approximately $26.2 million for six counties of eastern Puget Sound (no costs on development are anticipated in Thurston or Island counties). The largest share of these costs, $18.0 million, is borne in King County. The costs are then apportioned among large and small businesses according to the share of revenues by size category in each county. Those costs that are apportioned to small businesses are then divided by the number of small businesses to determine the average effect per business. The cost per business is then compared to revenues and average annual sales of small businesses in order to estimate the effects on small businesses.

The effects on small businesses in the land subdivision sector (NAICS code 237210) would be concentrated in King County, but the average effect on small business revenues is less than two percent. However, these data also suggest that the largest effect, in terms of total dollars and percent of revenues, would fall on small land subdivision businesses in Skagit County. Based on the estimated costs to development and the average sales per small business, the annual costs ranges from 1.64 percent to 8.40 percent of sales for a small firm in the land subdivision sector depending upon county. For all six counties combined, the annual costs are approximately 2.25 percent of sales.

Table A-6
Effects on Small Businesses in the Land Subdivision Sector[a/]
within Bull Trout Proposed Critical Habitat,
Eastern Puget Sound Counties[b/]

	County						
	King	**Snoho-mish**	**Pierce**	**Whatcom**	**Skagit**	**Kitsap**	**ALL[c/]**
Annual Prospective Costs ($000s)	$18,000.1	$2,856.9	$1,411.1	$988.7	$1,483.2	$1,423.2	$26,163.2
Percent of Sector Revenues Attributable to Small Businesses[d/]	45%	100%	93%	100%	100%	64%	56%
Effects on Small Businesses ($000s)	$8,138.9	$2,856.9	$1,219.3	$988.7	$1,483.2	$905.8	$15,683.3
Number of Small Businesses[d/]	479	121	111	46	21	35	813
Effects per Small Business	$16,991	$23,611	$11,801	$21,493	$70,628	$25,880	$19,291
Average Annual Sales per Small Business ($000s)[d/]	$878.0	$701.4	$757.8	$709.1	$841.0	$1,581.9	$859.0
Effects as a Percent of Small Business Sales	1.94%	3.37%	1.56%	3.03%	8.40%	1.64%	2.25%

a/ NAICS code 237210, “Land Subdivision.”

b/ No bull trout related costs on development are anticipated for Thurston or Island counties.

c/ Combined results for the six Puget Sound counties.

d/ From Table A-2, except “ALL.” The total number of small businesses (813) differs from those shown in Table A-2 (864) by not including those in Thurston and Island counties.

Skagit County: A Closer Look

The estimated effect on small businesses in Skagit County is likely to be overstated. First, as shown in Table A-6, the “effects per small business” in Skagit County are two to four times higher than for adjacent counties, despite the relative size of “annual prospective costs.” This is a result of the small number of firms (21, all of which are classified as “small businesses”) within the NAICS category of 237210. Firms in this sector are primarily engaged in servicing land and subdividing real property into lots for sale to builders. Firms that are not included in this sector, and therefore not in Table A-6, include the portion of firms in “Residential Building Construction” (NAICS 2361) or “Nonresidential Building Construction” (NAICS 2362) that construct buildings on lots they own and subdivide. In addition, firms that construct buildings for rent or own use, on lots they own and subdivide, are classified elsewhere (NAICS 5311, “Lessors of Real Estate"). To the extent that the number of firms, including small firms, as shown in Table A-6 is understated, the effects per small firm and as a percentage of sales are overstated.

Table A-7 provides a summary of the total number of businesses and small businesses in sectors associated with land development. The table indicates a large number of small businesses outside of the "Land Subdivision" (237210) industry sector that are engaged in construction activities and may also be landowners, thus potentially affected by stormwater management guidelines. Although data are not available to discern and quantify the portion of these sectors that include landowners, it nonetheless demonstrates that the pool of potentially affected small businesses in Skagit County is larger than the 21 entities identified in Table A-6, thereby causing the effects per small firm and effects as a percentage of sales to be overstated.

Table A-7
Summary of Sectors Associated with Land Development within Skagit County

Land Development Sector (NAICS)	**Total Number of Businesses**	**Number of Small Businesses** [a]
Land Subdivision (237210)	21	21
Residential Building Construction (2361)	302	293
New Housing Operative Builders (236117)[b]	*3*	*3*
Nonresidential Building Construction (2362)	66	64
Lessors of Real Estate (5311)	121	118
TOTAL	**510**	**496**

[a] For residential and nonresidential building construction, small businesses are those with less than $28.5 million in annual sales; for lessors of real estate, the threshold ranges from less than $6 million to less than $21.5 million in annual sales, depending on sector.

[b] Firms within the NAICS code 236117 ("New Housing Operative Builders") are included within the total industry group of NAICS code 2361 ("Residential Building Construction").

A second reason why the estimated effects on small businesses in Skagit County is likely to be overstated is that the small sample size of firms and firm revenues for a small or sparsely populated area such as Skagit County that are available from the Dun and Bradstreet database may result in an overestimate bias if individual firms and their revenues are missing. Third, the estimated effect may be overstated if land subdivision or development firms from adjacent counties also perform work in Skagit County, since they would share in the accompanying stormwater management costs.

Finally, it is possible that Dun and Bradstreet data on small businesses may understate the total number of small businesses in a particular sector. Specifically, their data excludes entities that (1) do not exhibit a recent and clear history of business and (2) specifically ask to be removed. It's possible that land speculators likely to be affected by land development regulations may be included within one or both of these categories of exclusion from the list of small businesses.

HUC Level Analysis of Land Development Effects: Skagit, Snohomish, and Whatcom Counties

The main report provides a detailed HUC (watershed) level analysis of economic effects, including development. The small business analysis necessarily examines county-level impacts because economic data are not readily available at any finer detail. Three counties (Skagit, Snohomish, and Whatcom), which are located adjacent to one another in northeastern Puget Sound, each contain impacts to small businesses in excess of three percent. To provide more precise information regarding the location of development impacts in the three counties, the specific location of HUC watersheds within county boundaries are considered.

Map A-1 shows the HUC watershed boundaries used for the economic analysis overlaid on Skagit, Snohomish, and Whatcom counties. There are 39 HUCs contained at least partially within the three counties combined, including 17 in Skagit, 19 in Snohomish, and 19 in Whatcom (many HUCs fall within more than one county). As shown, 15 of the 39 HUCs contain estimated development effects. These watersheds are located in the low-lying western and west central part of each county. The Snohomish River in Snohomish County and Lower Skagit River/Nookachamps Creek in Skagit County represent 77.6 and 81.2 percent of the total annual estimated development impacts in their respective counties (see Table A-8).

Together, Map A-1 and Table A-8 provide information on the watersheds that contain anticipated future development and associated economic impacts. However, data are not available regarding the specific small businesses that may be burdened by the stormwater regulations associated with this development, as businesses are not confined to work solely in the HUCs in which they are located. This and similar limitations in the data are detailed below (see "Caveats").

Table A-8
HUC Level Impacts Associated with Development in Skagit, Snohomish, and Whatcom Counties

County	Watershed (HUC) Name	Estimated Impact	County Impact Total	Percent of County Impact
Skagit	Lower Skagit River/Nookachamps Creek (1711000702)	$1,205,000	**$1,483,200**	81.2%
	Middle Skagit River/Finney Creek (1711000701)	$34,600		2.3%
	Samish River (1711000202)	$243,700		16.4%
Snohomish	Lower Sauk River (1711000604)	$21,400	**$2,856,900**	0.7%
	Lower Stillaguamish River (1711000803)	$189,900		6.6%
	North Puget Sound (1711001903)	$207,900		7.3%
	Pilchuck River (1711001101)	$89,700		3.1%
	Skykomish River/Wallace River (1711000903)	$25,300		0.9%
	Skykomish River/Woods Creek (1711000905)	$44,000		1.5%
	Snohomish River (1711001102)	$2,216,100		77.6%
	South Fork Stillaguamish River (1711000802)	$62,600		2.2%
Whatcom	Bellingham Bay (1711000201)	$313,200	**$988,700**	31.7%
	Birch Bay (1711000204)	$277,300		28.1%
	Lower North Fork Nooksack River (1711000404)	$16,300		1.6%
	Nooksack River (1711000205)	$381,900		38.6%
	TOTAL – Skagit, Snohomish, and Whatcom Counties	**$5,328,800**		

Sand and Gravel Mining

According to the analysis of effects on mining as presented in section 3.8 of the main report, an average annual cost per acre of $1,045 may be attributable to bull trout conservation measures. These costs are associated with a variety of conservation and water management activities. The analysis also determined a proxy, based on actual mined area, of approximately $357,000 per year of conservation related costs for the Coastal-Puget Sound region. No forecast was made of specific locations where future mining activities would take place because WDOE's 1994 shoreline management guidebook strongly discourages new mine locations within 200 feet of the floodway or within the 100-year floodplain. As such, the analysis of effects on small sand and gravel businesses is presented here as if the annual costs were distributed entirely within the Olympic Unit or in the Puget Sound Unit. This may overstate the effects if, in fact, mining is distributed across the two units.

The Washington Department of Natural Resources' database of floodplain mines includes company information for five of the ten potentially affected existing mines.[11] Three distinct companies owned these five mines; all three were confirmed, based on personal communication with the affected entities, to be below the 500-employee threshold for a "small business." Therefore, this analysis assumes that all affected mines are owned by small businesses. Six of the mines are in the Olympic Unit, and in the Wynoochee River watershed in Grays Harbor County, and represent $242,000 of the costs attributable to bull trout. The remaining four are located in Whatcom and Snohomish counties (two each). Their costs range from $10,000 to $24,000 per mine.

Table A-9 presents the cost to the mining industry as a share of revenues by size category for the three counties with mines. The costs are then divided by the number of small businesses in each county to determine the effect per small business. The cost per business is then compared to revenues and average annual sales of small businesses in order to estimate the effects on small businesses. The annual costs could be as high as 4.53 percent of sales for a small firm in the sand and gravel mining sector in Grays Harbor County; all costs are located in the Wynoochee River watershed (see Maps A-2 through A-4, based on Washington DNR Floodplain Mines). Cost for firms in both Whatcom and Snohomish counties are less than one percent of sales.

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[11] The remaining five mines were in existence prior to permitting requirements, and ownership information is not publicly available.

Table A-9
Effects on Small Businesses in the Sand and Gravel Mining Sector within Bull Trout Proposed Critical Habitat, Coastal-Puget Sound Region

	County		
	Grays Harbor	**Whatcom**	**Snohomish**
Annual Prospective Costs	$242,000	$43,000	$72,000
Percent of Sector Revenues Attributable to Small Businesses[c/]	100%	100%	76%
Effects on Small Businesses	$242,000	$43,000	$54,000
Number of Small Businesses [c/]	3	2	6
Effects per Small Business	$80,667	$21,500	$9,000
Average Annual Sales per Small Business[c/]	$1,779,000	$1,435,000	$1,507,000
Effects as a Percent of Small Business Sales	4.53%	1.50%	0.60%

a/ Includes Whatcom, Skagit, Snohomish, King, Pierce, Thurston, and Island counties.

b/ Includes Clallam, Grays Harbor, Jefferson, Mason, and Pacific counties.

c/ Derived from Table A-3.

Agriculture

In the case of bull trout conservation measures in the Saint Mary-Belly River region, as demonstrated in Section 5.3.3 and Table 114 of the main report, there is a potential for an economic effect on the Milk River Project from an allocation of water for instream flow in Swiftcurrent Creek, and subsequent reduction in water for irrigation. Table A-10 provides details on the change in net revenue to *all* irrigators combined on the Milk River Project. Since the U.S. Bureau of Reclamation manages the irrigation project for the benefit of all irrigators, it can be reasonably assumed that the shortage will be shared equally. Total change in net revenue among all affected farms would be $36,000 to $54,700 (see Table 114 in the main report). If these changes in revenue are shared equally among all farms within the respective commodity groups, the average share of revenue impact per farm would be $33 to $115.

For the purposes of this analysis, it is assumed that *all* of the farms in Table A-10 are small entities. When the total costs are compared to the average sales per farm (as shown in Table A-4) for all farms with annual sales of less than $500,000, they would account for 0.06 to 0.20 percent of annual revenues. Since the SBA revenue threshold for small farms is $750,000 per year, these percentages actually represent an overstatement of the potential effect on these farms.

Other Small Entities

There are some 140 small government entities located adjacent to the proposed CHD in the three regions. However, there is no record of consultations between the Service and any of these governments since the bull trout was listed in 1998. Indeed, it is not likely that the city would be involved in a land development project involving a section 7 consultation, although it may be involved in land use planning or permitting, and may play a role as an interested party in infrastructure projects. Any cost associated with this activity is anticipated to be a very small portion of the city's budget.

Table A-10
Summary of Effects on Agriculture of Bull Trout Conservation Activities,
Saint Mary-Belly River Region

	Commodity	
	Grains, Oilseed, Dry Beans, and Dry Peas	**Other Crops and Hays**
Change in Net Revenue Associated with a Change in Water Supply	$36,000 - $54,700	
Number of Affected Farms[a/]	1,081	476
Average Share of Impact per Farm [b/]	$33 - $51	$77 - $115
Effects as a Percent of Commodity Group Sales[c/]	0.04 – 0.06%	0.32 – 0.48%
Effects as a Percent of Small Business Sales [d/]	0.06 – 0.20%	

a/ From Table A-4, assuming all farms are affected.

b/ Assumes that revenue impacts affect only the indicated commodity group.

c/ From Table A-4, assuming *all* commodity group farms are small businesses. Calculated as "average share of impact per farm divided by average revenue per commodity group farm."

d/ From Table A-4, assuming *all* affected farms are small businesses. Calculated as "average share of impact per farm divided by average revenue per farm."

CAVEATS

The estimated effects on small businesses provided above contain several important assumptions that are likely to overstate the actual effects. These include:

- The effects on land development businesses estimated within the main report are concentrated on those entities whose dominant activity is related to commercial development, where stormwater management costs are much higher than for residential development. The analysis in this appendix assumes that small and large businesses are equally likely to perform services for commercial development as for residential or other development. If small businesses are concentrated in residential rather than commercial development, the effects on small businesses that are estimated here would be overstated.

- The SBA revenue threshold for small businesses engaged in farming is $750,000 annually. For this analysis, the threshold is assumed to be $500,000 based on data available. As a result, the average revenue per small farm ($57,979) is understated, and the effect of costs as a percent of annual revenue is similarly overstated.

- All of the affected farms are assumed to be small, which may overstate the proportion of small businesses affected.

POTENTIAL EFFECTS ON ENERGY SUPPLY

Executive Order No. 13211, "Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use," issued May 18, 2001 requires Federal agencies to submit a "Statement of Energy Effects" for all "significant energy actions" in order to present consideration of the impacts of a regulation on the supply, distribution, and use of energy.[12] Significant adverse effects are defined in the EO by the OMB according to the following criteria:

1. Reductions in crude oil supply in excess of 10,000 barrels per day;

2. Reductions in fuel production in excess of 4,000 barrels per day;

3. Reductions in coal production in excess of five million tons per year;

4. Reductions in natural gas production in excess of 25 million mcf per year;

5. Reductions in electricity production in excess of one billion kilowatt-hours per year or in excess of 500 megawatts of installed capacity;

6. Increases in energy use required by the regulatory action that exceed any of the thresholds above;

7. Increases in the cost of energy production in excess of one percent;

8. Increases in the cost of energy distribution in excess of one percent; or

9. Other similarly adverse outcomes.

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[12] Daniels, Mitchel E., July 13, 2001, "Memorandum for Heads of Executive Departments and Agencies, and Independent Regulatory Agencies," M-01-27, http://www.whitehouse.gov/omb/memoranda/m01-27.html.

The two criteria that potentially pertain to this analysis include 5 and 7. Section 3.4.1 of the report described the potential economic impacts to hydroelectric generation in the region. In that section, no reductions in generating capacity were identified. Furthermore, assessing reductions in power production due to possible increases in bypass flows was determined to be an overly complex task that depends upon many site-specific factors that could not be analyzed in this study. However, it is not anticipated that changes in hydroelectric dam operations to protect bull trout will result in a reduction in excess of one billion kWh. This is further supported by the fact that changes in hydroelectric operations are likely to reshape rather than reduce power production at many facilities. Furthermore, because significant reductions in power production are not anticipated, it is unlikely that the overall cost of energy production in the region will increase by more than one percent.