

Cascade Locks Proposed Bottled Water Facility: An Economic Impact Analysis of Market Effects and Discussion of Potential Nonmarket Impacts

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Abstract

The City of Cascade Locks and a number of Oregon governmental agencies are evaluating a proposal by Nestle Waters North America Inc. (Nestle) to build and operate a bottled water facility in Cascade Locks.

Cascade Locks, Oregon over the last three decades has undergone a number of challenging economic changes. It is working to develop manufacturing, tourism and lifestyle opportunities to address those changes and reinforce its economy. This report analyzes one option to develop a manufacturing facility for bottled water.

In this analysis, we provide historical background and a current description of the Cascade Locks economy. We estimate the economic impacts of constructing and operating a bottled water facility. While we find that the proposed facility can significantly contribute to the local economy, there can be tradeoffs for those contributions.

Exempted as a city yet located within the Columbia River National Scenic Area, the residents of Cascade Locks and many nonresidents are very concerned that any development avoid negative effects to this National Scenic Area and to the community. We recognize and provide some context and ideas for evaluating any potential negative non-market or environmental impacts from a proposed bottled water facility. A number of points are discussed that the City of Cascade Locks and Port of Cascade Locks may want to further analyze as they consider their options related to the proposed facility.

Introduction

The City of Cascade Locks City Council (City) and the Port of Cascade Locks Commissioners (Port) requested that Oregon State University Extension Service conduct an analysis of economic effects of the proposed construction and operation of a bottled water facility in Cascade Locks. Copies of the requests can be found in Appendix A. In addition, the City and Port asked for an overview of the nonmarket, including environmental, issues they needed to consider related to the proposed bottled water facility. This analysis estimates the market effects at the county and state levels for constructing and operating the proposed facility. It also describes many of the nonmarket issues related to the proposed construction and operation of a bottled water plant in Cascade Locks and provides some initial context for understanding those nonmarket effects. To ensure the analysis is a “net analysis”, both the positive and the negative economic impacts for existing and likely future economic activities are considered.

The primary audience and study area for this analysis is the community of Cascade Locks. Since the data and modeling are typically more accurate at the county level than the zip code level, the estimates are made using the Hood River County model. In addition, we estimate the economic effects at the State level. This level of analysis includes activity from any place in the State, and thus the impacts will be greater. Suppliers and vendors are more numerous at the more aggregate State level. Therefore expenditures that might “leak” out of Hood River County may be captured

elsewhere in the State. We also consider non-market impacts that extend beyond Oregon to the regional and even global levels. These impacts are offered only for discussion purposes and we make no attempt to estimate their magnitude.

Specifically, in this report we:

- Briefly discuss major economic events in Cascade Locks over the last 30 years.
- Profile the economy of Cascade Locks and contrast it with the larger Hood River County economy in which it functions
- Describe the proposed Cascade Locks water bottling facility
- Conduct an economic impact analysis of constructing and operating a water bottling facility in Cascade Locks and discuss the sensitivity of the projections
- Discuss potential economic impacts of the water bottling facility that may not be reflected in the market analysis and the various stakeholders likely to be affected by these impacts
- Consider potential social impacts of the water bottling facility
- Summarize the findings

An Economic Profile of Cascade Locks, Oregon

Historically, the Cascade Locks area has evolved from hunter-gatherer economies through river transportation to wood products manufacturing to the current period of economic stagnation and high unemployment. Economic conditions today are in stark contrast to those found when the timber industry was booming: As described by McLain and Zilverberg; *“From the 1950s to the 1980s, Cascade Locks prospered economically. Following World War II, the Forest Service stepped up its timber sales program on the Mount Hood and Gifford Pinchot National Forests located within and near the Gorge. Between logging and wood processing work, jobs were plentiful for male residents.”*¹

Led by a decline in the housing industry, the recession of the 1980s changed the economic prospects of the residents of Cascade Locks. This was exacerbated extended by²

1) completion of I-84 in 1975³ diverting most potential visitors and tourists around Cascade Locks;

2) completion in 1982⁴ of the Bonneville Dam power house;

3) “An abrupt decline in the supply of timber available from local national forests as the federal government sought to comply with the provisions of the Endangered Species Act...The overall volume of timber harvested in Hood River County dropped dramatically from a high of 65,270 mmbf in 1989 to a low of 13,756 mmbf in 1994. The decline in the volume of timber harvested on federal lands was most dramatic, dropping

¹McLain, Rebecca and Grace Zilverberg 2002. Northwest Economic Adjustment Initiative Assessment - Cascade Locks Case Study. http://www.sierrainstitute.us/neai/OR_case_studies/Cascade_Locks_OR.pdf

² Ibid

³ Ibid

⁴ Columbia Basin Research, University of Washington <http://www.cbr.washington.edu/hydro/bonneville>

from a high of 44,196 mmbf in 1988 to a low of 191 mmbf in 1995. Since 1995, the annual overall timber harvest has continued to remain substantially below the annual volumes harvested in the late 1980s. Although the volume harvested on Forest Service lands increased from 1996 onward, the amount cut annually is less than 10 percent of the annual cut of the late 1980s.⁵

Taken together, Cascade Locks experienced a number of negative economic shocks. Over the past 20 years more than \$10.8 million have been invested by the federal, State, and local agencies and foundations to help mitigate these negative economic shocks in Cascade Locks.⁶

For example, many public investments such as waste water treatment facilities, have been put in place to upgrade infrastructure and create the capacity in Cascade Locks to recruit new industries. The Cascade Locks portion of the McLain and Zilverberg report with a list of these public investments is included as Appendix B. In Oregon, the retraining efforts for the wood products industry workers to mitigate the loss of timber jobs were not as effective as many predicted. The economic profile for the wood products labor force in Cascade Locks may be represented by Helvoigt et al.'s less positive prospect as noted below.

*"We are left with a fairly positive prospect if the bulk of this group (wood products industry workers) found covered employment in another state or became self-employed in Oregon at a reasonable wage. On the other hand, this group might also form the basis for a cadre of chronically underemployed rural residents, to the extent that they remained in their original employment locations and adopted a subsistence lifestyle."*⁷

-Ted L. Helvoigt, Darius M. Adams, and Art L. Ayre 2003

While Hood River County and the State of Oregon have experienced population growth between 1990 and 2010 (28.4% and 32.4% respectively), Cascade Locks' growth rate has been just 2.7%.⁸ Infrastructure improvements such as the water treatment and collection systems, sewer treatment plant generator, marina project, and planning grants have been made in Cascade Locks to mitigate the loss of timber jobs, however, they have not been sufficient to recruit significant numbers of residents or businesses. This is additionally significant since the median housing price in Cascade Locks is less than 60% of those in Hood River.⁹

⁵McLain, Rebecca and Grace Zilverberg 2002. Northwest Economic Adjustment Initiative Assessment - Cascade Locks Case pp 8-9.

Study. http://www.sierrainstitute.us/neai/OR_case_studies/Cascade_Locks_OR.pdf

⁶ Ibid. pp 1-2.

⁷ Helvoigt, Ted L., Darius M. Adams, and Art L. Ayre 2003. Employment Transitions in Oregon's Wood Products Sector during the 1990s. Journal of Forestry, Volume 101, Number 4, June 2003, pp. 42-46(5). Society of American Foresters, Bethesda, Maryland.

⁸ Oregon Rural Communities Explorer <http://oregonexplorer.info/rural/>

⁹ Ibid

Based on the percentages of employment shown in Table 1, tourism related business (Arts, Entertainment etc. and part of Retail Trade and Transport), government (portions of Education, Health and Social Services and all of Public Administration), and manufacturing are the three primary drivers of Cascade Locks' economy.

These are basic industries that export their products or services to consumers outside the community. They provide services to retirees and others receiving transfer payments, and they bring in new money and job opportunities for residents. As a result they form the foundation for the local economy. Census data for rural communities has always had considerable margins of error which should be considered when reflecting on the economy of Cascade Locks. The percentages in Table 1 would need to be explored through interviews, or *ground-truthed*, before making decisions that rely on those specific numbers. At the same time, it is reasonable to conclude that the Cascade Locks unemployment rate is at least twice as high as the unemployment rate in Hood River County. Also, both Cascade Locks and Hood River County have been experiencing a decline in manufacturing – Cascade Locks at a slightly higher rate of decline. And we can see that the proportion of employment in government services has increased in Hood River County, yet declined in Cascade Locks.

Table 1. Unemployment and Percentage of Employment by Sector for Cascade Locks and Hood River County¹⁰

	Cascade Locks		Hood River County	
	1990	2006-10	1990	2006-10
Unemployment Rate	12.80%	16.63%	8.60%	5.94%
Percentage of Households with Self-Employment Income	10.96%	12.06%	20.92%	17.10%
Agriculture, Forestry, Fishing, Mining	4.35%	2.92%	20.40%	13.82%
Arts, Entertainment, Recreation, Accomodation	1.36%	13.45%	1.61%	11.49%
Construction	8.70%	10.31%	3.91%	5.58%
Education, Health, Social Services	14.40%	11.88%	15.80%	17.99%
FIRE: Finance, Insurance, Real Estate	0.00%	1.57%	2.99%	6.67%
Information	N/A	0.67%	N/A	2.98%
Manufacturing	16.03%	9.87%	14.16%	9.66%
Other Services	3.53%	5.16%	5.74%	4.54%
Professional, Science, Management, Administration	5.16%	8.30%	2.63%	7.23%
Public Administration	8.70%	6.28%	2.62%	3.24%
Retail Trade	25.00%	14.35%	15.16%	9.56%
Transport and Utilities	9.24%	10.31%	9.68%	4.57%
Wholesale Trade	3.53%	5.61%	5.31%	5.74%

To estimate the percentage of employees that may live in Cascade Locks or nearby and more directly affect the local economy, we can use the current commuting patterns. Table 2 shows the estimated commute time for workers in Cascade Locks and Hood River County since 1990.¹¹ As employment opportunities in Cascade Locks improve with a new bottled water plant, Cascade Locks' travel times to work may modestly decline towards the County average commute times. Currently, 48% of workers in

¹⁰ Ibid

¹¹ Ibid

Cascade Locks commute less than 30 minutes to work and 84% of Hood River County workers commute less than 30 minutes to work. We project that approximately 60% of the people who work in the bottled water plant would eventually live in Cascade Locks or nearby in the region with less than a 30 minute commute time,.

Table 2. Commute time for workers in Cascade Locks and Hood River County

Commute Time	Cascade Locks			Hood River County		
	1990	2000	2006-10 Avg	1990	2000	2006-10 Avg
<10 minutes	45.63%	31.30%	24.02%	39.00%	35.16%	34.74%
10-19 minutes	16.12%	13.48%	12.24%	31.60%	32.11%	33.79%
20-29 minutes	7.10%	7.83%	11.32%	12.36%	12.70%	15.26%
30-44 minutes	13.39%	18.91%	31.41%	5.99%	9.66%	8.64%
45-59 minutes	7.92%	18.48%	12.24%	2.30%	3.59%	2.35%
60+ minutes	4.92%	10.00%	8.78%	4.38%	6.78%	5.22%

E. D. Hovee & Co. LLC, completed an economic opportunities analysis for Cascade Locks in 2009 that provided detailed description of the economy. The report indicates that sixty percent of the land in Cascade Locks planned for commercial and industrial use is vacant and ready for development.¹²

Proposed Water Bottling Facility in Cascade Locks

In 2010, Nestle' Corporation proposed building a facility to produce bottled water at Cascade Locks, Oregon. Plans currently site the bottling facility at the Cascade Locks Industrial Park (Industrial Park). The Industrial Park is an enterprise zone providing tax abatement typically ranging from three to five years and extendable to fifteen years. The facility at build-out is projected to have two production lines within enclosed spaces totaling approximately 250,000 square feet. The proposed facility would cost approximately \$50 million to construct.

Operating under a proposed exchange or trade of spring water from Oxbow Springs from the Oregon Department of Fish and Wildlife for well water from the City of Cascade Locks, the facility would bottle spring water under Nestlé's Arrowhead brand. Nestle

¹²Hovee 2009. *City of Cascade Locks Economic Opportunity Analysis*. http://www.oregon.gov/LCD/ECODEV/docs/sample_EOA_reports/cascade_locks_004-09.pdf?ga=t.

may also purchase well water from the City of Cascade Locks and bottle it under its Pure Life Brand. The proposed facility at full capacity would have two water bottling lines, and use approximately 108,000 gallons of water per day. Raw materials, notably plastic bottles, would be transported from outside the area into the facility by truck, and trucks would transport filled water bottles to Portland for regional distribution.¹³

Economic Impact Analysis of a Cascade Locks' Water Bottling Facility

The economic impacts of the proposed facility were projected using an input-output economic model called *IMpactPLANning* (IMPLAN) produced by the Minnesota IMPLAN Group Inc. IMPLAN uses a system of linear structural input-output equations to describe the purchase and sales decisions of as many as 509 economic sectors, several representative consumers, and several types of federal, state and local governmental units. The basis of IMPLAN is that an increase in business sales (final demand) in one economic sector stimulates economic activity in other sectors. This is because one sector buys from other sectors in order to obtain the inputs needed to produce the goods and services it sells. These are called *backward linkages*. In addition, as purchases from backward linkages proceed, the incomes of owners and employees increase, and as this income is spent, further economic activity is stimulated. This economic activity can be explained as three types of effects including:

- the direct effect, or the change in economic activity as final demand changes,
- the indirect effect, which is the increased economic activity as the sector with the change in final demand makes purchases from other sectors or suppliers, and
- the induced effect, which is the impact on all economic sectors caused by expenditures of new household income generated by the direct and indirect effects of the initial changes in final demand

All three effects will be larger as a higher percentage of purchases are made within the economic area being studied.

IMPLAN is used extensively across the U.S. for making economic impact estimates. More than many other types of models, IMPLAN has the advantage of being relatively easy to describe and can be adjusted to better reflect local conditions and projects. IMPLAN has developed an extensive group of public and private scientists that regularly make suggestions for improvement to the modeling system.

At the same time, models such as IMPLAN have limitations because they are static and use a snap shot in time for the structure of the economy.¹⁴ None-the-less, they do reflect changes in short term economic activity resulting from specific projects with well-known technologies. It is for this reason we find IMPLAN to be best suited to the Cascade Locks study.

¹³Figures are from Nestle Waters North America Evaluates Potential Spring Water Plant in Pacific Northwest, December 2011 and Sheeran, K. and F. Zhou. October 2011. The Proposed Nestle Bottled Water Facility in Cascade Locks: A Preliminary Analysis of Economic Issues. Report prepared for Food and Water Watch. 22 pages.

¹⁴ Crompton, J., S. Lee, T. Shuster. 2001. A guide to undertaking economic impact analysis: the Springfest example. *Journal of Travel Research*. 40(1): 79-87.

For this project we express most of the IMPLAN estimates in terms of output or sales of goods and services, employment in full and part-time jobs, and value added or net income – that portion of sales that are uniquely created in the local economy. When reviewing these projections, remember they are different ways of describing facility construction and bottled water production. While they can be considered together, the individual metrics should not be added together.

The Hood River County economic effects are a subset of the State of Oregon's effects, which are larger because it is likely that a larger percentage of suppliers can be found within the State-wide economy. While we would have preferred to also estimate the economic effects at the City or zip code level for Cascade Locks, we have found that the interpolation required to create zip code level models can lead to significantly less precise estimates than possible at higher levels of aggregation. We have estimated the economic activity derived from the proposed construction and operation of a bottled water facility over two study areas – Hood River County and the State of Oregon.

Bottle Water Facility Construction

To assess the economic impacts of constructing a bottled water plant we use estimates that are based on a one-time snapshot of the entire construction period. The IMPLAN model that we use to make the estimates relies on 2010 data, adjusted to 2012 dollars.¹⁵ Table 3 shows the Hood River County economic activity that may result from constructing a \$50 million dollar facility in Cascade Locks. For this analysis we use a conservative approach, estimating only \$25 million in direct expenditure to cover the site improvements, structure, and basic systems. The production line and other specialized equipment are not likely to be available within Hood River County and may not be available in Oregon. To the extent that such equipment is purchased and/or installed by regional or Oregon businesses the listed amounts would increase.

Following from the general discussion above, the specific types of effects that we show are:

- *Direct Effects* - Changes in the industry that is primarily responsible for building the facility or producing the product;
- *Indirect Effects* - Changes in the intermediate industries which supply the directly affected industries;
- *Induced Effects* - Changes due to people/households spending the incomes they receive working in the directly or indirectly related industries.

¹⁵ This report has been through a peer review process that took over a year. The data we used was the most current (2010) available when we conducted the analysis and we adjusted to the current dollars (2012) at that time.

These three types of effects are expressed in four economic metrics:

- Employment – Full and part-time, which refers to jobs and includes a number of different types of jobs at varying levels of pay. One person might work more than one of these jobs.
- Labor Income which includes payments to employees in the full and part-time jobs
- Total Value Added – which encompasses income earned by employees (labor income), proprietor income, property income (rents and leases), and indirect business taxes.
- Output – which is the value of sales. includes the unique value added or contribution produced by a business and the cost of all the inputs or intermediate goods that are purchased by a business and produced by other businesses. There is a great deal of “double counting” in the sales figure. When a company sells aggregate or rock to a contractor who is doing the site work that sale is included as output. Then, when the contractor charges for the site work the cost of that gravel is included in the price of the work and counted again. Basic inputs can be counted many times. For example, total sales in Oregon are approximately, \$300 billion, however the value added, or net state product that is uniquely produced in Oregon, is approximately \$170 billion.

Table 3. Facility Construction Economic Impacts in Hood River County

<i>Type of Effect</i>	<i>Employment Full & Part-Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Direct (General Contractor)	253	8,418,042	10,255,273	25,000,000
Indirect (Suppliers)	41	1,417,656	2,466,832	4,336,857
Induced (Household Spending)	63	1,812,976	3,619,735	5,960,649
Total Effect	356	11,648,674	16,341,841	35,297,506

Table 4 shows the top ten industries that would be impacted by this facility construction in Hood River County.

Table 4. Business Sectors Most Affected by Facility Construction in Hood River County

<i>Description</i>	<i>Employment Full & Part- Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Construction of new nonresidential manufacturing structures	253	8,418,042	10,255,273	25,000,000
Architectural, engineering, and related services	10	536,618	546,603	978,844
Food services and drinking places	10	158,318	258,443	497,678
Wholesale trade businesses	7	266,682	675,157	940,348
Offices of physicians, dentists, and other health practitioners	5	245,258	256,771	455,962
Private hospitals	5	304,268	333,431	595,463
Real estate establishments	5	30,404	401,866	455,397
Services to buildings and dwellings	4	32,301	63,808	178,369
Legal services	4	156,307	284,917	361,828
Nursing and residential care facilities	3	79,789	93,245	143,441

Table 5 extends the projection to estimate the economic effects of constructing the facility, to include purchases made anywhere in the State. The effects are greater than those in Hood River County since there are many more suppliers and places to make household purchases in Oregon than there are in Hood River County.

Table 5. Facility Construction Economic Impacts, State-level

<i>Type of Effect</i>	<i>Employment Full & Part- Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Direct (General Contractor)	253	8,418,042	10,255,273	25,000,000
Indirect (Suppliers)	51	2,600,139	4,039,258	7,065,069
Induced (Household Spending)	115	4,317,468	7,769,047	12,676,793
Total Effect	419	15,335,649	22,063,578	44,741,862

In economic impact analysis it can be difficult to determine whether the economic effects would have occurred without this project. At this time, we are not aware of projects or estimated incremental growth of the economy that would create similar economic effects, as described below.

Bottled Water Facility Operation

In 2010, 47.9% all U.S. expenditures for food and beverages were for food prepared away from home.¹⁶ Some of the prepared food and beverage expenditures can be considered luxuries and some are considered necessities. Bottled water is probably purchased for both reasons – to accompany a meal at a restaurant, to be more certain of the quality of the water in a strange place, or as an alternative for a beverage the consumer considers less healthy. While the bottled water market has been variable, it is unlikely demand will dramatically decline, and it could significantly increase if recyclable plastic bottles become competitive. There are currently 29 bottled water facilities in Oregon. As the bottled water industry sector grows it can attract and “spinoff” suppliers, and develop skilled employees and proprietors that will reinforce the economic impacts of the industry and contribute to its competitiveness.

For analysis, our jobs estimates are for annual impacts. Nestle estimates the new facility would create up to 50 jobs. We reduce the new jobs estimate to 30 for Cascade Locks/Hood River County (see Table 6) and 40 for Oregon (see Table 7) to capture only the impacts of jobs held by workers in the study areas. Nestle has not made any commitments related to hiring people who currently reside in the region or State. Therefore, the distribution of the economic impacts on current residents is uncertain. Instead we estimate how many workers might eventually reside in the region or State, yet we do not attempt to factor-in their prior residence.

Nestle provided estimates that we use to edit/create an IMPLAN production function for a bottled water sector. The edits reduced the regional purchasing coefficients from the out-of-the-box IMPLAN model. We also remove the proprietor income, or profit, and its related impacts from both the local and statewide calculations. Note the \$25 million in annual sales that we use for plant output is our estimate based on the number of employees, and determined to be reasonable by Nestle. These dollars are different than the construction dollars and just coincidentally total the same amount.

These adjustments reduce the economic effects that we would have calculated if we had used the IMPLAN estimates alone. An example is the expenditure of shipping pallets. Nestle has a national contract for pallets and, initially at least, would be unlikely to purchase their pallets locally. While IMPLAN would not have estimated Nestle could satisfy all of its needs in Hood River County, IMPLAN would have estimated that 78% of the pallets could have been purchased within Oregon. Businesses regularly review their sources for inputs, and over time local entrepreneurs try to produce inputs that are being imported from other domestic or international sources. This is called import substitution, and pallets may be a candidate for that type of substitution.

¹⁶Annette Clauson and Leibtag, Ephraim 2012. Food CPI and Expenditures. USDA/Economic Research Service <http://www.ers.usda.gov/Briefing/CPIFoodAndExpenditures/>

Table 6. Annual Estimated Economic Impacts of Operating a Bottled Water Facility in Hood River County with 50 Employees/30 Residents

<i>Type of Effect</i>	<i>Employment Full & Part-Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Direct (Nestle)	30	1,297,920	1,875,026	25,000,000
Indirect (Suppliers)	26	955,595	1,770,089	5,221,384
Induced (Household Spending)	18	539,961	1,076,827	1,756,913
Total Effect	74	2,793,476	4,721,942	31,978,297

Table 7. Annual Estimated Economic Impacts of Operating a Bottled Water Facility in Oregon with 50 Employees/40 Residents

<i>Type of Effect</i>	<i>Employment Full & Part-Time</i>	<i>Labor Income (\$)</i>	<i>Total Value Added (\$)</i>	<i>Output (\$)</i>
Direct (Nestle)	40	1,730,560	2,307,666	25,000,000
Indirect (Suppliers)	34	1,242,274	2,301,116	6,787,799
Induced (Household Spending)	23	701,949	1,399,875	2,283,987
Total Effect	97	3,674,783	6,008,657	34,071,786

Again, to complete a net economic impact analysis, we need to subtract any measurable negative impacts or future opportunity costs of operating the bottled water facility, as well as add any positive impacts that the bottled water facility might have on indirectly related businesses or economic development strategies. Both the Port and City are working to increase tourism as an economic development strategy. We considered whether or not our analysis should reflect effects on tourism of the bottled water facility.

In the community of Hood River, Oregon, which is 20 miles to the east of Cascade Locks, a large brewery with a bottling facility is located three blocks from the primary tourism center of town. A number of other industrial facilities are located within a half mile of downtown Hood River. We were not able to find studies or popular articles that suggest the bottling facility at the brewery has any negative or positive effect on the tourism of the community of Hood River or on Hood River County. Therefore we have not attempted to reflect positive or negative effects on tourism of the proposed bottled water facility in Cascade Locks.

Beyond Economic Impact Analysis

There are two reasons to look beyond the Economic Impact Analysis (EIA) presented above. First, EIA focuses on economic activity, without assessing the merits of that activity – good or bad. EIA addresses the distribution of impacts among business sectors and geographic regions, but does not consider social impacts to different stakeholders.

Second, EIA does not consider potential negative or positive non-market economic effects. If markets functioned perfectly, prices and quantities observed in the marketplace would reflect all costs and benefits. If this were true, profitable projects would be beneficial to society.

However, if markets do not function perfectly, some costs and benefits are not fully reflected in market prices and quantities. Market failure may result in projects being pursued that are profitable, but not necessarily socially desirable.

Below, we discuss some of the costs and benefits of the Cascade Locks project that may not be fully reflected in the EIA provided above. Our discussion is often in general terms, but becomes more specific as we relate it to the bottled water industry and then the proposed Cascade Locks project.

External Costs and Benefits

Economic costs and benefits not reflected in the market place are called *externalities*. There can be both positive and negative externalities. Positive externalities are benefits that do not accrue to the producer or consumer of a good. For example, a consumer's choice to purchase bottled water at a restaurant in lieu of alcohol may not only benefit the consumer, but may also benefit other drivers on the road as the consumer drives home more safely. Negative externalities are costs that do not accrue to the producer or consumer of the good. For example, a negative externality may exist if beverage containers are not recycled and consumers do not fully pay disposal costs through container deposits or garbage fees. With negative externalities, people who do not receive the benefits of a good share in some of its costs.

Economists have expended great effort trying to estimate the value of positive and negative externalities, so they can be added to the private benefits and costs when evaluating the economic and social net benefits.¹⁷ Three methods are used to estimate how society values externalities: *revealed preference*, *stated preference*, and *avoided cost*.

Revealed preference methods estimate the dollar values of externalities using information on what consumers and producers actually buy and sell. For example, a common revealed preference method is the well-known travel cost method which estimates the benefits of outdoor recreation by looking at how much money and time recreationists pay to travel to and participate in recreational activities. As another example, *hedonic* studies estimate the value of neighborhood amenities by statistically relating real property prices to the intrinsic property characteristics and the neighborhoods' amenities or disamenities.¹⁸

¹⁷U.S. Environmental Protection Agency. 2000. "Guidelines for Preparing Economic Analyses." EPA 240-R-00-003. Washington, DC: USEPA. 227p.

<http://yosemite.epa.gov/EE/epa/eerm.nsf/vwRepNumLookup/EE-0228C?OpenDocument>

¹⁸See, for example, Leggett, C., N. Bockstael. 2000. Evidence of the effects of water quality on residential land price. *Journal of Environmental Economics and Management*. 39(2):121-144.

Stated preference methods rely on peoples' responses to hypothetical situations in various types of surveys. Because the responses people make usually do not have real financial consequences, many economists are skeptical of stated preference methods. Yet, the results of these methods have been used in litigation and, under some conditions, closely reflect actual consumer behavior.¹⁹

Finally, the avoided cost method uses the amount paid to neutralize an externality as an estimate of its cost. For example, if the truck traffic to the bottled water facility is projected to create a level of congestion beyond that which would be anticipated based on existing land use designations, the avoided cost method would estimate the additional cost of mitigating those effects by dispersing, slowing the traffic, and/or cushioning the traffic impacts.

Bottled Water – Global Market and Social Considerations

At the global level, bottled water has been long-consumed in Europe, but its expansion into the United States and other nations has been recent and rapid.²⁰

United States' bottled water consumption has grown every year from 1976 to 2007. In these years, annual bottled water consumption in the United States grew from 354 million gallons (1.6 gallons per person) to 9,075 million gallons (30.2 gallons per person).

From 2007 to 2010 annual bottled water consumption per capita has ranged from 27.6 to 29 gallons. The share of bottled water in United States beverage consumption has risen from 2 percent in 1980 to 14 percent in 2005, while the consumption shares of milk, alcoholic beverages, and coffee have fallen.²¹ An alternative source estimates annual U.S. per capita consumption of water at 58 gallons, including 21 gallons of bottled water, compared to 44 gallons of soda.²² Nestle bottled water production has increased 3.3 percent between 2007 and 2011.²³

Bottled water is popular for a variety of reasons, including perceived better quality and taste, health benefits over higher caloric beverage options, lower levels of contaminants

¹⁹ 24. Vossler, C. and J. Kerkvliet. 2003. A Nonexperimental Test of the Contingent Valuation Method: Comparing Hypothetical and Actual Voting Behavior. *Journal of Environmental Economics and Management*. 45: 631-649.

²⁰ For a history of bottled water and account of the forces contributing to the recent rise of bottled water see Chapelle, F. 2005. *Well Springs: A Natural History of Bottled Spring Water*. Piscataway, NY. Rutgers University Press. For two critical coverages of the bottled water industry in the United States, see Royte, E. 2008. *Bottlemania: How Water Went on Sale and We Bought It*. New York, NY. Bloomsbury and Gleick, P. 2010. *Bottled and Sold: The Story Behind Our Obsession with Bottled Water*. Washington, DC. Island Press.

²¹ The 1976 figures are derived from Earth Policy Institute, http://www.earth-policy.org/index.php?/data_center/C21/. The share of carbonated beverages also increased during the period, from 25 percent in 1980 to 29 percent in 2005. The 2007-2010 numbers are from "Bottled Water Sales Return to Growth in 2010". June 2011. *Vending Times*. 51(6)

²² Choi, C, 2013. Water sales heat up, taste for soda fizzles. *The Seattle Times*. March 12. pp. A6-A7.

²³ David Palais of Nestle Waters. Personal Communication. April 5, 2012.

and other chemicals, convenience, and style.²⁴ Some question the rationality of bottled water consumers because it is substantially more expensive than alternatives, such as tap water. However, this criticism does not account for the different attributes of bottled water, including convenience, safety, or style, which consumer value.²⁵

Increased bottled water consumption may have human health implications. First, bottled water consumption may provide a safer drinking water alternative to tap water when public water delivery systems or domestic ground water supplies are compromised. Studies have shown that safety and health-related concerns are among the primary reasons given by U.S. consumers for bottled water consumption.²⁶ Second, bottled water may serve as a healthier alternative to other bottled beverages, including sweetened sodas.

The consumption of sweetened sodas is linked to obesity, type-2 diabetes, and other health problems.²⁷ Some evidence exists that consumers will substitute bottled water for other beverages under certain conditions.²⁸ A study conducted in a Canadian school cafeteria found that removing bottled water from the available choices resulted in substantive substitution toward sweetened beverages.²⁹

To the extent that bottled water consumption can lead to better health outcomes, which in turn lead to lower public health expenditures, there could be positive externalities associated with increased bottled water consumption. However, we are not aware of any evidence that the Cascade Locks' facility would increase bottled water consumption in the region.³⁰

Environmental Concerns

At the global or market level beyond Cascade Locks and even Oregon, the production and consumption of bottled water and the disposal of its containers may also raise environmental concerns. Some of these concerns can be put in terms of negative and positive externalities. Ferrer (2001) discusses general environmental concerns related

²⁴Ferrier, C. 2001. Bottled Water: Understanding a Social Phenomenon. *AMBIO: A Journal of the Human Environment*. 30(2):118-119.

²⁵Jakus, P., Shaw, D., Nguyen, T., Walker, M. 2009. Risk perceptions of arsenic in tap water and consumption of bottled water. *Water Resources Research*. 45:

²⁶Ferrier, C. 2001. Bottled Water: Understanding a Social Phenomenon. *AMBIO: A Journal of the Human Environment*. 30(2):118-119 and Jakus, P., Shaw, D., Nguyen, T., Walker, M. 2009. Risk perceptions of arsenic in tap water and consumption of bottled water. *Water Resources Research*. 45:

²⁷Chaloupka, F., L. Powell, and J. Chirque. 2009. Sugar-sweetened Beverage Taxes and Public Health. Issue Brief. Robert Wood Johnson Foundation. July. Accessed June 12, 2012 at: <http://www.rwjf.org/files/research/20090715beveragetaxresearchbrief.pdf>

²⁸Uri, N. 1986. The Demand for Beverages and Interbeverage Substitution in the United States. *Bulletin of Economic Research*. 31(1): 77-85 and Dori, M. 2006. Bottled Water Versus Tap Water: Understanding Consumers Preferences. *Journal of Water and Health*. 4(2): 271-276..

²⁹Toronto District School Board. 2009. Report No. 02-09-1388. RTS No. 401. Accessed at <http://council.london.ca/meetings/CNC%20Reports/2011-02-15%20Report/Item%2020.pdf>, June 12, 2012.

³⁰Dave Palais, Nestle Waters, does not expect an increase in bottled water consumption to result from the Cascade Lock's project. Personal communication. April 5, 2012.

to bottled water, including impacts on surface and groundwater supplies and associated fisheries, increased litter and contamination from bottled water packaging, and increased transportation and associated pollution.³¹

Food and Water Watch (2009), Ball (2010), MIG, Inc. (2011), and Sheeran and Zhou (2011) present environmental and economic concerns specific to the Cascade Locks project.³²The potential negative externalities suggested include a negative impact on groundwater and fisheries from withdrawing water from Oxbow Springs, increased traffic congestion on Interstate 84, community disruption and safety concerns from truck traffic through the city to the bottling plant, increased litter and contamination from bottled water containers, increased use of fossil fuels, negative impacts on Cascade Locks infrastructure, and a degradation of the scenic qualities of the Columbia River Gorge.³³In the sections below, we specifically discuss environmental and economic concerns associated with the proposed Nestle Cascade Locks project. The discussion, though not providing specific economic impacts, can be used by the City and Port to guide additional research and weigh against the positive direct economic impacts discussed earlier, to approximate a net impact of the proposed bottled water plant.

Water, Fisheries, Hatchery Operations, and Wastewater

Integral to the proposed project is an exchange of water from Oxbow Springs to the City of Cascade Locks.

Oregon Department of Fish and Wildlife (ODFW) now holds a water right to 10 cubic feet per second (cfs), or about 6.46 million gallons per day (gpd), "...from which it is considering dedicating five percent (.05 CFS) for the exchange."³⁴Oxbow Springs. ODFW uses some of this water for egg incubation and early rearing of Chinook, Coho, and sockeye salmon at its Oxbow Hatchery.³⁵

³¹Ferrier, C. 2001. Bottled Water: Understanding a Social Phenomenon. *AMBIO: A Journal of the Human Environment*. 30(2):118-119.

³²Food and Water Watch. 2009. Help keep a Nestle' water bottling plant out of the Columbia River Gorge. Fact Sheet. November ; Ball, D. 2010. Bottled water pits Nestle vs. greens. *Wall Street Journal*. May; Sheeran, K. and F. Zhou. October 2011. The Proposed Nestle Bottled Water Facility in Cascade Locks: A Preliminary Analysis of Economic Issues. Report prepared for Food and Water Watch. 22 pages; MIG, Inc. January 2011. Cascade Locks Public Forum, November 17, 2010, Meeting Summary. Berkeley, CA.

³³Food and Water Watch. Help keep a Nestle' water bottling plant out of the Columbia River Gorge. Fact Sheet. November 2009.

³⁴Attachment 2 Background Report Proposed Water Exchange ODFW Oxbow Hatchery/City of Cascade Locks August 23, 2013. http://www.dfw.state.or.us/agency/commission/minutes/13/09_sept/Exhibit%20B_Attachment%202_Background%20Report%20Proposed%20Water%20Exchange_082313.pdf

³⁵Oregon Department of Fish and Wildlife, Oxbow Hatchery Operations Plan 2012.

“Under any agreement, ODFW would retain ownership of its water rights. The proposal is a water exchange; the water right holder in an exchange does not give up its control of the water right.”³⁶ Nestle would purchase the Oxbow Springs water from the City and use the water for bottling. ODFW would receive replacement water from City groundwater wells, with Nestle paying for the infrastructure needed to transport City well water to the Oxbow hatchery. The additional infrastructure development could be used beyond the benefits to bottled water plant. Fuller use of the City’s excess water capacity could affect a transfer both in terms of capital improvements and operating revenue to the City from the State.

The City supplies domestic water from groundwater contained in the sandy gravels underlying Herman Creek under Water Permit G1266, which is for 3.5 cfs³⁷ or approximately 2.262 million gpd of groundwater.

The City uses two pumped wells to produce domestic water which have a combined capacity of 1.4million gpd. Currently, the city utilizes about 150,000 gpd during winter months and 300,000 during summer months.³⁸

Nestle proposes to draw all of the .05 cfs from the Oxbow Spring exchange with the City for bottling. Nestle will also use water from the City’s wells for office use and production processes other than the water that is placed in the bottles. Current utilization rates compared to reported pumping capacity do not suggest that the Nestle facility would overtax the City’s water production capacity or its groundwater resources.

Two studies have addressed the potential impacts on fisheries and hatchery operations. The first investigated the possibility that groundwater withdrawals would result in increased water temperatures at Herman Creek Cove on the Columbia River and adversely impact adult steelhead and Chinook salmon. The authors conclude:³⁹

“[The] persistence of a large cool water pool at depth in Herman Creek Cove that is generally about 7 degrees F (4C) cooler than surface water and 11 degrees (6C) cooler than the Columbia River indicates that the predicted changes in temperatures of Herman Creek due to the water exchange would be far less than would be required to destabilize thermal stratification within the Cove (Executive Summary, p. 1)

³⁶Attachment 2 Background Report Proposed Water Exchange ODFW Oxbow Hatchery/City of Cascade Locks August 23, 2013. http://www.dfw.state.or.us/agency/commission/minutes/13/09_sept/Exhibit%20B_Attachment%202_Background%20Report%20Proposed%20Water%20Exchange_082313.pdf

³⁷Hood River County LINKS to Water Planning Group documents and data http://www.co.hood-river.or.us/index.asp?Type=B_BASIC&SEC={FE70783E-39E7-462A-B147-2F58DE75EC63}&DE={6C3794CA-57CB-427A-9C1E-338A744EAC1A} and the Oregon Water Resources Document Vault <http://apps.wrd.state.or.us/apps/misc/vault/default.aspx>

³⁸Sheeran, K. and F. Zhou. 2011. The Proposed Bottled Water Facility in Cascade Locks: A Preliminary Analysis of Economic Issues. report prepared for Food and Water Watch.

³⁹Dominguez, L., Cramer, S., Duery, S. 2010. Temperature characteristics of Herman Creek Cove and its function as a cool-water refuge of adult salmon and steelhead in the Columbia River. Cramer Fish Sciences. Report prepared for Nestle’ Water North America. December 20.

The second study tested the appropriateness of using groundwater to raise fish in the Oxbow hatchery. Specifically, the study tested for pathogens and increased mortality in 713 rainbow trout raised in a tank containing water pumped from Cascade Locks' wells. In a letter to the City of Cascade Locks⁴⁰, ODFW reports that, "no pathogens or health issues were found either in the mortalities or the healthy fish in the test tank throughout the test period." The letter also states that two other tests remain to be completed, yet we have not been able to determine the results of these tests.

The City's wastewater treatment facility was built in 1998 and has a capacity of 480,000 gpd. It is currently operating at 20 percent capacity, processing 96,000 gpd. The Nestle plant will produce between 108,000 and 288,000 gpd of wastewater.⁴¹ Cascade Locks' wastewater treatment plant could process this volume and still be at between 42.5 and 80.0 percent capacity.

Traffic

A potential negative externality is the noise, community disruptions, and safety concerns resulting from an estimated 210 truck trips per day on I-84 and in the town of Cascade Locks.⁴² At the City level, the greatest impacts will be a traffic increase that would occur on the Frontage Road between the weigh station and Forest Lane, with a minor increase on WaNaPa Street. Four factors could affect how these traffic impacts are valued. First at the State level, because Nestle currently serves its Pacific Northwest customers from California bottling facilities, Cascade Locks production may reduce traffic associated with other bottling plants and reduce total truck miles for delivering bottled water to the Pacific Northwest. Second, the increased truck traffic on I-84 will represent a nine tenths of one percent increase over existing traffic volume. In 2010, average annual daily traffic at milepost 43.38 (near the West Cascade Locks interchange) was 22,400 vehicles, of which 77 percent were passenger cars and motorcycles and 23 percent were trucks. The 210 truck trips per day attributable to the Nestle facility represents nine tenths of one percent increase in total traffic over the 2010 levels and a 4 percent increase in truck traffic.⁴³ Third, some business owners express positive attitudes towards increased truck traffic in downtown Cascade Locks. Fourth, traffic in the center of the City could be entirely eliminated if trucks were directed

⁴⁰ Otto, W. February 24, 2011. Letter to George Fisher, City of Cascade Locks.

⁴¹ Sheeran, K. and F. Zhou. October 2011. The Proposed Nestle Bottled Water Facility in Cascade Locks: A Preliminary Analysis of Economic Issues. Report prepared for Food and Water Watch. 22 pages

⁴² Hedonic methods for measuring the value of traffic disamenities are well developed. For example, see Nelson, J. 2008. Hedonic property value studies of transportation noise, aircraft, and road traffic. Chapter 3 in A. Baranzini, et al. (eds) *Hedonic Methods in Housing Markets*. Springer-Business Media. Existing literature provides evidence that increased traffic could result in the loss of benefits for some residents. For example Kawamura, K. and Mahajah, S. 2005. Hedonic Analysis of Impacts of Traffic Volumes on Property Values. *Transportation Research Record: Journal of the Transportation Research Board*. 124:69-75.

⁴³ Average annual daily traffic data was obtained from Oregon Department of Transportation (http://highway.odot.state.or.us/cf/highwayreports/traffic_parms.cfm), accessed July 16, 2012. Vehicle classifications 5-13 were counted as trucks.

to travel east on I-84 to the Wyeth interchange, reverse direction on I-84, and exit to the potential plant site on Herman Creek Road. A Nestle representative has indicated that this may be an option at some point.⁴⁴

Litter

One potential negative effect is the increased litter and solid waste resulting from the project. If bottles are not recycled, and deposits and garbage fees do not fully cover the costs of disposing of bottles, increased bottled water consumption could create negative impacts that become a progressive concern if disposal sites and their capacities become more limited. However, there will only be a net negative impact specific to the Cascade Locks plant if the plant results in increased bottled water production. We are not aware of any evidence that this will be the case.

Oregon's 5 cent refundable deposit on bottled water containers mitigates some potential litter costs. Estimated return rates on such containers are between 70 and 90 percent.⁴⁵ The costs of disposing of containers that are not recycled may be covered by waste disposal user fees. More research in this area is warranted. If the bottled water produced in Cascade Locks is sold in Washington State or any other state without a deposit system, it is likely that the bottles would create significant negative externalities.

Such negative externalities may only last a short time. Evidence suggests that citizens are addressing the negative externalities as seen in the recent efforts to ban single-use plastic bags, and there are regular analyses being conducted in Washington regarding implementing a bottle bill.⁴⁶ Conversely, some citizens are acting on concerns about litter by banning the sale of bottled water.⁴⁷

There is a potential for reduced litter and solid waste problems in lighter weight or compostable bottles. One study found that lighter weight bottles combined with 100 percent recycling could produce as little solid waste as tap water delivery systems.⁴⁸

⁴⁴ MIG, Inc. January 2011. Cascade Locks Public Forum, November 17, 2010, Meeting Summary. Berkeley, CA.

⁴⁵ The 90 percent figure is from Oregon Bottle Bill, Wikipedia, accessed June 12, 2012 at http://en.wikipedia.org/wiki/Oregon_Bottle_Bill. The 70 percent figure is from Bottle Bill Resources Guide, accessed June 12, 2012 at <http://www.bottlebill.org/about/benefits/waste.htm>.

⁴⁶ For example, the City of Seattle instituted a ban on plastic shopping bags on July 1, 2012.

⁴⁷ Concord, MA banned the sale of water bottles less than one liter in 2013. The University of Vermont banned the sale of bottled water in 2012. Choi, C. 2013. Water sales heat up, taste for soda fizzles. The Seattle Times, March 12. pp. A6-A7.

⁴⁸ State of Oregon. 2009. Life Cycle Assessment of Drinking Water Systems: Bottle Water, Tap Water, and Home/Office Delivery Water. Report prepared for Land Quality Division by Franking Associates.

Tourism

A final potential adverse impact of the facility we considered is the loss of scenic values in the Columbia River Gorge National Scenic Area. This is an important concern in that the amenity-led development resulting from the Scenic Area has become an important driver of local economies, including tourism and in-migration.⁴⁹ However, the industrial site for the proposed bottled water plant is only partially visible from the Columbia River, I-84, or Highway 14 in Washington. In addition, the Industrial Park is within the City limits of Cascade Locks. The Scenic Area regulations recognize the need for development within city limits and exempt those developments. Cascade Locks is a small community of only 2 square miles, and is constrained by an existing Scenic and Wilderness Areas and the Columbia River. It would take an act of Congress to expand beyond the current urban growth boundary.⁵⁰ As a result, any construction to support economic development would need to be placed within the currently available space.

Potential Positive Effects

There are three areas that may be positively impacted by the proposed project.

Hatchery

Currently, fish production at Oxbow Hatchery can be limited by low summer flows from Oxbow Springs. Using well-produced municipal water, as proposed in the bottled water plant design, more regular summer water flow can be assured and the hatchery may be able to increase the production of sockeye and Coho salmon.⁵¹

Reduced fossil fuel use

A positive impact of the project could be reductions in diesel and gasoline used for transportation. The construction of a Nestle facility in Cascade Locks is likely to result in a decrease in fossil fuel consumption as the Cascade Locks plant is used instead of the existing Nestle plants in California, to produce and transport bottled water for the Pacific Northwest. Transport mileages from Cascade Locks to Pacific Northwest markets would be less than current ones, resulting in a savings of fossil fuel.

This positive impact could be offset if there are additional energy requirements for the Cascade Locks facility while other Nestle facilities continue to produce at current levels.

⁴⁹Kraemer, N. 2009. Boardfeet to Boardheads: Natural Amenity-led Development in the Columbia River Gorge National Scenic Area. Terminal Project. School of Architecture and Allied Arts. University of Oregon.

⁵⁰E-mail communication from Chuck Daughtry, Port of Cascade Locks, April 12, 2012.

⁵¹Sheeran, K. and F. Zhou. October 2011. The Proposed Nestle Bottled Water Facility in Cascade Locks: A Preliminary Analysis of Economic Issues. Report prepared for Food and Water Watch. 22 pages; and personal communication with Oxbow Hatchery personnel.

Attachment 2 Background Report Proposed Water Exchange ODFW Oxbow Hatchery/City of Cascade Locks August 23, 2013. http://www.dfw.state.or.us/agency/commission/minutes/13/09_sept/Exhibit%20B_Attachment%202_Background%20Report%20Proposed%20Water%20Exchange_082313.pdf

Total energy use will also be dependent on the extent to which bottled water containers are recycled. Using recycled material to create the plastic bottles consumes two thirds less energy than using raw feedstock for bottle making.⁵² A life cycle analysis commissioned by the State of Oregon Department of Environmental Quality concluded that energy used in bottle production accounts for the majority of energy use in bottled water delivery systems, except in long (cross country) transportation scenarios.⁵³

Social

Cascade Locks' social structure has been severely disrupted over the last few years. The mayor and the majority of the city council were recalled in 2011 and have been recently replaced. The high school was closed and the students are being bused to Hood River. Local fire protection has been recently reinstated after reconciling financial problems.

It is difficult to imagine that a major portion of these problems is not caused by or at least exacerbated by the community's economic distress. Even with all the help provided by federal, state, and local governments to overcome the loss of the jobs in the wood products industry, the community is experiencing significant stress. If the community expands or is successful in attracting basic industrial employers it is likely to experience increased economic and social resilience.

Communities that struggle economically also struggle to address the related social costs. Through this analysis, we are not making an attempt to quantify the social benefits of the bottled water plant, but suggest there may be significant impacts.

There may be a threshold effect in terms of the increased economic activity from a bottled water plant affecting the social vitality of the community. While it seems reasonable to anticipate positive effects from an incremental development of the bottled water facility (for example, starting with just one line of production), the relationship of economic and social impacts to the community may not be linear thereby less than half the effects with one line of production. At the same time, it may not be possible to justify two lines of production without an initial testing phase at 50% capacity.

⁵²Gleick, P., Cooley, H. 2009. Energy Implications of bottled water. *Environmental Research Letters*. 4(1):

⁵³State of Oregon. 2009. Life Cycle Assessment of Drinking Water Systems: Bottle Water, Tap Water, and Home/Office Delivery Water. Report prepared for Land Quality Division by Franking Associates.

Considerations

A bottled water facility in Cascade Locks, Oregon as described in this report, could contribute 356 full or part-time jobs and \$16.3 million in one-time additions to the economy of Hood River County during construction, and 74 full or part-time jobs and \$4.7 million in income annually during operation of the bottled water facility. The impacts are even larger on a statewide basis. We have discussed a variety of positive and negative impacts of such a project. In addition, there are always tradeoffs or opportunity costs for any decision. When one economic development initiative like a bottled water facility is created, some other type of development may be precluded or affected. Hopefully in this report we have provided useful ways to evaluate those opportunity costs and compare them to the additional economic activity that a new bottled water facility will contribute to the economy.

APPENDIX A

"The Heart of the Columbia River Gorge"



City of Cascade Locks
PO Box 308 140 SW Wanaqua St.
Cascade Locks, OR 97014

(503) 374-8752 TTY: 711

Bruce Sorte
Rural Studies Program
Dept of Agricultural & Resource Economics
Oregon State University
213 Ballard Hall
Corvallis, OR 97331-3601

Feb. 11, 2013

Dear Mr. Sorte:

The City of Cascade Locks has been approached by a major bottled water retailer who desires to build a bottling plant in our Industrial Park and market that product through a wide distribution network. As part of our due diligence process we would like the Rural Studies Program to develop an economic analysis of constructing and operating a bottled water facility in Cascade Locks. Would you please also provide an overview of the nonmarket issues, including environmental issues, that may need to be considered related to a proposed bottled water facility?

We appreciate any assistance you can provide the City of Cascade Locks as we face this opportunity.

Sincerely,

Tom Cramblett
Mayor, Cascade Locks

The City of Cascade Locks is an Equal Opportunity Provider.

Port of Cascade Locks

The Port of Cascade Locks Commission Meeting was held Thursday, February 7, 2013, at the City of Cascade Locks Council Chambers, Cascade Locks, OR 97014.

- I. **Meeting called to order/ Pledge of Allegiance:** Commission President Groves called the meeting to order at 6:00 pm.
- II. **Roll Call:** Commissioners Groves, Caldwell, & Cramblett were in attendance. Commissioner Mohr was excused.
 - **Others Present:** Interim General Manager (IGM) Paul Koch, Port Attorney Jerry Jaques, Port Staff Kristi Bengtson, BreAnna Porter, Holly Howell, Gary Rains, & Dale Davis. Others: Ken Hutton, Don Haight, Gyda Haight, City Administrator Gordon Zimmerman, Rick Cyphers-Port Auditor (Onstott, Broehl & Cyphers), Caitlin Sause (Ball Janik), City Council Member-Bruce Fitzpatrick, Camera Operator Betty Rush.
- III. **Declaration of Potential Conflicts of Interest:** None
- IV. **Modifications, Additions to Agenda:** Item C –Presentation deferred until the next meeting.
- V. **Items from the floor:**
 - a. **Review of Audit - Rick Cypher's (Onstott, Broehl & Cyphers):**

Mr. Cypher's reviewed the report –Exhibit A

Mr. Cypher's reviewed mgmt. letter –Exhibit B

Mr. Cypher's reviewed the recommendations.

 - Apply for credit card and cancel current debit card.
 - Written formal travel and reimbursement policy.

IGM Koch commented that these items will be included in the priority setting meeting.

Commissioner Groves asked Mr. Cypher's if he believes that the Port is doing things correctly. Mr. Cypher commented yes he does believe that the Port is doing things correctly.
 - b. **Report from Caitlin Sause - Ball Janik, LLC:** Ms. Sause works as a lobbyist with Ball Janik LLC representing the Port at the State level regarding Nestle. Ms. Sause commented that there are some bills currently being reviewed in regards to water, stated that she keeps the legislators informed of anything relating to Nestle or potential impacts on the project. Ms. Sause commented about a letter of support from Representative Johnson & Senator Thomsen.

c. Approval of request for Nestle Economic Impact Analysis from OSU:

IGM Koch commented that Bruce Sorte, community Economist for OSU Extension Service has asked that the Port Commission to make a formal request for his final version of the impact of a bottled water facility in Cascade Locks. IGM Koch commented that this report provides a profile of the community and the past economic shocks the community has experienced, documents the economic impacts of constructing and operating a major water bottling plant in Cascade Locks and was originally requested to be done by the Port & City.

COMMISSIONER CALDWELL MADE A MOTION AUTHORIZING IGM KOCH TO FORMALLY REQUEST THE FINAL REPORT FROM BRUCE SORTE AND OSU. COMMISSIONER CRAMBLETT SECONDED THE MOTION. Commissioners Groves, Caldwell, & Cramblett voted yes. Motion passed.

APPENDIX B

Attached as separate document.