Mineral Valuation

OPINION OF THE VALUE OF THE ECONOMICALLY RECOVERABLE GLACIAL SAND AND GRAVEL AGGREGATES CONTAINED WITHIN THE PENNY CREEK PIT, LOCATED IN SECTIION 23, TOWNSHIP 27 NORTH, RANGE 2 WEST, W.M., JEFFERSON COUNTY, WASHINGTON

Prepared for:

GREGORY L. GOODMAN, MAI
VALBRIDGE PROPERTY ADVISORS
506 2ND AVENUE, SUITE 1001
SEATTLE, WA 98104

FEBRUARY 28, 2017

McLUCAS & ASSOCIATES, INC.

CONSULTING GEOLOGIST
INDUSTRIAL MINERALS AND AGGREGATE SPECIALISTS

"IT'S ALL ABOUT THE ROCK – PERMITS – MARKET AREA"

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mclucastaylor@qwestoffice.net

Gregory L. Goodman, MAI
Managing Director
Valbridge Property Advisors
506 2nd Avenue, Suite 1001
Seattle, WA 98104

February 28, 2017

RE: Updated Mineral Valuation of sand and gravel resources contained within the Jefferson County Penny Creek Pit

Dear Ms. Goodman:

The following report represents our opinion of value for the sand and gravel reserves, contained within the Penny Creek Pit located in Jefferson County, Washington. Upon completion of your review of this document, please call so that we can discuss its contents, scope, and results.

Thank you for the opportunity to work on this most interesting project.

Respectfully,

Glennda McLucas
President, RPG

Respectfully,

Stephen Taylor
V.P. Mineral Valuations

State of Washington
Engineering Geologist
678
Licensed Geologist
GLENNDA B. McLUCAS

SUMMARY

In July, 2014, McLucas and Associates, Inc. (McLucas) was retained by Gregory Goodman, MAI, and Managing Director of Valbridge Property Advisors for developing an opinion of the present value of economically-and-legally-recoverable sand and gravel resource contained within the Penny Creek Pit, owned by Jefferson County. In February, 2017 McLucas was retained again to provide an update to the 2014 Mineral Valuation of the Penny Creek Pit. Jefferson County is currently entertaining the potential of selling the 29.4-acre mine site. This Updated Mineral Valuation is being provided for this purpose.

The mine site is located near Quilcene, Washington, within Section 23, Township 27 North, Range 2 West, W.M. McLucas was also charged with the task of determining the quality and quantity of aggregates which the property contains. In 2014, McLucas obtained aggregate samples, and had Materials Testing & Consulting, Inc. provide the necessary testing of rock quality. These results are included in the Material Quality Section of this report.

The mining property consists of 29.4-acres, which is approved, and permitted to mine construction aggregates in Jefferson County, Washington, and approved for reclamation by the Washington State Department of Natural Resources (WSDNR). The mining permits are very old, but do not require a new Jefferson County Mining Permit for borrow run and screening of aggregates. Additional processing such as crushing or washing of aggregates would require a new Jefferson County Conditional Use Permit. These Jefferson County Permits can be obtained from county as noted by enclosed correspondence located in the Permit Section of this report. The reclamation permit with Washington State Department of Natural Resources requires an updated reclamation permit which is straight forward requiring a SM-8A, Narrative, and New Map Set.

The property has been mined "on and off" since 1972 by property owner James D. Dutton, and Carl A. Willrich. The site had originally been issued a "Determination of Non-Significance" by Jefferson County, which gave the property owner the right to mine aggregates from the property site. An SM-6 was signed in November 1972 by Jefferson County. In October 1989 Jefferson County purchased the property from Dutton/Willrich, and was issued an Operating permit from WSDNR. These documents can be reviewed in the Permit Section of this report.

It has been estimated that the permitted portion (29.4 acres) of the mine site has approximately, 1.9 million tons of legally-extractable sand and gravel reserves available for mining. Through the process of the Current Market Analysis, McLucas has determined that the Projected Average Weighted Price Per-Ton is $10.89. McLucas Market Analysis has determined that a 10% of the Average Price Per Ton generates a starting royalty of $1.09 per ton. McLucas has used the 5-year average, 1.76% of the Consumer Price Index (CPI) to escalate the production, and a 5-year average 3.87% of the Producers Price Index (PPI) to escalate the royalty over a (20) year mine life. A 9.41 percent discount rate was utilized consisting of 3.41% cost of money, 4% rate fluctuation (1% for every 5 DCF years) of the cost of money, and a 2% risk factor.

In conclusion, McLucas has generated a 20-year valuation spreadsheet (Table 1) (which concludes that the 1.9-million-ton aggregate reserve has a Net Present Value (NPV) of $393,233.

The subject valuation does not include:

(1) Determination of the reversionary value of the 29.4 acre mine post-mining real estate in 30-years, nor the timber value, if any.

INTRODUCTION

Stephen Taylor, Vice President Mineral Valuations, and Glennda McLucas, Registered Washington State Professional Geologist (RPG), officers of McLucas & Associates, Inc. (McLucas), were retained by Valbridge Property Advisers, and Jefferson County. The purpose of McLucas' involvement is to provide an updated mineral valuation for the remaining aggregate reserves contained within the Penny Creek Pit.

McLucas has been providing Mineral Valuations for over 35 years. Glennda and Steve are vetted vendors with the Internal Revenue Service for mineral valuations in tax donation mine claims. McLucas has provided over 100 mineral valuation the past years to mine operators, banks, cities, counties, northwest state agencies, and federal agencies. McLucas is a licensed geologist in Oregon, and Washington, and has limited agreements in Idaho, Montana, and Canada. McLucas also provide mineral valuations for the Washington State Department of Transportation in condemnation cases. McLucas valuations have been used by mine owners to settle ownership disputes, financing, and sale of mine operations. Please review enclosed McLucas brochure for additional information.

The purpose of this report is to present an opinion of the fair-market value of the sand and gravel resources contained within the Penny Creek Pit site, which is the subject of this updated sand and gravel mineral valuation. Fair-market value is defined as the most probable price that a willing buyer would be justified in paying for recoverable sand and gravel resources contained within the subject property, owned in fee simple by Jefferson County, Washington.

McLucas traveled to the site in August, 2014 for collecting sand and gravel samples to be tested by Material Testing Corporation, and to conduct a review of the site with Scott Stewart, representative of Jefferson County. McLucas has reviewed documents that have been submitted by Jefferson County, and feel comfortable with this report. McLucas did not travel to the site this year, but reviewed the property via Google Earth. McLucas talked with Jefferson County to see if there had been any activity or changes to the site. McLucas found that there had not been any changes to the site, permits, or mining.

The following contents of this report outline McLucas' due-diligence in reviewing all aspects of the mine operation, permits, market area, and all legal pertinent documents.

SITE DESCRIPTION

CURRENT CONDITION

The Penny Creek Mine site has been mined for the past 40 plus years. Early ownership of Dutton/Willrich mined an estimated 10% of the mine site from 1972 to 1989. Jefferson County purchased the site in 1989, and have not mined the site to this current date. It appears that the Fir has been harvested in the past, and 20% of the site has been cleared of trees. Bruch has overgrown the open areas; a variety of tress encompass the remaining 80% of the site.

PROJECT LOCATION

As illustrated by the enclosed aerial photos, the Penny Creek site is located within Jefferson County, Washington, approximately 1 mile southeast of the City of Quilcene via US 101, which forms the subject site's southern boundary. The property's eastern boundary is Pete Beck Road. The entrance to the site is the intersection of US 101 and Penny Creek Road, which is at the corner of the western boundary.

LEGAL DESCRIPTION

The approximate 30-acre Penny Creek Pit site occupies a portion of Section 23, Township 27 North, Range 2 West, W.M., Jefferson County, Washington.

OWNERSHIP

The ownership of the property is Jefferson County, Washington. The Jefferson County Assessor & Treasurer indicates the property is free and clear of any liens. These documents can be reviewed in the Title Section of this report.

ACCESS CONDITIONS

Traveling northeast via US 101 on the Olympic Peninsula, the intersection of US 101 and Penny Creek Road, somewhat hard to see traveling north, is where the entrance gate is located, close to this intersection. If you travel just a short distance you will see Pete Beck Road, the eastern boundary of the property, you have traveled a little too far. The site is approximately 1 mile southwest of Quilcene, Washington.

SITE DESCRIPTION

The 30-acre site is an irregular rectangular in nature, except for the southern boundary, which is formed by US 101). The site description is as follows;

a) A 10% mined floor with brush covering this area.

b) There is approximately 20% of the site that has had the trees cleared, and now is covered with brush.

c) The site has been logged for the Fir, and approximately 80% of the site is covered with other species of trees.

d) The site rises in elevation from the previous east mining floor of 128' msl, to the treed area of the west boundary at approximately 190' msl.

e) At the 165' msl area a flat terrace area is present and contains the road that leads down to the pit floor.

GEOLOGY - TOPOGRAPHY - WATER

REGIONAL GEOLOGY

The Olympic Mountains, an extension of the Coastal Range from Oregon, is the core of the Olympic Peninsula. The area is known for spectacular mountains, lush rain forests, and pristine coastlines. The peninsula is bordered by the Pacific Ocean, to the west, the Strait of Juan de Fuca to the north, and Hood Canal to the east. The southern flanks of the Olympic Mountains adjoin the lowlands of Grays Harbor basin. The Olympic Mountains catch moisture-laden Pacific storms, causing an average of 140 inches of precipitation in one year. The areas' highest point is Mount Olympus at 7,965 feet above sea level.

GEOLOGY SEDIMENT PROFILE

The Coast range basement consists of Eocene Crescent Formation basalts, which were erupted close to North American in a marine setting. The formation consists mostly of thick submarine basalt flows such as pillow lavas. Locally, sub aerial flows are preserved where islands formed during the Eocene. The Crescent Formation was deposited upon continentally derived marine sediment sand is locally inter bedded with Eocene limy red sediments that now are limestone. During the middle Eocene, about 50 million years ago, the Crescent Formation was deformed due to accretion to North American. A thick sedimentary accretionary prism formed offshore at about this time. Sediments from the prism were thrust or under-plated beneath the Crescent Formation Uplift of the Olympics during middle to late Miocene time was possibly caused by arching of the sub ducting oceanic slab sedimentary rocks are now exposed in the core of the Olympics.

SITE SAND AND GRAVEL GEOLOGY

The north and east flanks of the Olympics were subject to erosion by continental ice sheets during the Pleistocene. Alpine glaciers also sculpted the Olympic Mountains. Thick deposits of sand and gravel fill valley bottoms and cover the coastal plains. Raised wave-cut platforms along the west coast indicate periods of uplift. Many of down warped Hoh mélange rocks in a matrix of clay formed diapers or piercement structures that were active through the Pliocene and Pleistocene. Offshore, they deform Holocene sediments

SITE TOPOGRAPHY AND DRAINAGE

The site represents a bedrock-controlled sand and gravel terrace that slopes eastward from the western boundary with an elevation more than 190 feet MSL at the intersection of Penny Creek Road and US 101 to the east boundary of Pete Beck Road at an elevation of 155 feet MSL. The previous mining area (10%) is at an elevation of 128' MSL. This creates an upward sloping terrace that extends west up to 62 feet in height.

GROUND WATER

The site did not have a water well in place. McLucas did not attempt to obtain local well information, since the current Jefferson County Permit does not allow for the washing of aggregates on site.

GEOLOGY OF WASHINGTON - OLYMPIC MOUNTAINS

The Olympic Mountains, an extension of the Coast Range from Oregon, form the core of the Olympic Peninsula. The area is known for spectacular mountains, lush rain forests, and pristine coastlines. The peninsula is bordered by the Pacific Ocean to the west, the Strait of Juan de Fuca to the north, and Hood Canal to the east. The southern flanks of the Olympic Mountains adjoin the lowlands of Grays Harbor basin. The Olympic Mountains catch moisture-laden Pacific storms, causing an average of 140 inches of precipitation per year. Some locations have recorded nearly 200 inches of precipitation in one year. The area's highest point is Mount Olympus at 7,965 feet above sea level.

The Coast Range basement consists of Eocene Crescent Formation basalts, which were erupted close to North America in a marine setting. The formation consists mostly of thick submarine basalt flows such as pillow lavas. Locally, subaerial flows are preserved where islands formed during the Eocene. The Crescent Formation was deposited upon continentally derived marine sediments and is locally interbedded with early Eocene limy red sediments that now are limestones. During the middle Eocene, about 50 million years ago, the Crescent Formation was deformed due to accretion to North America. A thick sedimentary accretionary prism formed offshore at about this time. Sediments from the prism were thrust or underplated beneath the Crescent Formation. Uplift of the Olympics during middle to late Miocene time was possibly caused by arching of the subducting oceanic slab. The Crescent Formation was arched into a major antiform. Metamorphosed sedimentary rocks are now exposed in the core of the Olympics.

On the flanks of the Olympic Peninsula, marine nearshore clastic sedimentation continued throughout the Oligocene and early Miocene. By the middle Miocene, convergence of the Juan de Fuca plate with the North American plate accelerated to the point that sedimentary, volcanic, and metamorphic rocks along the west flank of the Olympics were broken, jumbled, and chaotically mixed to form a melange. This formation is known as the Hoh rock assemblage; its sedimentary blocks contain foraminiferal faunas from middle Eocene to Oligocene in age. Hoh melange rocks are exposed along 45 miles of the western coast. A pronounced angular unconformity marks the top of the Hoh, on which the marine Quinault Formation was deposited during the Pliocene.

The north and east flanks of the Olympics were subject to erosion by continental ice sheets during the Pleistocene. Alpine glaciers also sculpted the Olympic Mountains. Thick deposits of sand and gravel fill valley bottoms and cover the coastal plains. Raised wave-cut platforms along the west coast indicate periods of uplift. Many of the cliffs along the west coast are capped by loess. In some areas, the coast was downwarped. Hoh melange rocks in a matrix of clay formed diapirs or piercement structures that were active through the Pliocene and Pleistocene. Offshore, they deform Holocene sediments.

Manganese deposits are associated with red limestone that is interbedded with Crescent Formation basalt. Copper is also known from the Crescent Formation, and pillow basalts yield beautiful zeolite specimens. Sedimentary rocks of the Hoh melange on the flanks of the Olympic Peninsula contain both oil and gas, as evidenced by shows in exploratory wells and seeps along the coastline.

The above text is modified from the following article: Lasmanis, Raymond, 1991, The geology of Washington: Rocks and Minerals, v. 66, no. 4, p. 262-277.

CONTACTS

Geologic Hazards Group
Geology & Earth Resources Division
Washington State Department of Natural Resources
360-902-1450
Fax 360-902-1785
dnrgeologyhazards@dnr.wa.gov

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FILES

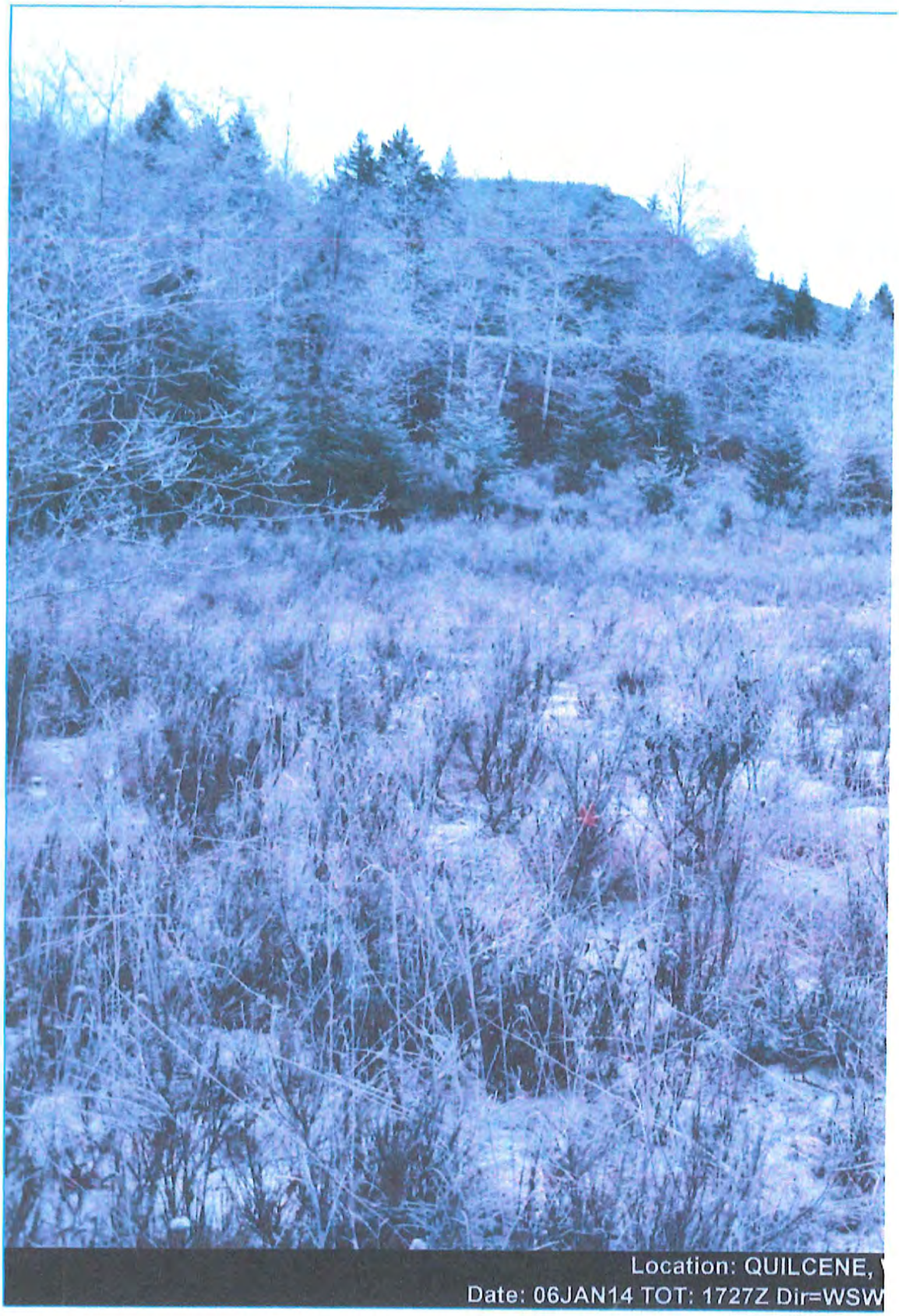
RELATED LINKS

Geology of Washington

- Introduction
- References
- Geology & Earth Sciences

Geology of Washington Provinces

- Okanogan Highlands
- Northern Cascades
- Southern Cascades
- Willapa Hills
- Columbia Basin
- Blue Mountains
- Puget Lowland
- Portland Basin



Folde

Google earth

7/5/13

feet 1000
meters 300

Google earth

5/13/12

feet 900

meters 200

Google earth

1991

feet 1000
meters 300

MATERIAL QUALITY

Particle Size Ranges

Results of grading analyses generated for all pit hole samples were collected by McLucas, and submitted to Material Testing & Consulting laboratories for test work. The testing results are included within this section of this report. The test results provide a summary and average of grading of the coarse aggregate fraction. The test results provide an average grading for the deposit. Overall, it appears the deposit contains the full range of particle sizes, and that they occur in relatively equal percentages, an important factor when providing aggregate for concrete structures where strength is an important consideration.

Plus 3-6 inch cobbles represent from 3 to 5 percent of the total materials observed in the field; however, grading results show 100 percent passing the 4-inch screen. This is undoubtedly due to loss of the plus 3" material during sample collection at the site. An average of 14 percent of material is retained by the 1.5-inch screen coarse gravel from 1.5 inches to ¾ inch in diameter.

Fine gravel from 3/4 inch to the number 4 screen, which represents an average of 36 percent of the total, is the largest coarse aggregate fraction. The percentage of ¼ inch material is not excessive (an average of 7 percent of the total). This size fraction represents the material commonly discarded during screening of coarse aggregate, it is commonly used as masonry grout, such that it is not always wasted.

Color

Aggregate samples from upper terrace (midpoint-165' msl) of the site, taken from six pit holes, is medium orange to brown in color. This indicates that there is a presence of iron/manganese. It is McLucas and MTC opinion that this area of the site, the surface rock (1'to4') is weathered rock, thus resulting in a degradation of 3 to 5 percent. Samples taken for the mining floor (128' msl) the rock was grayish to black, and the degradation was acceptable at 15%.

Weathering/Quality

As McLucas, has pointed out, sample collection at the 165' level indicate that the rock at the surface of the site is somewhat weathered, and iron stained and suggest that deeper holes be dug to check for the degradation at this level. The LA Abrasion tests for both levels were excellent, indicating the rock is competent.

McLucas noted from the test results that in all the sampling, the site is short 5 to 10 percent in the number 4 mesh. To compensate, the site can add imported #4 mesh material to the site and mix with the borrow pit run to accomplish the borrow pit specifications for 50% #4 borrow. The site can produce borrow with less than 50% #4, and select borrow.

In conclusion, the site has a deposit of well-graded sand and gravel with averages of 60% gravel, 36% sand, and 4% silt and clay. The LA Abrasion is 14% to 16% with a maximum of 35% allowance. The degradation for the upper terrace is 3 to 5 percent with a minimum of 15%. (Further and deeper samples need to be tested). The lower mine floor degradation of three pit holes is 70.5 % with a minimum of 15. The sieve analysis indicates the sand and gravel sizes are well distributed.

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Sieve Report

Jefferson County Mine Site Exploration -			
Project: Penny Pit	**Date Received:** 12-Aug-14	**ASTM D-2487 Unified Soils Classification System**	
Project #: 14K026	**Sampled By:** Client	GW, Well-graded Gravel with Sand	
Client: McLucas & Associates, Inc.	**Date Tested:** 15-Aug-14	**Sample Color:**	
Source: Penny Pit	**Tested By:** C. Larabee	brown	
Sample#: S14-363			

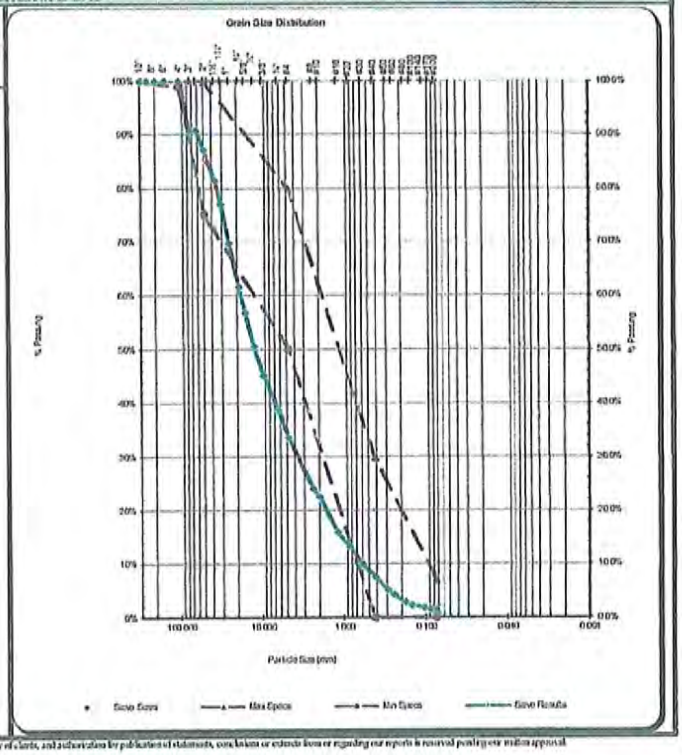
ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5821

Specifications
2014 WSDOT 9-03.14(1) Gravel Borrow
Sample Meets Specs ? No

$D_{(5)}$ = 0.291 mm	% Gravel = 66.4%	Coeff. of Curvature, C_c = 1.37	
$D_{(10)}$ = 0.602 mm	% Sand = 32.1%	Coeff. of Uniformity, C_U = 29.89	
$D_{(15)}$ = 1.056 mm	% Silt & Clay = 1.5%	Fineness Modulus = 6.15	
$D_{(30)}$ = 3.846 mm	Liquid Limit = n/a	Plastic Limit = n/a	
$D_{(60)}$ = 12.163 mm	Plasticity Index = n/a	Moisture %, as sampled = n/a	
$D_{(90)}$ = 17.991 mm	Sand Equivalent = n/a	Req'd Sand Equivalent =	
$D_{(95)}$ = 60.473 mm	Fracture %, 1 Face = n/a	Req'd Fracture %, 1 Face =	
	Fracture %, 2+ Faces = n/a	Req'd Fracture %, 2+ Faces =	

ASTM C-136, ASTM D-6913

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%		
10.00"	250.00		100%		
8.00"	200.00		100%		
6.00"	150.00		100%		
4.00"	100.00	100%	100%	100.0%	99.0%
3.00"	75.00	91%	91%		
2.50"	63.00	91%	91%		
2.00"	50.00	87%	87%	100.0%	75.0%
1.75"	45.00		85%		
1.50"	37.50	82%	82%		
1.25"	31.50	77%	77%		
1.00"	25.00	70%	70%		
3/4"	19.00	62%	62%		
5/8"	16.00	57%	57%		
1/2"	12.50	51%	51%		
3/8"	9.50	45%	45%		
1/4"	6.30	39%	39%		
#4	4.75	34%	34%	80.0%	50.0%
#8	2.36		24%		
#10	2.00	23%	23%		
#16	1.18		16%		
#20	0.850	13%	13%		
#30	0.600		10%		
#40	0.425	8%	8%	30.0%	0.0%
#50	0.300		5%		
#60	0.250	4%	4%		
#80	0.180	3%	3%		
#100	0.150	2%	2%		
#140	0.106		2%		
#170	0.090		2%		
#200	0.075	1.5%	1.5%	7.0%	0.0%



Comments: _____

Reviewed by: _____

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NW Region ~ 805 Dupont Street, Suite 5 • Bellingham, WA 98225 • Phone (360) 647-6061 • Fax (360) 647-8111
SW Region ~ 2118 Black Lake Blvd. SW • Olympia, WA 98512 • Phone (360) 534-9777 • Fax (360) 534-9779
Kitsap Region ~ 5451 NW Newberry Hill Road, Suite 101 • Silverdale, WA 98383 • Phone (360) 698-6787 • Fax (360) 692-1919
Visit our website: www.mtc-inc.net

Materials Testing & Consulting, Inc.

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Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C-131

Project:	Jefferson County Mine Site - Penny Pit	Client:	McLucas & Associates, Inc.
Project #:	14K026	Sampled by:	Client
Lab #:	S14-362	Date Received:	August 12, 2014
Location/Source:	Penny Pit	Tested by:	C. Larabee
Description:	brown gravel w/ sand	Date Tested:	August 16, 2014
Equipment Used:	SW068, LA Abrasion Machine		

Grading Designation	A	
# of Revolutions	500	
Mass of Sample Before Test	5009.6 g	
Mass of Sample After Test	4321.9 g	
Percentage of Loss	13.7 %	
Specification	Max. 35 %	Pass ☒ Fail ☐

Remarks: _____

Reviewed by: _____

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Aggregate Durability Index

(WSDOT 113)

Project: Jefferson County Mine Site - Penny Pit
Project #: 14K026
Lab #: S14-363
Location/Source: Penny Pit
Description: brown gravel w/ sand
Equipment Used: SW063, SW016, SW022

Client: McLucas & Associates, Inc.
Sampled By: Client
Date Received: August 12, 2014
Tested By: C. Larabee
Date Tested: August 22, 2014

Data

	Run #1	Run #2
Test Sample Height (H):	2.0	1.9
Durability Index Value (D):	70	71
Average Durability Index:	70.5	
Required Durability Index:	Min 15	Pass ☒ Fail ☐

$D = (15-H) / (15+1.75H) * 100$

Reviewed by: _____

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Client:	McLucas & Associates, Inc.	**Date:**	July 21, 2014
Address:	Us 101 & Pete Back Rd	**Project:**	Jefferson County Mine Site Exploration
	Quilcene	**Project #:**	14K026
Attn:	Stephen Taylor	**Sample #:**	K14-173

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test Results		Test(s) Performed:	Test Results
☑	Sieve Analysis	FAIL	☐	Sulfate Soundness	
☐	Proctor		☐	Unit Weight	
☐	Sand Equivalent		☑	WSDOT Degradation	5
☐	Fracture Count		☑	LA Abrasion	15.16%
☐	Moisture Content		☐		
☐	Specific Gravity, Coarse		☐		
☐	Specific Gravity, Fine		☐		
☐	Hydrometer Analysis		☐		
☐	Atterberg Limits		☐		
☐	Asphalt Extraction/Gradation		☐		
☐	Rice Density		☐		

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

Respectfully Submitted,
Samuel Hyatt
WABO Supervising Laboratory Technician

Materials Testing & Consulting, Inc.
Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Sieve Report

Project: Jefferson County Mine Site Exploration
Project #: 14K026
Client: McLucas & Associates, Inc.
Source: Jefferson County Mine Site
Sample#: K14-173

Date Received: 21-Jul-14
Sampled By: BK
Date Tested: 25-Jul-14
Tested By: CL

ASTM D-2487 Unified Soils Classification System
GW, Well-graded Gravel with Sand
Sample Color:
Red/Brown

ACCREDITED

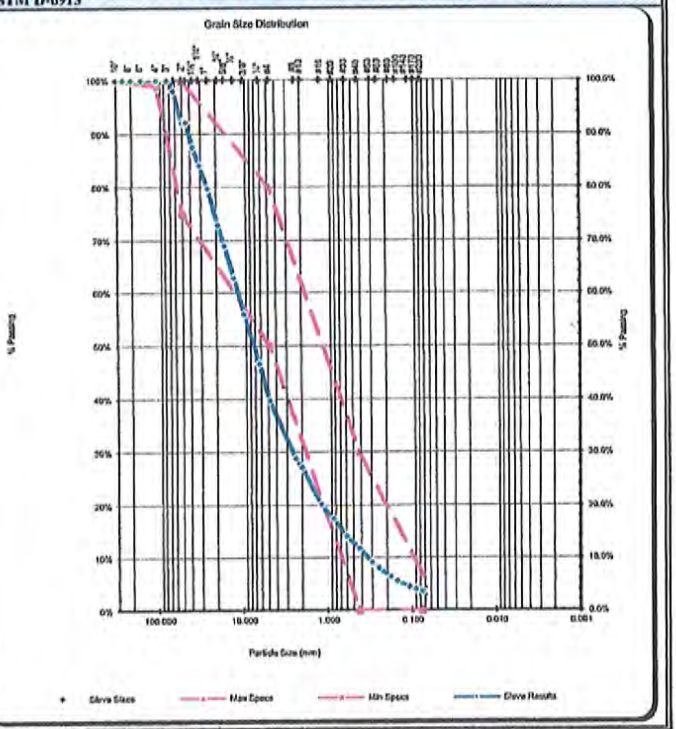
ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5821

Specifications
2012 WSDOT 9-03.14(1) Gravel Borrow
Sample Meets Specs ? No

$D_{(15)}$ =	0.126 mm	% Gravel =	60.2%	Coeff. of Curvature, C_C =	1.77
$D_{(10)}$ =	0.343 mm	% Sand =	36.2%	Coeff. of Uniformity, C_U =	32.75
$D_{(15)}$ =	0.667 mm	% Silt & Clay =	3.7%	Fineness Modulus =	5.61
$D_{(30)}$ =	2.609 mm	Liquid Limit =	n/a	Plastic Limit =	n/a
$D_{(50)}$ =	7.450 mm	Plasticity Index =	n/a	Moisture %, as sampled =	6.8%
$D_{(60)}$ =	11.228 mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =	
$D_{(90)}$ =	41.381 mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =	
		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =	

ASTM C-136, ASTM D-6913

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%		
10.00"	250.00		100%		
8.00"	200.00		100%		
6.00"	150.00		100%		
4.00"	100.00	100%	100%	100.0%	99.0%
3.00"	75.00	100%	100%		
2.50"	63.00	98%	98%		
2.00"	50.00	92%	92%	100.0%	75.0%
1.75"	45.00	92%	92%		
1.50"	37.50	88%	88%		
1.25"	31.50	84%	84%		
1.00"	25.00	80%	80%		
3/4"	19.00	73%	73%		
5/8"	16.00	69%	69%		
1/2"	12.50	63%	63%		
3/8"	9.50	56%	56%		
1/4"	6.30	47%	47%		
#4	4.75	40%	40%	80.0%	50.0%
#8	2.36		29%		
#10	2.00	27%	27%		
#16	1.18		20%		
#20	0.850	17%	17%		
#30	0.600		14%		
#40	0.425	12%	12%	30.0%	0.0%
#50	0.300		9%		
#60	0.250	8%	8%		
#80	0.180	6%	6%		
#100	0.150	6%	6%		
#140	0.106		4%		
#170	0.090		4%		
#200	0.075	3.7%	3.7%	7.0%	0.0%



Comments: _____

Reviewed by: _____

#4 – 10%

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Visit our website: www.mtc-inc.net

Materials Testing & Consulting, Inc.
Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Client:	McLucas & Associates, Inc.	**Date:**	July 21, 2014
Address:	US 101 & Pete Back RD	**Project:**	Jefferson County Mine Site Exploration
	Quilcene	**Project #:**	14K026
Attn:	Stephen Taylor	**Sample #:**	K14-174

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test Results		Test(s) Performed:	Test Results
☑	Sieve Analysis	FAIL	☐	Sulfate Soundness	
☐	Proctor		☐	Unit Weight	
☐	Sand Equivalent		☑	WSDOT Degradation	4
☐	Fracture Count		☑	LA Abrasion	16.10%
☐	Moisture Content		☐		
☐	Specific Gravity, Coarse		☐		
☐	Specific Gravity, Fine		☐		
☐	Hydrometer Analysis		☐		
☐	Atterberg Limits		☐		
☐	Asphalt Extraction/Gradation		☐		
☐	Rice Density		☐		

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

Respectfully Submitted,
Samuel Hyatt
WABO Supervising Laboratory Technician

Materials Testing & Consulting, Inc.
Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Sieve Report

Project: Jefferson County Mine Site Exploration
Project #: 14K026
Client: McLucas & Associates, Inc.
Source: Jefferson County Mine Site
Sample#: K14-174

Date Received: 21-Jul-14
Sampled By: BK
Date Tested: 25-Jul-14
Tested By: CL

ASTM D-2487 Unified Soils Classification System
GW-GC, Well-graded Gravel with Silty Clay and Sand
Sample Color:
Red/Brown

AGGREDITED

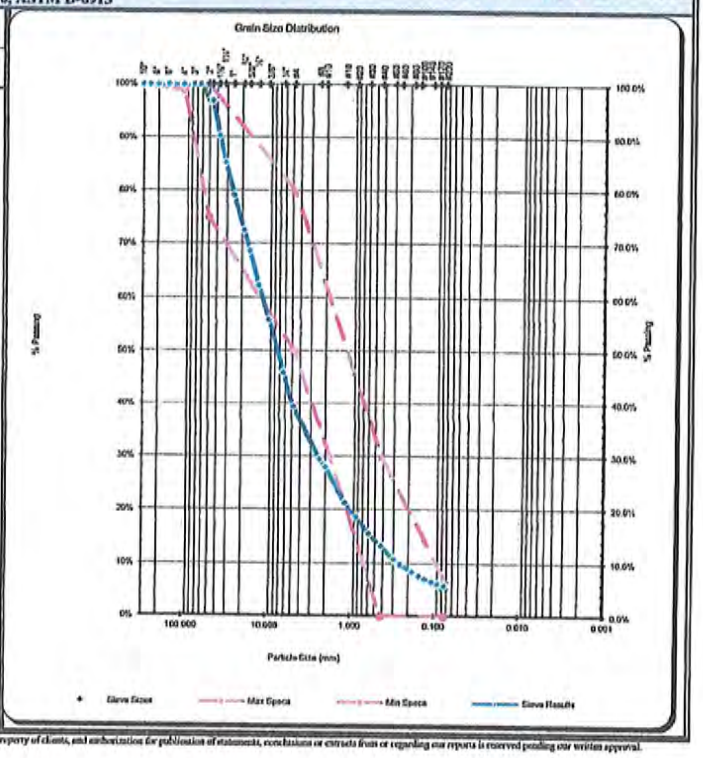
ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5821

Specifications
2012 WSDOT 9-03.14(1) Gravel Borrow
Sample Meets Specs ? No

D_{95} =	0.065 mm	% Gravel =	60.6%	Coeff. of Curvature, C_c =	2.13
D_{60} =	0.256 mm	% Sand =	33.6%	Coeff. of Uniformity, C_u =	44.47
D_{15} =	0.562 mm	% Silt & Clay =	5.8%	Fineness Modulus =	5.50
D_{10} =	2.492 mm	Liquid Limit =	n/a	Plastic Limit =	n/a
D_{05} =	7.578 mm	Plasticity Index =	n/a	Moisture %, as sampled =	6.1%
D_{03} =	11.391 mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =	
D_{00} =	37.029 mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =	
		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =	

ASTM C-136, ASTM D-6913

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%		
10.00"	250.00		100%		
8.00"	200.00		100%		
6.00"	150.00		100%		
4.00"	100.00	100%	100%	100.0%	99.0%
3.00"	75.00	100%	100%		
2.50"	63.00	100%	100%		
2.00"	50.00	97%	97%	100.0%	75.0%
1.75"	45.00	97%	97%		
1.50"	37.50	90%	90%		
1.25"	31.50	85%	85%		
1.00"	25.00	79%	79%		
3/4"	19.00	73%	73%		
5/8"	16.00	69%	69%		
1/2"	12.50	62%	62%		
3/8"	9.50	56%	56%		
1/4"	6.30	46%	46%		
#4	4.75	39%	39%	80.0%	50.0%
#8	2.36		29%		
#10	2.00	28%	28%		
#16	1.18		21%		
#20	0.850	19%	19%		
#30	0.600		15%		
#40	0.425	13%	13%	30.0%	0.0%
#50	0.300		11%		
#60	0.250	10%	10%		
#80	0.180	8%	8%		
#100	0.150	8%	8%		
#140	0.106		7%		
#170	0.090		6%		
#200	0.075	5.8%	5.8%	7.0%	0.0%



Comments: _____

Reviewed by: _____

#4 1170 –

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Client:	McLucas & Associates, Inc.	**Date:**	July 21, 2014
Address:	US 101 & Pete Back Rd	**Project:**	Jefferson County Mine Site Exploration
	Quilcene	**Project #:**	14K026
Attn:	Stephen Taylor	**Sample #:**	K14-175

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test Results		Test(s) Performed:	Test Results
☑	Sieve Analysis	FAIL	☐	Sulfate Soundness	
☐	Proctor		☐	Unit Weight	
☐	Sand Equivalent		☑	WSDOT Degradation	3
☐	Fracture Count		☑	LA Abrasion	17.10%
☐	Moisture Content		☐		
☐	Specific Gravity, Coarse		☐		
☐	Specific Gravity, Fine		☐		
☐	Hydrometer Analysis		☐		
☐	Atterberg Limits		☐		
☐	Asphalt Extraction/Gradation		☐		
☐	Rice Density		☐		

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

Respectfully Submitted,
Samuel Hyatt
WABO Supervising Laboratory Technician

Materials Testing & Consulting, Inc.

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Sieve Report

Project:	Jefferson County Mine Site Exploration	**Date Received:**	21-Jul-14
Project #:	14K026	**Sampled By:**	BK
Client:	McLucas & Associates, Inc.	**Date Tested:**	25-Jul-14
Source:	Jefferson County Mine Site	**Tested By:**	CL
Sample#:	K14-175		

ASTM D-2487 Unified Soils Classification System
GM, Silty Gravel with Sand
Sample Color:
Red/Brown

ACCREDITED

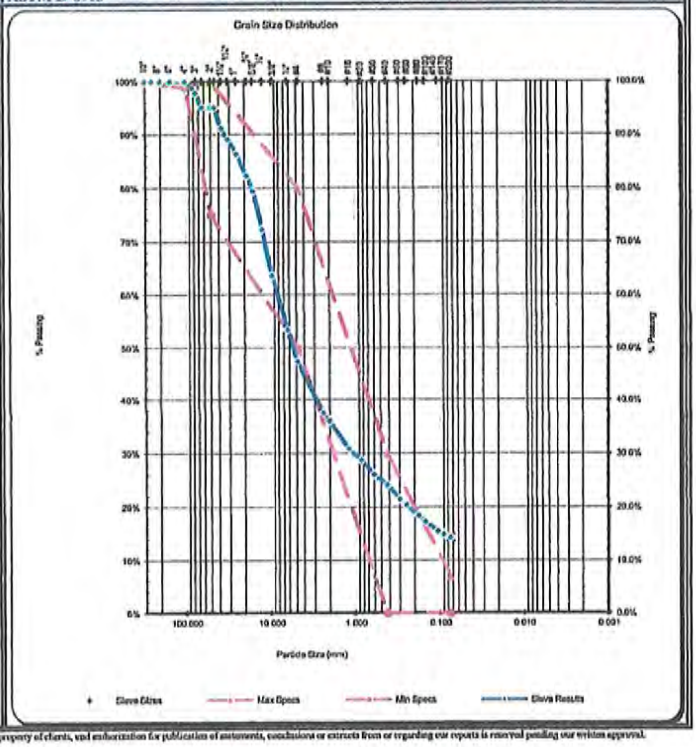
ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5821

Specifications
2012 WSDOT 9-03.14(1) Gravel Borrow
Sample Meets Specs ? No

$D_{(5)}$ =	0.026 mm	% Gravel =	52.5%	Coeff. of Curvature, C_c =	2.50
$D_{(10)}$ =	0.052 mm	% Sand =	33.1%	Coeff. of Uniformity, C_U =	159.85
$D_{(15)}$ =	0.090 mm	% Silt & Clay =	14.4%	Fineness Modulus =	4.78
$D_{(30)}$ =	1.041 mm	Liquid Limit =	n/a	Plastic Limit =	n/a
$D_{(50)}$ =	5.401 mm	Plasticity Index =	n/a	Moisture %, as sampled =	9.8%
$D_{(60)}$ =	8.328 mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =	
$D_{(90)}$ =	34.091 mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =	
		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =	

ASTM C-136, ASTM D-6913

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%		
10.00"	250.00		100%		
8.00"	200.00		100%		
6.00"	150.00		100%		
4.00"	100.00	100%	100%	100.0%	99.0%
3.00"	75.00	98%	98%		
2.50"	63.00	95%	95%		
2.00"	50.00	95%	95%	100.0%	75.0%
1.75"	45.00	95%	95%		
1.50"	37.50	91%	91%		
1.25"	31.50	89%	89%		
1.00"	25.00	86%	86%		
3/4"	19.00	82%	82%		
5/8"	16.00	79%	79%		
1/2"	12.50	72%	72%		
3/8"	9.50	64%	64%		
1/4"	6.30	53%	53%		
#4	4.75	47%	47%	80.0%	50.0%
#8	2.36		38%		
#10	2.00	36%	36%		
#16	1.18		31%		
#20	0.850	29%	29%		
#30	0.600		26%		
#40	0.425	24%	24%	30.0%	0.0%
#50	0.300		22%		
#60	0.250	20%	20%		
#80	0.180	18%	18%		
#100	0.150	17%	17%		
#140	0.106		16%		
#170	0.090		15%		
#200	0.075	14.4%	14.4%	7.0%	0.0%



Comments: _____

Reviewed by: _____

#4 39% –
#200 7.4+

Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C-131

Project:	Jefferson County Mine Site Exploration	Client:	McLucas & Associates, Inc.
Project #:	14K026	Sampled by:	BK
Lab #:	K14-173	Date Received:	July 21, 2014
Location/Source:	Jefferson County Mine Site	Tested by:	CL
Description:	Red/Brown Gravel / Sand	Date Tested:	July 25, 2014
Equipment Used:			

Grading Designation	A	
# of Revolutions	500	
Mass of Sample Before Test	5002.2 g	
Mass of Sample After Test	4243.8 g	
Percentage of Loss	15.16 %	
Specification	%	Pass ☐ Fail ☐

Remarks: _____

Reviewed by: _____

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Aggregate Durability Index

(WSDOT 113)

Project: Jefferson County Mine Site Exploration
Project #: 14K026
Lab #: K14-173
Location/Source: Jefferson County Mine Site
Description: Red/ Brown Gravel w/ Sand
Equipment Used:

Client: McLucas & Associates, Inc.
Sampled By: BK
Date Received: July 21, 2014
Tested By: CL
Date Tested: July 25, 2014

Data

	Run #1	Run #2
Test Sample Height (H):	31.1	13.2
Durability Index Value (D):	5	5
Average Durability Index:	5	
Required Durability Index:		Pass ☐ Fail ☐

$D = (15-H) / (15+1.75H) * 100$

Reviewed by: _____

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(1)

(1)

(1)

(1)

(2)

(1)

(B)

(3)

(3)

(a)

4

(4)

(6)

6

(B)

5

(5)

(4)

RESERVE QUANTITY

Base Map Sources: Google Earth

Property Line Setbacks: 50' setbacks utilized as per Jefferson county and WSDNR

Mining Depth: Current pit floor of 128' MSL, average elevation height is 173' MSL, average mining depth is 45'.

Overburden Volumes: McLucas as determined that a 10% factor will be utilized for the overburden, topsoil, and subsoil's.

Calculation Technique: McLucas has utilized Google Earth elevations, dimensions, and aerial photography to calculate the approximate volume of sand and gravel contained within the Penny Creek Pit site.

Qualifications and Limitations: McLucas is not an engineering company, but a geologic firm. McLucas has used this method to determine the approximate volumes of sand & gravel or bedrock contained within mine operations. We approach these calculations conservatively, and offer the results as our best calculation of reserves. An engineering company should be retained for exact quantities, if the client feels necessary for these calculations.

The following is McLucas calculations of the Penny Creek Pit sand and gravel reserves;

(A) Reserve Calculation:

(1) South boundary line: 1,325', North boundary line: 1,266': Average length: 1296'
(2) West boundary line: 1292', East boundary line: 801': Average width: 1047'
(3) West elevation: 190' msl: East elevation: 155' msl: Average height: 45'
(4) 1296' x 1047' x 45' = 61,061,040 cu. feet dived by 27 cu feet/cu. yd. = 2,261,520 cu. yds.

(B) Overburden, Topsoil, Subsoil:

(1) A 10% factor has been used, 2,261,520 cu. yds. X 10% = Minus 226,152 cu. yds. = 2,035,369 cu. yds. remaining reserve.

(C) 50' Setback Property Lines Calculation:

(1) South property line of 1325' x 50' setback = 66,250 sq. feet
(2) East property line of 801' x 50' setback = 40,050 sq. feet
(3) North property line of 1266' x 50' setback = 63,300 sq. feet
(4) West property line of 1292 x 50' setback = 64,600 sq. feet
(5) This is a total of 234,200 sq. feet for the 50' setback

(6) A 234,200 sq. feet x average height of 45' = 10,539,000 cu. feet divided by 27 cu. feet /cu.yd. = 390,333 cu. yds. for the 50' setback from property line.
(7) The 2,035,369 cu. yds. of remaining reserves, less 390,333 cu. yds. setbacks = 1,645,035 cu. yds. of remaining reserves.

(D) 2:1 Reclamation Slopes:

(1) McLucas has utilized ½ of the 50' setback calculation of 390,333 to account for the final reclamation slopes of 2:1: 390,333 cu. yds. divided by 2 = 195,167 cu. yds. Remaining reserves are: 1,645,035 cu. yds. minus 195,167 cu. yds. 2-1 slopes = 1,449,868 cu. yds. of remaining reserves.

(E) Previous Mining Deduction:

(1) McLucas has walked the property and analysis the aerial views of the site, and the mining floor base has been mined to a 128' msl, but it is a very small area located in the east portion of the site. To be conservative, McLucas has deducted an additional 10% of the remaining reserves of 1,449,868 cu. yds. minus 10% 144,987 cu. yds. = 1,304,881 remaining reserves of sand and gravel.

Reserve Quantity:

It is McLucas opinion that the Penny Creek Pit site currently has a reserve of 1,304,881 cubic yards of sand and gravel. The 1,304,881 cubic yards x a conversion factor of 1.5 equals: 1,957,322 tons of sand and gravel reserves, plus or minus ten percent. McLucas tested the material at the 128' msl at the pit floor, and at the 165' msl the midpoint of the site where the entrance road crossed the site, which profiles the deposit from the 128' floor to the 165' midpoint is consistent with gravel content. McLucas did not investigate the gravel content from the 165' msl, to the 190' msl west property boundary, and assumes that the deposit continues to that point. This area is currently treed and should be investigated as the trees are removed.

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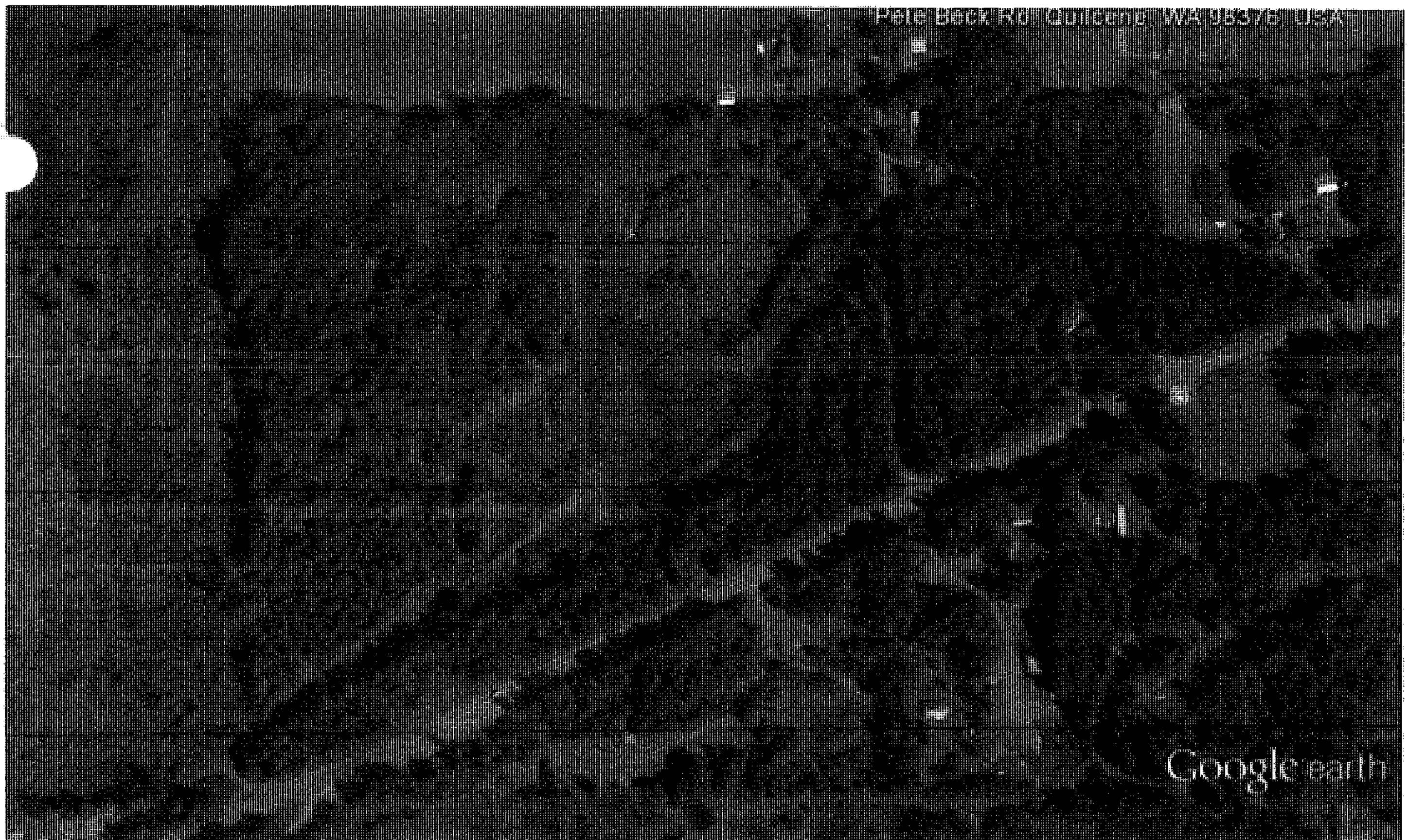


Google earth feet 7/5/13 1000 meters 400

New Calculations September

South Line - 1325'
East Line - 801'
North Line - 1266'
West Line - 1292'

Average 1296'

X = 1,356,912 sq Feet

Average 1047' X 45' = 61,061,040 cu Feet
÷ 27' = 2,261,520 cu yds.

Average elevation - 173' MSL

East Pit Floor - 126' MSL pit floor

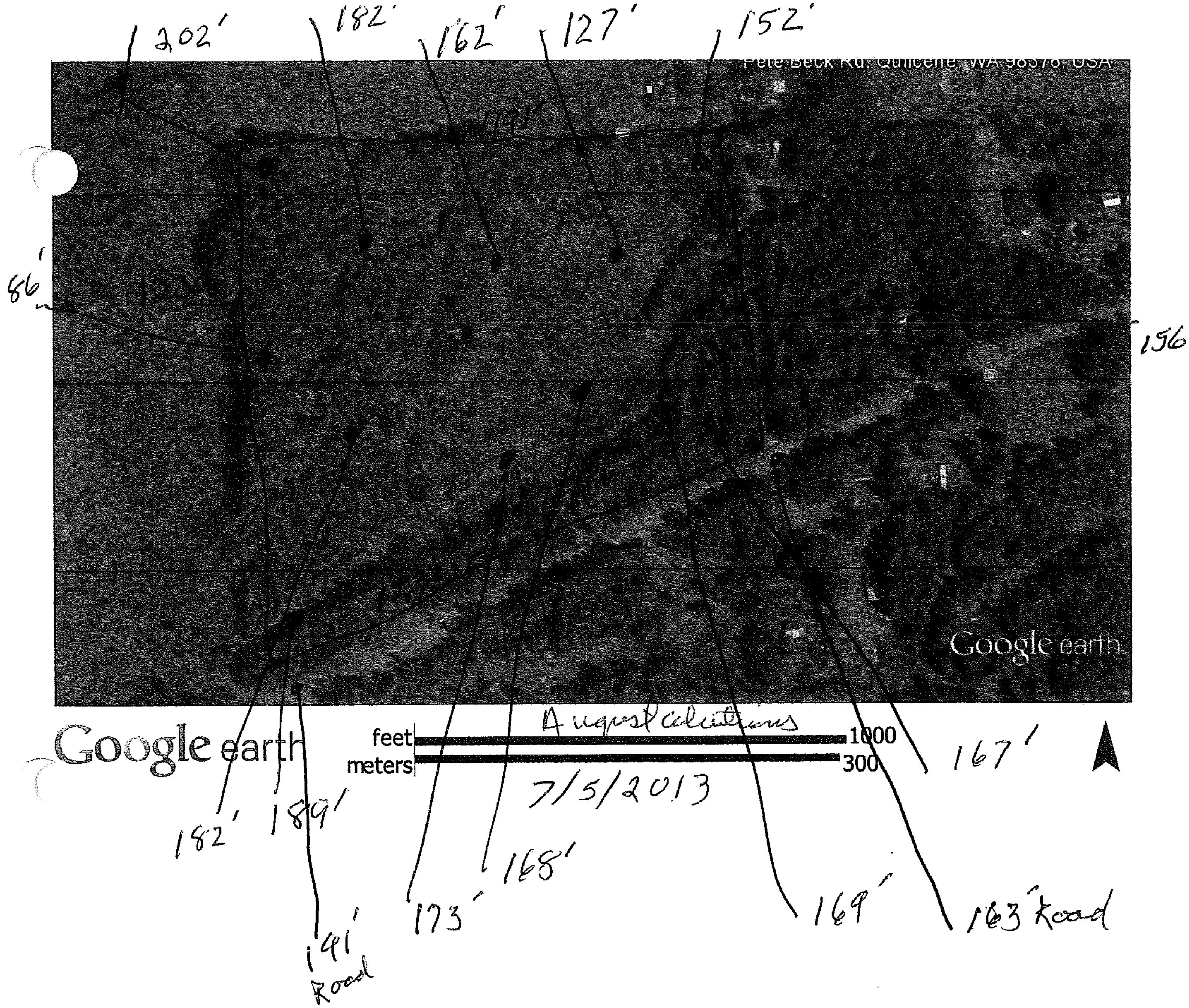
West Height -

126' ~~126' MSL~~
~~155'~~
~~45'~~ Height
45'

Less 50' setback ~~x 45'~~ x

~~1296' x 1047'~~ =
South Line 1325' x 50' = 66,250 sq'
East Line 801' x 50' = 40,050 sq'
North Line 1266' x 50' = 63,300 sq'
West Line 1292' x 50' = 64,600 sq'

234,200 sq'
x 45'
10,539,000 cu. F
÷ 27 = 390,333 cu yds

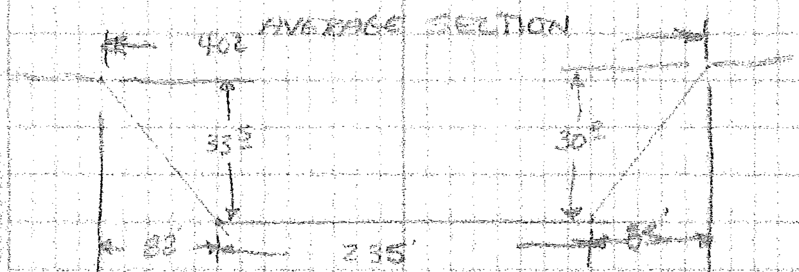


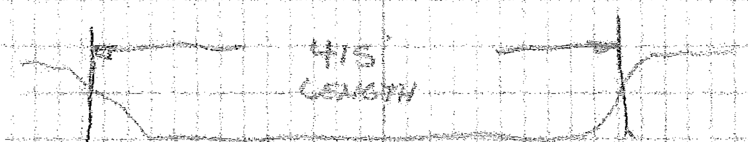
West - 190' MSL average
East - 155' MSL average
> Average 173' elevation

Date 1-30-89 Page ______

Sec 13 T27N R28W DESCRIPTION Tm SK

PROPOSED QUINCONE PIT
to be purchased by
Jeff. Co.





$\frac{318.5' \times 415' \times 31.75}{27}$ = 155,430 cy

MARKET REVIEW

McLucas has taken another look at the Economic Profile of Jefferson County. As stated by the updated profile, "The outlook for Jefferson County for the remainder of 2016 and into 2017 is one of growth, but it is likely to be modest at best. While the goods-producing sector has shown some growth during 2016, the service-providing sector seems to be treading water. In 2016 the construction, manufacturing and trade sectors showed modest gains as government remained steady." McLucas opinion is that the competition is great for aggregate sales in Jefferson County with approximately 12 or more active pits competing in a relatively small market. We will adjust our projections accordingly.

Jefferson County is located on the Olympic peninsula in the northwestern Washington state. Jefferson County is nestled between the Admiralty Inlet and Clallam, Mason, Grays Harbor and Kitsap counties. Named for President Thomas Jefferson, it was created in 1852 from a portion of Lewis County; the county seat is Port Townsend. Much of the county is publicly owned land. About 60 percent of the county comprises the Olympic national park, and Olympic National forest, and roughly 20 percent is under the jurisdiction of federal and state agencies. The Hoh Reservation and a small corner of the Quinault Reservation are also located in Jefferson County.

The local economy in Jefferson County's current economic base grew from a history of natural resources development in logging and fishing in the late 1880's. By the turn of the 20th century, sawmills fish processing, and ship and boatbuilding were firmly established in the coastal areas of the county. The county also was known for smuggling spirits from Canada in and out of the county's many hidden coves and forests during prohibition.

Port Townsend, the economic center of the county, has experienced periods of boom and bust over the century do to its dependency on these volatile industries. During 2011, Port Townsend finally started to recover from the 2007 to 2009 Great Recession with visible signs of economic growth with new shops, new investments and rebounds in tourism. But tax revenues and other activities such as residential real estate have yet to spring back to pre- 2007 levels.

The economy of Jefferson County is comprised of both industrial, and an agricultural base. Industrially, the county's history climate and terrain support healthy forest products and maritime sectors, including lumber, fish processing, ship repair and maintenance as well as ship and boat building. The agricultural base encompasses tree farms for logging, aquaculture and a flourishing organic farming sector. Food production, stemming from this growing agricultural segment, includes artisan cheeses and bread. Tourism also provides revenue streams to the county Economic activity is supported by vibrant port and airport, ferry terminal and state highways.

Jefferson County has seventeen permitted operating sand/gravel, and bedrock mines operating within the county. There is a reasonably good market for construction aggregates within Jefferson County. Do to the number of operating mines, the market share becomes very local

with market distances within twenty miles of each operating mine. This competitive market has been taken into consideration in the formulation of the market demand for the Penny Creek Pit location.

McLucas has contacted approximately 12 producers of aggregates located in the Olympic Peninsula. McLucas has obtained eight aggregate pricing quotes which enables McLucas to determine the average price per ton and generate a reasonable royalty for the Royalty Based Discounted Cash Flow, Table 1. Producers commented on the large deposit of sand and gravel contained within the Penny Creek Pit site, stating that many of the deposits in the Olympic Peninsula are not as deep, nor contain as much sand and gravel as the Penny Creek Pit site.

McLucas has enclosed additional information about Jefferson County which can be reviewed in the appendices of this report.

ROYALTY RATE

ROYALTY

For a mineral valuation, a royalty rate is not necessarily what is paid, nor received, for mineral materials in-the-ground. Alternatively, it can be the wholesale value of the finished product. Other factors such as the existence of competing mines, adverse environmental factors, and the distance from the market the property services, are factored into the discount rate, excluding all costs associated with the business portion of the company's aggregate-production operation. For this reason, a royalty rate is always substantially lower than the retail or wholesale unit price for construction aggregates.

McLucas has surveyed the Market area for the Penny Creek site. The Market Area/Distance for the majority of operating mines is normally within 15 miles. Hauling costs are one of the major deterrents to the market place distance. This can be shorter or longer, depending upon the next available competitive source of aggregates.

A royalty amount is usually the price paid to a land owner by a contract operator (i.e. a lessee) who has the ability to obtain in-place mineral materials while using his own mining, mineral-processing, loading, and transport equipment. In this case, Jefferson County is the owner of the Penny Creek Pit,

The principal purpose of assessing a royalty is to produce and income for the owner of a mineral deposit, and to protect the resource for maximum future development income. The royalty changed for extraction of a mineral commodity can be calculated in several ways. The most common methods include:

1) determination of comparable sale, including royalties;
2) assessment of a percentage of market place prices of processed aggregates;
3) assessment of previous production and sales, determining the average price per ton;
4) determination of income, minus cost; or
5) conducting an auction or competitive bid; or
6) current lease between lessor and lessee.

Method 2, the assessment of a percentage of the market place prices of processed aggregates and borrow pit was employed. McLucas was able to obtain current aggregate prices from the Olympic Peninsula market area. The summary of this analysis of the average price per ton for processed aggregates, and borrow pit run.

PENNY CREEK PIT
AGGREGATE PRODCERS SURVEY
AVERAGE AGGREGATE PRICE PER TON

Company	Gravel Borrow	¾ to ½	1 ½ minus	Drain Rock	Pea Gravel	Average
Cotton Redi Mix	$8.00	$10.00	$10.00	$8.50	$13.00	$ 9.90 ton
Miles S/Gravel	$7.50.	$11.50	$11.00	$11.50	$12.00	$10.70 ton
Squim Redi Mix	$8.00	$12.00	$12.00	$9.00	$13.00	$10.80 ton
Davis S/Gravel	$8.00	$15.00	$15.00	$11.00	$15.00	$12.80 ton
Seaton Construct.	$8.00	$12.00	$11.00	$10.00	$13.00	$10.80 ton
Fred Hills Material	$8.00	$11.00	$11.00	$9.00	$12.00	$10.20 ton
Port Orchard S&G	$8.50	$12.00	$12.00	$10.00	$12.50	$11.00 ton
Glacier Northwest	$8.00	$11.00	$11.00	$9.00	$12.00	$10.20 ton
Average:	$8.00	$11.93	$11.71	$ 9.86	$12.93	$10.89 ton

Average Price Per Ton: $10.89

***ROYALTY CALCULATED AT 10%: $1.09 per ton rounded**

*WITHIN THE WASHINGTON MARKET PLACE, ROYALTIES RANGE FROM 10% TO 15%, DEPENDING ON THE LOCAL MARKET. FOR THE PURPOSE OF THIS REPORT, MCLUCAS HAS UTILIZED A 10% BASE DUE TO THE LIMITATIONS OF THE MARKET PLACE.

MCLUCAS HAS UTILIZED THE CONSERVATIVE TONNAGE OF **25,000 TONS AS THE STARTING BASE FOR PRODUCTION. MCLUCAS HAS ALSO UTILIZED THE AVERAGE PRICE PER TON OF $1.09.

The criteria for establishment of a fair-market royalty should be:

1) fairness to both the resource owner and the resource lessee or potential buyer;

2) reflection of current market place values;

3) predictability for future rate assessments;

4) that it be easy to use and compute; and

5) that it be related to an acceptable economic base.

VALUE CALCULATION

Net present Value (NPV) is a method of comparing the value of money at the time a mineral valuation is prepared with its future value. A dollar today is worth more than a dollar in the future because inflation erodes the buying power of future money, while money available today can be invested and grown.

In addition, local economic and regulatory information contained within McLucas' files were used to aid in the valuation process, including determination of the Highest and Best Use of the subject property, which is deemed to be extraction of sand and gravel within the Penny Creek Pit property.

The term constant dollars refer to the net present value relative to a fixed date. The term current dollars refer to the unadjusted value of money. The term discount rate refers to a percentage used to calculate the NPV, and reflects the time-value of money. For example, assuming a discount rate of 5%, the net present value of $2,000.00 ten years from now is $1,227.83. So, if someone offered you $1,000.00 at the present date, or $2,000.00 ten years from now, the recipient would choose the latter because its' net present value is higher.

Calculating NPV is difficult, in part because it is not clear what discount rate should be used, nor is it clear how to project future changes in the discount rate. Typically, when the term "constant dollar" is used, it reflects the NPV of historic data, using the consumer price index (CPI) as the discount rate. Since the CPI is known in the present case, this provides a method of adjusting figures for the effects of inflation.

Since the discount rate reflects the future value of money, it typically has two components: (1) as an adjustment for inflation; and (2) a risk-adjusted return on the use of the money. Since market forces typically incorporate inflation adjustments into investment returns and borrowing costs, often the discount rate is keyed to a standard reference rate.

McLucas utilizes the current 30-year, Triple A, Treasury bond rate as part of the discount rate for property mineral valuations because it is a conservative figure, is risk-free, and is the discount rate typically used by banks for economic analysis of loan programs.

The discount rate should be the APR of the highest risk-adjustment rate of return that can be obtained by investing money, or the lowest rate at which money can be borrowed, whichever is higher.

Royalty

For mineral valuation, a royalty rate is not necessarily what is paid, nor received, for mineral materials in-the-ground. Alternatively, it can be a percentage of the wholesale value of the finished product. Other factors such as the existence of competing mines, adverse environmental factors, and distance from the market it serves are factored into the discount rate, rather than the royalty rate. A wholesale unit price is required to determine the net value of the remaining, commercially-extractable sand and gravel reserve contained within the Penny Creek Pit site. For this reason, a royalty rate is always substantially lower than a retail/wholesale unit price for construction aggregates. For this report, McLucas has determined that the royalty for the Penny Creek Pit is $1.09 per ton.

Discount Rate

The discount rate applied for completing the valuation formula is 9.41%. This is based on a triple A Bond rate of 3.41 percent, a rate fluctuation factor of 1.0% for each 4-year period (4%) of future revenue projections. All permits are in place and the mine is in good standing with Jefferson County, and the Washington Department of Natural Resources is requiring an updated reclamation plan, which is straight forward. McLucas finds no environmental concerns within the property. McLucas has assessed a risk factor of 2% to the discount rate. For this report, a 9.41 % rounded discount rate will be utilized.

Starting Annual Production

McLucas has determined that 2018 annual production base will be 25,000 tons, a conservative starting production amount for the Penny Creek Pit. This starting production will be escalated by 2,000 tons per year, for the next 5-years of production (2019-2023).

Production escalation after year 2023 will be escalated annually by the 5-year average for the Consumer Price Index (CPI), which is 1.76%.

Reserve Calculation and Determination of Mine Life

McLucas, within this report, has determined that the Penny Creek Pit had a sand and gravel reserve of 1.9 million tons. Please review the Reserve Quantity section of this report.

The mine life is estimated to be 30-40 years.

Royalty Rate and Escalation Percentage

As part of the subject valuation, a royalty assessment was performed. A royalty amount is usually based on a percentage of the average retail/wholesale price of the processed aggregates through analysis of competing mine operator's retail price lists. McLucas has determined that the projected Average Retail Price Per Ton for sand and gravel aggregates in

the Penny Creek Pit is $10.89 per ton. Royalty rates range from 10% to 20% of the average price per ton. McLucas has selected an average of 10.0% royalty rate as a conservative approach. This computes to a $1.09 per-ton royalty. The royalty rate is escalated each year through application of a 3.82% annual increase, based on the 5-year average of the Producers Price Index (PPI).

Discounted Cash Flow Analysis

From all the above information, it is now possible to construct a Discounted Cash Flow Analysis to arrive at a market value conclusion for the aggregates within the Penny Creek Mine that can be mined within a 20-year period, effective the day of the valuation. A discounted cash flow analysis accounts for the time-value of money by attributing a lesser percent value for cash flows that will not be realized until a given future date. This type of reasoning is typically used by investors when analyzing investments with irregular future cash flows. In order to perform this discounted cash-flow analysis, it was necessary to make several assumptions, enumerated below.

For the purposes of the subject valuation, excavation and royalty payments will commence as of January 1, 2018, these will proceed in an orderly manner for 19-years, or until the sand and gravel reserves have been exhausted. Year 2017 is considered closed as Jefferson County sells the Penny Creek Pit and land.

The resultant yearly cash flows are tabulated in Table 1. These cash flows have been entered into the discounted cash flow analysis program of a Hewlett Packard 12-C calculator, using a 9.41 % discount rate.

Based on the discounted cash flow of the royalty stream, and utilizing the above-described elements, the net present value (NPV) of the remaining mineable sand and gravel within the Penny Creek Pit as of September February 27, 2017, through application of the Morkill Mining Formula is: NPV $393,233

$$PV = \frac{R\,(1+i)^{n} - 1}{I\,(1+i)^{n}}$$

WHERE: r = average annual removal volume x royalty rate
I = discount rate
n = mine life

TABLE 1 FOLLOWS:

TABLE 1
Penny Creek Pit
NET PRESENT VALUE
DCF ROYALTY BASED SPREADSHEET

Sand & Gravel Reserves: 1.9 million tons
Annual Production: Starting production, 25,000 tons
Production Escalation: 2,000 tons per year for first 5 years, then 1.76%, 5-year average of the Consumer Price Index (CPI)
Mine Life: 20 years DCF – 30-year production and sales mine life
Starting Royalty: $1.09 per ton, as per lease agreement
Royalty Escalation: 3.82%, 5-year average of the Producers Price Index (PPI)
Starting Average Price Per Ton: $10.89
Discount Rate: 9.41%

	2017	2018	2019	2020	2021
Year:	1	2	3	4	5
Production:	closed	25,000	27,000	29,000	31,000
Royalty:	sale of pit	$1.09	$1.13	$1.17	$1.21
Net Royalty:	-0-	$27,250	$30,510	$33,930	$37,510

	2022	2023	2024	2025	2026
Year:	6	7	8	9	10
Production:	33,000	35,000	35,616	36,242	36,880
Royalty:	$1.26	$1.31	$1.36	$1.41	$1.47
Net Royalty:	$41,580	$45,850	$48,438	$51,101	$54,214

	2027	2028	2029	2030	2031
Year:	11	12	13	14	15
Production:	37,529	38,190	38,862	39,546	40,242
Royalty:	$1.52	$1.58	$1.64	$1.70	$1.77
Net Royalty:	$57,044	$60,340	$63,734	$67,228	$71,228

	2032	2033	2034	2035	2036
Year:	16	17	18	19	20
Production:	40,950	41,671	42,404	43,151	43,911
Royalty:	$1.84	$1.91	$1.98	$2.06	$2.14
Net Royalty:	$75,348	$79,592	$83,960	$88,891	$93,970

Net Present Value of Sand and Gravel with a 9.41% Discount = **$393,233 NPV**
*Sand & Gravel Produced and sold over 20 years: 695,194 tons, remaining tons: 1,204,806
**The Net Present Value of the Sand and Gravel does not include the reversionary value of the land, or timber value if any.

(AAA)

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Moody's Seasoned Aaa Corporate Bond Yield© (DISCONTINUED) (AAA)

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Observation: Sep 2016: 3.41 (+ more) Updated: Oct 3, 2016

Units: Percent, Not Seasonally Adjusted

Frequency: Monthly

1Y | 5Y | 10Y | Max 2011-09-01 to 2016-09-01

EDIT GRAPH

FRED — Moody's Seasoned Aaa Corporate Bond Yield© (DISCONTINUED)

Shaded areas indicate U.S. recessions (https://fredhelp.stlouisfed.org/fred/data/understanding-the-data/recession-shading/) Board of Governors of the Federal Reserve System (US)

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NOTES

Source: Board of Governors of the Federal Reserve System (US) (http://www.federalreserve.gov/)

Release: H.15 Selected Interest Rates (http://www.federalreserve.gov/releases/h15/)

The Federal Reserve Board has discontinued this series as of October 11, 2016. More information, including possible alternative series, can be found at http://www.federalreserve.gov/feeds/h15.html (http://www.federalreserve.gov/feeds/h15.html).

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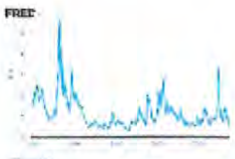

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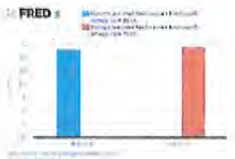

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Observation: Sep 2016: 3.41 (+ more) Updated: Oct 3, 2016

Units: Percent, Not Seasonally Adjusted

Frequency: Monthly

1Y | 5Y | 10Y | Max 2015-09-01 to 2016-09-01

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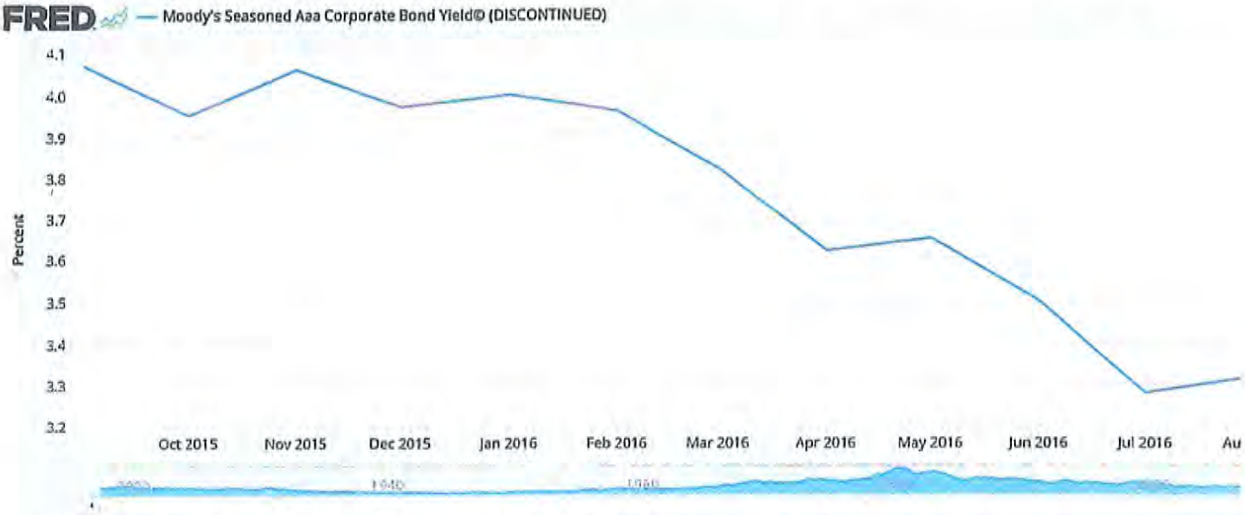

Shaded areas indicate U.S. recessions (https://fredhelp.stlouisfed.org/fred/data/understanding-the-data/recession-shading/) Board of Governors of the Federal Reserve System (US)

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Source: Board of Governors of the Federal Reserve System (US) (http://www.federalreserve.gov/)

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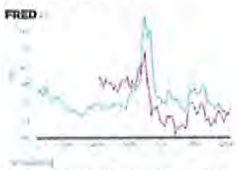

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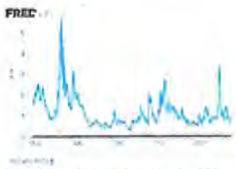

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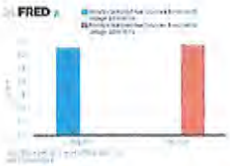
Measuring risk

(https://fredblog.stlouisfed.org/2014/08/measuring-risk/?



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Moody's Seasoned Aaa Corporate Bond Yield© (DISCONTINUED)

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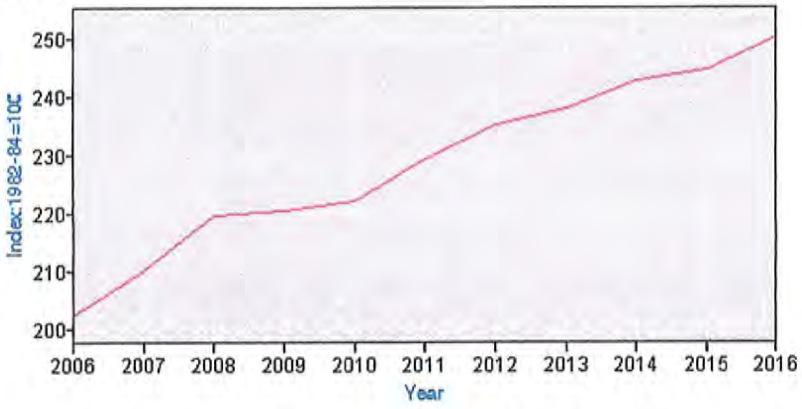
Data extracted on: February 8, 2017 (11:57:34 AM)

Consumer Price Index - Urban Wage Earners and Clerical Workers

Series Id: CWURA423SA0
Not Seasonally Adjusted
Area: Seattle-Tacoma-Bremerton, WA
Item: All items
Base Period: 1982-84=100



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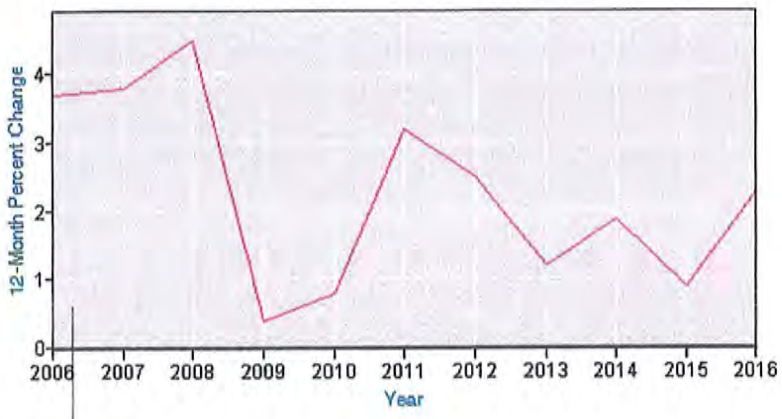
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2006		198.0		202.5		203.8		205.1		203.9		204.3	202.6	200.8	204.4
2007		205.746		210.388		210.550		210.220		213.107		214.024	210.266	208.373	212.160
2008		216.332		218.483		223.573		223.273		220.687		216.424	219.692	218.664	220.721
2009		218.752		220.208		221.993		221.873		221.339		220.905	220.658	219.853	221.463
2010		221.215		222.309		221.857		223.444		223.112		222.853	222.384	221.714	223.053
2011		225.790		228.313		230.072		230.558		232.697		231.297	229.435	227.455	231.415
2012		232.081		234.808		236.222		236.750		237.947		234.588	235.261	233.959	236.564
2013		236.542		237.405		238.963		239.343		239.363		238.021	238.129	237.271	238.987
2014		239.607		243.690		244.293		244.471		244.289		240.726	242.732	242.006	243.458
2015		240.735		243.165		246.925		247.500		246.307		246.146	244.933	243.104	246.761
2016		246.464		249.396		251.848		252.393		252.639		252.286	250.523	248.769	252.277

12-Month Percent Change
Series Id: CWURA423SA0
Not Seasonally Adjusted
Area: Seattle-Tacoma-Bremerton, WA
Item: All items
Base Period: 1982-84=100



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2006		2.9		3.2		4.6		5.0		2.7		4.2	3.7	3.5	4.0
2007		3.9		3.9		3.3		2.5		4.5		4.8	3.8	3.8	3.8
2008		5.1		3.8		6.2		6.2		3.6		1.1	4.5	4.9	4.0
2009		1.1		0.8		-0.7		-0.6		0.3		2.1	0.4	0.5	0.3
2010		1.1		1.0		-0.1		0.7		0.8		0.9	0.8	0.8	0.7
2011		2.1		2.7		3.7		3.2		4.3		3.8	3.2	2.6	3.7
2012		2.8		2.8		2.7		2.7		2.3		1.4	2.5	2.9	2.2
2013		1.9		1.1		1.2		1.1		0.6		1.5	1.2	1.4	1.0
2014		1.3		2.6		2.2		2.1		2.1		1.1	1.9	2.0	1.9
2015		0.5		-0.2		1.1		1.2		0.8		2.3	0.9	0.5	1.4
2016		2.4		2.6		2.0		2.0		2.6		2.5	2.3	2.3	2.2

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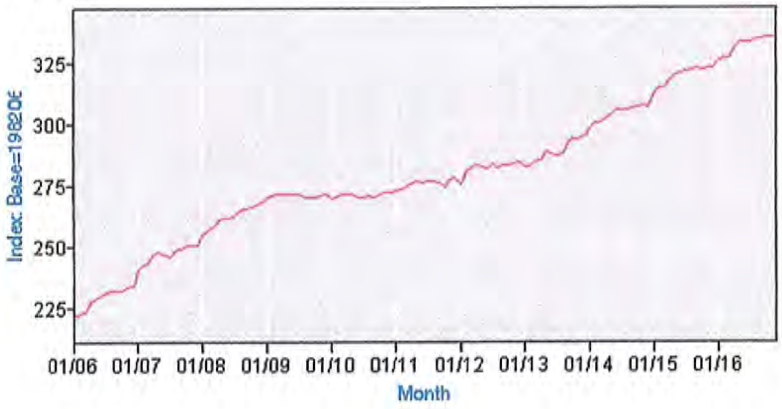
Data extracted on: February 8, 2017 (12:04:19 PM)

Producer Price Index Industry Data

Series Id: PCU212321212321
Industry: Construction sand and gravel mining
Product: Construction sand and gravel mining
Base Date: 198206



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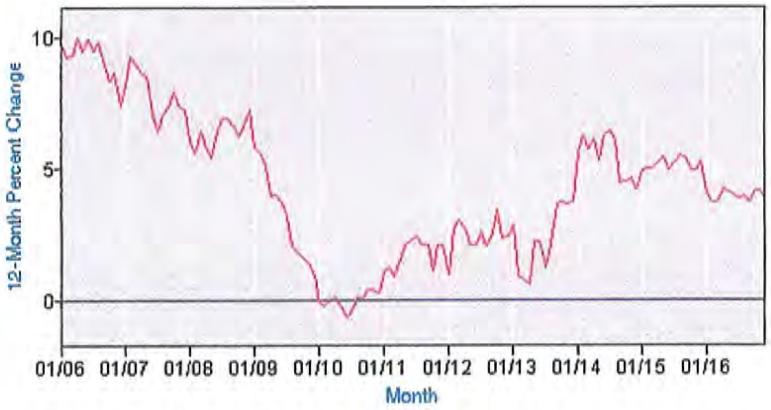
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2006	222.4	222.4	223.2	227.5	228.8	230.1	231.2	232.1	232.3	232.3	233.5	233.7	229.1
2007	240.7	242.8	243.2	247.0	248.2	246.3	246.1	248.3	249.2	250.6	250.8	250.6	247.0
2008	255.2	256.5	258.7	261.4	261.6	262.1	263.0	265.4	265.7	266.1	267.3	268.7	262.6
2009	270.1	270.8	271.8	271.7	272.0	271.7	271.4	270.7	270.4	270.4	271.1	271.5	271.1
2010	269.8	270.2	271.7	272.0	271.5	270.2	270.4	271.1	270.7	271.5	272.2	272.4	271.1
2011	272.7	273.4	274.2	276.2	277.1	276.1	277.0	276.7	276.3	274.5	277.9	278.1	275.8
2012	275.4	280.7	282.4	283.6	282.9	282.0	284.2	282.3	283.3	283.7	284.3	284.9	282.5
2013	283.1	283.2	284.7	285.4	289.0	288.2	287.5	288.3	293.6	294.3	294.5	295.3	288.9
2014	298.9	300.7	300.8	302.9	304.4	306.1	306.0	305.8	306.5	307.5	307.9	307.6	304.6
2015	313.6	315.7	315.7	318.5	320.8	321.2	321.9	322.5	323.1	322.6	323.1	323.6	320.2
2016	326.3	327.4	327.4	331.9	333.9	334.1	334.1	335.0	335.1(P)	335.9(P)	336.2(P)	335.9(P)	332.8(P)

P : Preliminary. All indexes are subject to revision four months after original publication.

12-Month Percent Change

Series Id: PCU212321212321
Industry: Construction sand and gravel mining
Product: Construction sand and gravel mining
Base Date: 198206



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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2006	9.7	9.2	9.3	10.0	9.5	9.9	9.5	9.8	8.9	8.3	8.6	7.4	9.1
2007	8.2	9.2	9.0	8.6	8.5	7.0	6.4	7.0	7.3	7.9	7.4	7.2	7.8
2008	6.0	5.6	6.4	5.8	5.4	6.4	6.9	6.9	6.6	6.2	6.6	7.2	6.3
2009	5.8	5.6	5.1	3.9	4.0	3.7	3.2	2.0	1.8	1.6	1.4	1.0	3.2
2010	-0.1	-0.2	0.0	0.1	-0.2	-0.6	-0.4	0.1	0.1	0.4	0.4	0.3	0.0
2011	1.1	1.2	0.9	1.5	2.1	2.2	2.4	2.1	2.1	1.1	2.1	2.1	1.7
2012	1.0	2.7	3.0	2.7	2.1	2.1	2.6	2.0	2.5	3.4	2.3	2.4	2.4
2013	2.8	0.9	0.8	0.6	2.2	2.2	1.2	2.1	3.6	3.7	3.6	3.7	2.3
2014	5.6	6.2	5.7	6.1	5.3	6.2	6.4	6.1	4.4	4.5	4.6	4.2	5.4
2015	4.9	5.0	5.0	5.2	5.4	4.9	5.2	5.5	5.4	4.9	4.9	5.2	5.1
2016	4.0	3.7	3.7	4.2	4.1	4.0	3.8	3.9	3.7(P)	4.1(P)	4.1(P)	3.8(P)	3.9(P)

P : Preliminary. All indexes are subject to revision four months after original publication.

3.82 5YR AV.

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POSITIVE AND NEGATIVE FACTORS
HIGHEST AND BEST USE

Positive Factors

1. The site is in a reasonably good market place, the Olympic Peninsula, Washington.
2. Access to the mine is excellent, with entrance off US 101.
3. The mine has been issued all the local and state permits to mine, but requires an updated WSDNR reclamation permit renewal, which is straight forward.
4. The sand and gravel is well sorted supplying all aggregate sizes and meets WSDOT specification for construction aggregates, except for #40 mesh.
5. The 30-acre site has an above normal glacial deposit of sand and gravel in a sloping terrace from 198' msl to 128' msl.

Negative Factors

1. The current Jefferson County Conditional Use Permit does not have the capability to wash aggregates, and would require a new Conditional Use permit
2. The current Jefferson County Conditional Use Permit does not have the capability to crush aggregates on site, and would require a new Conditional Use Permit.
3. The Jefferson County market for aggregate sales has many producers selling rock in a moderate market area.

Highest & Best Use

For the purposes of the subject mineral valuation, McLucas believes the highest and best use of the Penny Creek Mine site is the production and sale of its sand and gravel resources, and the final reversionary use of the property after the completion of mining and reclamation would be the subdivision of six 5-acre high quality/location lots for home sites.

Note: If the site is not mined, considerable property development would have to be performed to the site to obtain six 5-acre lots for home sites. The site starts at a 128' msl elevation, and inclines to a terrace at 165' msl, and then continues to climb to its highest elevation of 198' msl. This existing topography would only be conducive to four 7.5-acre home sites. The mining and reclamation of the site allows for the highest and best use of the mine site.

ASSUMPTIONS

1. Glennda B. McLucas, licensed Washington Professional Geologist, and Stephen Taylor, Vice President Mineral Valuations of Mc Lucas and Associates, Inc., who prepared the subject mineral valuation, has based the above determinations and conclusions on standard scientific methodology and best professional judgment. In my opinion, the conclusions should agree with local, state, and federal regulatory agencies; however, this should be considered a preliminary jurisdictional determination and should be used at the mine owner's own risk until it has been reviewed and approved in writing by the appropriate regulatory agencies, most particularly, Jefferson County (owner), and Washington Department of Natural Resources, the surface mining regulatory agency.

2. The determinations, conclusions, assumptions, and limiting conditions within this opinion of value is based on conversations with Matt Stewart, Jefferson County Fleet Manager, and employees of the Washington Department of Natural Resources' Geology and Earth Resources Division's mining regulations. McLucas assumes that all this information is correct and current. All site dimensions and other legal information is assumed to be correct, as found through available records, or on-the-ground inspection.

3. The enclosed Statutory Warranty Deed outlines the transfer of title and interest from Carl Willrich, and Mavis Willrich to Jefferson County Department of Public Works, Order No. 320154.

4. McLucas has used reports that have been generated for the owners of the Penny Creek Mine, starting in the early 1970's to present day.

5. The information contained within this report, and facts observed during Stephen Taylor's physical examination of the property in 2014, in the company of Matt Stewart, is from sources considered to be reliable, but such information is in no sense guaranteed. Data supplied by the client has been checked, where possible, within the limitations of this investigation. To the best of McLucas' knowledge and belief, the statements and opinions contained within this report are supportable. If any errors are found, the right is reserved to modify the conclusions reached.

6. While various approaches to value, and various mathematical calculations have been used in estimating value, these are but aids to formation of the opinion of value expressed within this report. In these calculations, certain arithmetical figures are rounded to the nearest significant amount for the sake of clarity in arriving at the value.

7. The data and conclusions embodied in this valuation are a part of the whole valuation. No part of this valuation is to be used out of context, or by itself alone. No part of this valuation is necessarily correct, being only part of the evidence upon which the final judgment as to value is based.

8. McLucas assumes that there are no hidden or unapparent geologic conditions beneath the surface of the property that would render it less valuable. McLucas did conduct a subsurface investigation to assess the, quantity, and quality of site materials. McLucas estimation of reserves was conducted by utilizing Google Earth, which has provided us with an estimation of the reserves contained within the Penny Creek site. McLucas is not an engineering company, and offers our estimation as being reasonable, which should be verified by an engineering company. Jefferson County permit documents have been reviewed, and are assumed to be correct. Aggregate quality information was provided by Material Testing Corporation, and reviewed by McLucas & Associates, Inc.

9. Any maps, sketches, or photographs included within this report are presented for the sole purpose of illustration, and as an aid to metal visualization of the property. These illustrations are not necessarily drawn to scale, and should not be construed as surveying or engineering report.

10. No guarantee is made as to the accuracy of the estimates or opinions furnished by others, which have been used in arriving at the subject opinion of value. It is further assumed that the opinions, estimates, and data contained in this report are accurate.

11. McLucas and Associates, Inc., by reason of this valuation, is not required to give testimony, or provide attendance in court, or at any governmental hearing with reference to the property appraised, unless arrangements have been made in advance.

12. Neither all, nor any part of the contents of this report (especially any conclusions as to value, or McLucas' identity) will be disseminated to the public through advertising media, public relations media, news media, sales media, or any other public means of communication without the prior written consent approval of McLucas.

13. Unless otherwise stated within the valuation report, the existence of hazardous materials, which may or may not be present on the property, was not observed by McLucas, who has no knowledge of the existence of such materials on, or in the property. McLucas is not qualified to detect such substances, however. This type of material may affect the value of the property. The value estimate is predicated on the assumption that there is no such material on, or in the property that would cause a loss in value. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.

14. Compensation for services provided the client, is dependent only upon delivery of this report.

15. The value found by McLucas is in no way contingent upon the compensation to be paid for mineral land valuation services. The purpose of this report is to estimate the fair market value of the property as of February 27, 2017, the date McLucas finished the report.

16. The Updated Opinion of Value, as set forth within this report, is based solely upon information available at, and prior to the date of valuation, February 27, 2018. No responsibility is assumed with respect to facts which may have developed subsequent to such date, and which might have a bearing on the opinion of value at the date noted, as expressed herein.

17. Acceptance of and/or use of this report by the client or any third party, constitutes acceptance of the above conditions. McLucas' liability extends on to the stated client, not subsequent parties or users, and is limited to the amount of the consulting fee received by McLucas.

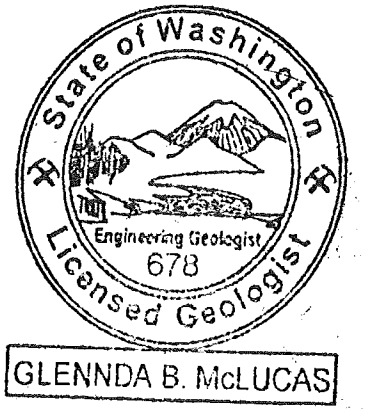
CERTIFICATION

I certify that to the best of my knowledge and belief that:

The statements of fact contained within this mineral valuation report are true and correct;
the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased, professional analyses;
I have no present or prospective interest in the Penny Creek Pit property that is the subject of this report;
I have no personal interest, or bias with respect to the parties involved;
my compensation is not contingent upon any action or event resulting from the analyses, opinions, or conclusions in this report;
my analyses, opinions, and conclusions were developed in conformity with the requirements of the Code of Professional Ethics of the Washington State Board of Geologist Examiners, under which body I have been issued a license to operate as a professional geologist within Washington State;
I have made a personal inspection of the property that is the subject of this report.

Glennda McLucas, President, R.P.G.
McLucas and Associates, Inc.

Stephen Taylor, Vice President
McLucas and Associates, Inc.



PERMIT DATA

McLucas spoke with Matt Stewart, Manager of Fleet Services, Jefferson County to discuss any changes to the current permits. McLucas was informed that there had been no changes to the permits since the previous 2014 Mineral Valuation of the site.

McLucas did obtain the latest WSDNR Inspection Report dated December 21, 2016. The DNR is requesting a new permit application from Jefferson County to include a new mapset. WSDNR has agreed to hold off on the permit update until the site is sold.

On November 11, 1972, Jefferson County, Washington issued a surface mining permit to Dutton – Willrich to operate the Penny Creek Pit mine site near Quilcene, Washington. At that time, Washington State Department of Reclamation issued a reclamation permit (10898) to Dutton – Willrich. This permit allowed Dutton- Willrich to mine aggregates with pit run borrow and the screening of aggregates.

The site was obtained, through a Statutory Warranty Deed, March 3, 1989, with Carl and Mavis Willrich, whereby Jefferson County Community Planning Department became the new owners of the Penny Creek Pit site. In October 1989 Jefferson County was issued a new reclamation and mining permits from the Washington State Department of Natural Resources. Since this time the mine has set idle, and used to store basalt bedrock.

McLucas has had conversations with Jefferson County and have included documentation emails to these facts, which are included for your review. In summary, Jefferson County will honor the existing historic permit which allows the current owner or new owner to mine the site selling borrow run material, and allow the site to screen the rock for aggregate sizes to sell in the open market. However, this permit does not allow for the site to crush, or wash aggregates on site. The County is open to the new owner in obtaining a new Conditional Use Permit to crush and wash aggregates, which would require a new SEPA application, WSDOE General Permit, and a Site Evaluation Report.

McLucas contact with the Washington State Department of Reclamation concerning the reclamation permit, states the site will require an updated reclamation permit to include a new SM-8, Narrative, New Mapping, and SEPA. This is fairly, straight forward and easily obtained.

360-456-8248 T
360-438-1881 F

On Tue 26/08/14 5:16 PM , Matt Stewart MStewart@co.jefferson.wa.us sent:

Steve, please see below. Let me know what follow-up questions you have.

Thank you,
Matt

Matt Stewart
Manager, Fleet Services
Jefferson County
PO Box 1200
371 Chimacum Rd
Port Hadlock WA 98339
mstewart@co.jefferson.wa.us
Office: 360-344-9713
Mobile: 360-301-9448

From: David W. Johnson
Sent: Tuesday, August 26, 2014 15:13
To: Matt Stewart
Cc: David W. Johnson
Subject: RE: Permit Questions Jefferson County Penny Creek Pit

Matt,

See my answers below within the list of questions. My answers are based upon review of JCC 18.20.240 attached.

(1) Will the county allow for Crushing/screening of sand and gravel? Yes, with approval of a Type III Conditional Use permit – requires a pre-application conference.

(2) Will the county allow for aggregate washing on site? Yes, with an engineered stormwater plan

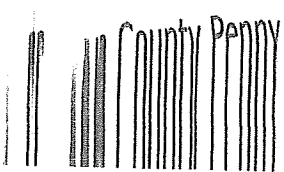
(3) Is there a set MSL elevation for the bottom of the pit area? To be determined under the required Site Evaluation Report (18.20.240(2)(h)(i)

(4) Will the standard DNR 50' setback from property line and a 2'-1' reclamation cut slope be used? Yes

(5) Will Jefferson County be the lead agency in the SEPA review? Yes

(6) Will a DOE General Discharge Permit be required? Yes if require by that agency.

(7) Any other permit requirements? Not known – none anticipated at this time.



DEPARTMENT OF
NATURAL RESOURCES

GEOLOGY AND
EARTH RESOURCES DIVISION
1111 WASHINGTON ST SE
MAIL STOP 47007
OLYMPIA, WA 98504-7007

360-902-1450
FAX 360-902-1785
TRS 711
GEOLOGY@DNR.WA.GOV
WWW.DNR.WA.GOV

December 21, 2016

JEFFERSON COUNTY PUBLIC WORKS
623 SHERIDAN ST
PORT TOWNSEND, WA 98368-2439

RE: INSPECTION REPORT FOR SURFACE MINE RECLAMATION PERMIT #70-010898 (PENNY CREEK)

Dear Permit Holder:

A review of your permit file and inspection on 12/20/2016 has been completed for the Department of Natural Resources (DNR) Surface Mine Reclamation Permit located in a portion of Section 23, Township 27 North, Range 02 West, W.M., Jefferson County, Washington.

Enclosed is the Inspection Report (Form SM-7A) for your Department of Natural Resources Surface Mine Reclamation Permit. Please review the report carefully to determine if any corrective actions are in order.

If you have any questions please feel free to contact me by calling 360-870-7805.

Sincerely,

Nicole Damer
Surface Mine Reclamation Program
Division of Geology and Earth Resources

Enclosures (2)

c: File #70-010898

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

SURFACE MINE RECLAMATION INSPECTION REPORT (Form SM-7A)

Reclamation Permit No. 70-010898

Permit Holder: JEFFERSON COUNTY PUBLIC WORKS
Mine name: PENNY CREEK
County: Jefferson
Latitude/Longitude: 47.8194, -122.9010

Report Date:	12/21/2016
Inspection Date:	12/20/2016
Acres Permitted:	20
Acres Disturbed:	0.6
Acres Reclaimed:	1.58
Depth Permitted: (ft)	25
Depth Mined: (ft)	0

Performance Security:

Current reclamation security: $0.00
Total reclamation security required: $0.00

Annual Fee:

Fees Owed: **$0.00**

Inspection Checklist:

Compliant with permit?	No	Boundaries/setbacks marked?	No	Mining within boundaries?	No
Signs of slope instability?	No	Segments need reclamation?	Yes	Topsoil conserved?	Yes

Subsequent Use:

Forestry

Inspection Observations and Reclamation Status:

Thank you Matt for meeting with me at the pit. The site was inactive during the inspection, with access restricted by a locked gate. The oversized material that had been present on the western side of the site has been removed and brought to a nearby site. The overburden that had been mixed in with it has been stockpiled onsite near the excavations; all of this is considered mining-related disturbance. During the last inspection in 2015, DNR and the County agreed that a Revised Reclamation Permit application submittal could be postponed until the site had sold because the site was considered reclaimed. Due to the increase in disturbed acreage, a Revised Reclamation Permit application is now required to be submitted to DNR within 60 days (by February 21, 2017) in order to bring the site back into compliance by providing a scalable map set and adequate reclamation plan. If additional time is needed, please submit a written request by February 21, 2017.

If you have questions about any of the items detailed in this inspection report, please call SMR representative Nicole Damer at 360-870-7805.

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

Aerial Photography Report

Reclaimed Area: 1.58 Acres

Permit # 70-010898

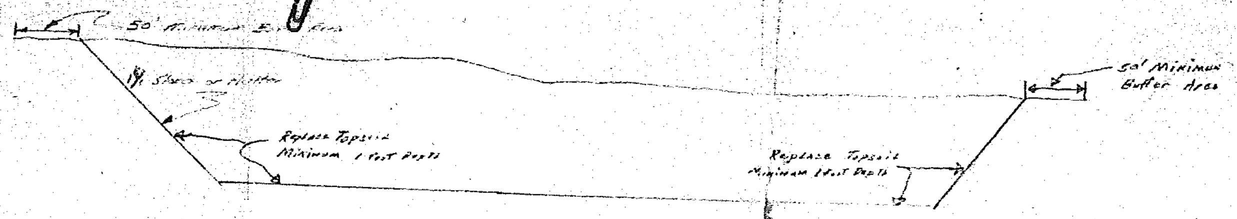
Jefferson County Public Works
Penny Creek

Inspected: 12/20/2016
by Nicole Damer

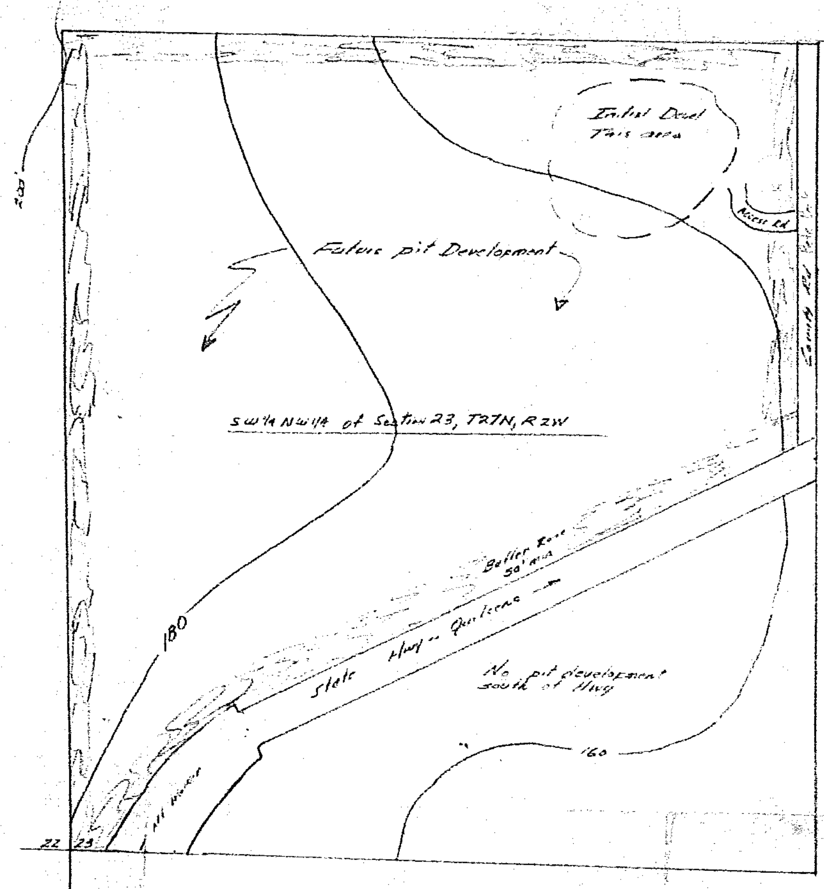
Legend

- Disturbed Area
- Reclaimed Area
- Permit Boundary
- GPS Field Points

N



Typical Section through pit area



Notes:

1. Maximum bank slope 1½:1; Flatter if req'd for erosion control.
2. Slope will be seeded where req'd for erosion control.
3. Natural screening will be maintained on property lines & along highway for a minimum of 50' undisturbed.
4. Douglas Fir will reseed naturally from seed trees left in surrounding 50 foot buffer area.
5. Gravel is permeable to a depth greater than 25 feet. Maximum depth to be mined and ground water table is below 25 feet. There are no natural defined drainage channels.

Reclamation Plan

Material Removal
Section 23, T27N, R2W
Existing Topography & Planned Development
11/21/__ Sht 1 of 1

From: Matt Stewart <MStewart@co.jefferson.wa.us>
To: "mclucastaylor@qwestoffice.net" <mclucastaylor@qwestoffice.net>
Subject: RE: FW: Permit Questions Jefferson County Penny Creek Pit
Sent: Thu 28/08/14 11:54 AM
Priority: Normal

Steve, here is the answer from David W. Johnson of the county's DCD, who has been our representative on this project:

> The mine could be re-activated to extract material without a conditional use permit as an allowed "yes" use. However, new accessory uses such as a rock crusher would require a conditional use permit. We would also require consistency with the performance and development standards under JCC 18.20.240 & 18.30.170, SEPA, a valid DNR mining permit and reclamation plan, and be responsible for complying with other state agencies' regulations.

Let me know if you have follow-up questions or concerns.

Thanks for the material test results yesterday. Looks much better!

Matt

From: Stephen Taylor [mailto:mclucastaylor@qwestoffice.net]
Sent: Wednesday, August 27, 2014 9:13
To: Matt Stewart
Subject: Re: FW: Permit Questions Jefferson County Penny Creek Pit

Matt,

The mining permit questions have been cleared up with the attached Jeffferson County Permit Requirements. The question I have is any consideration being given to the fact that the sight has already been permitted in 1972 and then transfered to Jefferson County in 1989 and approved for reclamation by WSDNR? It appears that Jefferson County is requiring a new county mining permit for the site. We know that WSDNR has requested and updated reclamation plan which is fairly straight forward. As it states with the attached County requirements a new Type III permit approval, Conditional Use Permit, SEPA, WSDOE General Permit, NPDES approval, Hydrogeologic Study, plus new mapping. These are all negatives in terms of selling the site for mineral extraction. There is no guarantee that Jefferson County will issue a mining permit as I see it. If this is the case then I will have to factor this into the discount process for the mineral valuation. Please advise. Note: I just got back the test results for the Penny Creek and Jefferson County pits. I will be sending them shortly. I expect to be done with the valuation in a couple of days.

Thanks,

Steve

Stephen Taylor
McLucas & Associates, Inc.
V.P. Marketing/Mineral Valuations
P.O. Box 5352
Lacey, WA 98509

Jefferson County

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Cases Associated with Parcel No: 702232002

This may not be a complete listing of information that exists for this parcel. There may be other information pertinent to the property on file. Please contact the Department of Community Development for additional information.

Case Number	ZON14-00018
Description	CONDITONAL USE PERMIT - PENNY CREEK PIT Maintain defunct gravel mining pits as outdoor storage areas for stockpiling of road maintenance materials. This proposal requires a Type II Conditional Discretionary "C(d)" Use permit with public notice, but no public hearing, except at the discretion of the Administrator.
Last Name	JEFFERSON COUNTY PUBLIC WORKS
Received Date	6/12/2014 2:33:41 PM
No Images	

Case Number	PRE14-00003
Description	Permit Penny Creek gravel pit as an outdoor storage yard. Currently zoned RR 1-5.
Last Name	JEFFERSON COUNTY
Received Date	2/5/2014 11:17:39 AM
No Images	

18.20.240 Mineral extraction, mining, quarrying and reclamation.

(1) In addition to meeting all other applicable requirements of this code, including this section, all new mineral extraction and mineral processing activities located outside of an approved mineral resource land (MRL) overlay district designation (as specified in Article VI-C of Chapter 18.15 JCC) shall be subject to the following standards:

(a) New mineral extraction and mineral processing activities in rural residential districts shall require a conditional use permit subject to a Type III permit approval process.

(b) The total disturbed area of mineral extraction, mining and quarrying sites (excluding access roads) and any associated mineral processing activities shall not exceed 10 acres. Any proposed mineral extraction which would create disturbed areas in excess of 10 gross acres shall require an MRL designation in accordance with Article VI-C of Chapter 18.15 JCC.

(2) The following standards apply to all surface mining and reclamation activities:

(a) All surface extraction shall be performed in full compliance with the Washington State Surface Mining Act (Chapter 78.44 RCW). Other extraction must conform with all applicable Washington State laws.

(b) Applications for development permits for extraction shall be accompanied by a report prepared by a professional geologist which shall include at least the following information:

(i) Types of materials present on the site;

(ii) Quantity and quality of each material;

(iii) Lateral extent of deposit(s);

(iv) Depth of deposit(s);

(v) Depth of overburden; and

(vi) Method of extraction.

(c) All extraction, surface mining, and reclamation operations must, to the extent possible, employ best management practices (see Chapter 18.30 JCC) for drainage and erosion and sedimentation control, buffer zones, and other precautionary measures as appropriate to protect adjoining lands, surface and groundwater quality and quantity, natural drainage systems, environmentally sensitive areas, wildlife habitat, and scenic resources from adverse impacts resulting from the extraction operations and to meet the standards of this code and other applicable county, state, and federal codes and regulations.

(d) Topsoil or other overburden having value for agriculture or other beneficial uses shall not be removed or disposed of in a manner which will reduce its value or prevent its future use.

(e) Spoils shall be placed outside of environmentally sensitive areas and shoreline areas. Final slope angle shall be no steeper than 1.5:1. Best management practices shall be employed for drainage and other controls so that: (i) spoils are properly drained and do not cause ponding; (ii) runoff water meets the requirements and standards of this code and other applicable county, state and federal codes and regulations; and (iii) mass soil movement is prevented.

(f) All extraction and reclamation activities that create a noise disturbance must take place between 7:00 a.m. and 7:00 p.m. on weekdays, unless extended hours of operation are authorized for emergency purposes by the administrator. No use shall be made of equipment or material which produces unreasonable vibration, noise, dust, smoke, odor, electrical interference to the detriment of adjoining property or the persons having the quiet use and enjoyment of that adjoining property.

(g) The alteration, intensification, and expansion of existing gravel pits and surface mining operations is allowed subject to reasonable performance standards to ensure that alteration, intensification, and expansion of such uses have minimal adverse impacts on surrounding areas and uses; and provided, that:

(i) If increased off-site impacts (noise, vibration, dust, traffic) would result from expansion, intensification, or modification, a conditional use permit shall be required.

(ii) Modification to include a new use or operation (e.g., a rock crusher) shall require a conditional use permit subject to a Type III permit approval process.

(h) The following performance standards are required for mining, quarrying and asphalt/concrete batch operations located within a designated susceptible aquifer recharge area or special aquifer recharge protection area. Mining, quarrying and asphalt/concrete batch operations in such areas must also comply with the best management practices identified in JCC 18.30.170 for those activities. Asphalt batch plants are prohibited in special aquifer recharge protection areas (JCC 18.15.250(1)(b)).

(i) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plants located within a designated critical aquifer recharge area shall, prior to approval and operation, submit a site evaluation report to Jefferson County for review and approval. Prior to preparation of a site evaluation report, the applicant shall prepare and submit a scope of work for the report to Jefferson County for review and approval.

(ii) At a minimum, the site evaluation report shall contain the following elements: (A) permeability of the unsaturated zone, (B) location of nearby sensitive areas (wellhead protection areas, special protection areas, etc.), (C) groundwater depths and flow direction,

(D) location, construction, and use of existing wells within one-quarter mile of the subject site, (E) site map at one inch to 2,000 feet scale, (F) activity characterization, (G) proposed best management practices, and (H) a contingency plan. In addition, the following detailed information about the hydrogeologic characteristics of the site and a prediction of the behavior of a contaminant may be required: (A) background water quality compiled over at least a one-year period, (B) contaminant transport modeling based on potential releases to groundwater, (C) modeling of groundwater withdrawal effects, (D) geologic and hydrogeologic characteristics including, but not limited to, surface water on-site and with the subbasin or watershed that may have interactions with groundwater or surface contaminants, and (E) groundwater monitoring plan provisions.

(iii) Gravel mining and rock quarrying operations located within a designated critical aquifer recharge area shall, prior to approval and operation, obtain a National Pollutant Discharge Elimination System and State Waste Discharge Individual General Permit (NPDES) for process water, stormwater, and mine dewatering water discharges from the Washington State Department of Ecology, Water Quality Program.

(iv) Cement concrete batch plants, and asphalt concrete batch plants located within a designated critical aquifer recharge area shall, prior to approval and operation, obtain a National Pollutant Discharge Elimination System and State Waste Discharge Individual Permit from the Washington State Department of Ecology, Water Quality Program.

(v) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plants located within a designated critical aquifer recharge area shall demonstrate that the proposed activities shall not cause degradation of the groundwater quality below the standards described in Chapter 173-200 WAC (Water Quality Standards for Ground Water of the State of Washington).

(vi) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plants located within a designated critical aquifer recharge area shall, pursuant to JCC 18.30.170(1), implement the Washington State Department of Ecology's Storm Water, Water Quality, Hazardous Waste, Wetland, and Solid Waste Program BMPs and relevant BMPs from the Departments of Health, Agriculture, Transportation, and State Conservation District Office or demonstrate through a best management practices report pursuant to JCC 18.30.170(2), how they will integrate other necessary and appropriate mitigating measures on the design, installation, and management of the proposed facility or use.

(vii) Provide a written agreement to the county providing that all employees at mining, quarrying, cement concrete batch plants, or an asphalt batch plant site, will be notified that the operation lies above an aquifer recharge area and providing annual training regarding all measures set forth by the BMPs established in JCC 18.30.170 (1).

(viii) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plants located within a designated critical recharge area shall at all times comply with Olympic Air Pollution Control Authority permit requirements.

(ix) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plant operations located within a designated critical area aquifer recharge area shall engage a third party, selection of which is approved in advance by the county, to monitor compliance with regulations and conditions pertaining to their NPDES/state waste discharge permit. Reports shall be prepared and distributed as required in the NPDES/state permit with copies to the county each month unless the permit requires quarterly reporting, in which case copies will be provided to the county quarterly.

(x) Mining, quarrying, cement concrete batch plants, and asphalt concrete batch plant operations located within a designated critical area aquifer recharge area shall submit an annual report to the county evaluating implementation of the Department of Natural Resources approved reclamation plan. A qualified, independent consultant approved by the county shall prepare the report. The report shall identify how restoration of the site compares to the approved reclamation plan and whether any corrective action is contemplated by the applicant or required by the Department of Natural Resources. [Ord. 8-06 § 1]

SURFACE MINING PERMIT

STATE OF WASHINGTON
DEPARTMENT OF
NATURAL RESOURCES
Olympia, WA 98504

Operator: Jefferson County

Address: P.O. Box 1220

Port Townsend, WA 98368

Pursuant to RCW 78.44 (Chapter 64, Laws of 1970) an OPERATING permit is hereby granted to the above-named operator to engage in surface mining on the property described in the application and material on file under this permit. The total area to be disturbed by surface mining, including the deposition of surface mining refuse, shall be in accordance with the reclamation plan filed with and approved by the Department of Natural Resources under this permit, and in accordance with conditions set forth in Exhibit "A" attached hereto and made a part hereof.

TERM

This permit shall be in effect from the date of issuance and shall remain in effect so long thereafter as the operator pays the annual basic fee of $250.00 per site and the additional acreage fee if applicable, complies with the Surface-Mined Land Reclamation Act and the rules and regulations promulgated thereunder, complies with the reclamation plan, and maintains a performance bond as required by the Act.

CHANGE OR MODIFICATION OF RECLAMATION PLAN

The operator shall obtain written approval from the Department prior to any change or departure from the approved reclamation plan. The reclamation plan may be modified as provided in RCW 78.44.100 at any time during the term of the permit after timely notice and opportunity for hearing.

TRANSFER OF PERMITS

The transfer of this permit to another operator through sale, assignment, lease, or otherwise shall not be made unless approved in writing by the Department. A transfer shall not be approved unless the successor operator assumes all duties of the former operator to complete the reclamation of the land and the Department approves the successor operator's bond.

BONDS

A performance bond in the amount of ---NOT REQUIRED---
($ _____) Dollars shall be submitted to and approved by the Department prior to commencement of surface mining. The operator may submit a cash deposit or an assignment of a savings account in the amount specified in lieu of a performance bond. The amount of the bond shall be subject to adjustment annually, based on the number of acres to be surface mined and the number of acres to be reclaimed.

PENALTIES

This permit may be suspended, cancelled, or revoked if the operator violates any of the applicable requirements set forth in the Act or the rules and regulations promulgated pursuant thereto, or if the operator fails to conduct his operations as specified in the approved reclamation plan.

The operator shall be guilty of a gross misdemeanor for conducting surface mining without a valid operating permit. Each day of operation without a valid operating permit constitutes a separate offense.

Issued this 1st day of November, 19 72.

(REVISED THIS 1ST DAY OF OCTOBER, 1989)

Sec. 23

T. 27 N.

R. 2 West

BRIAN J. BOYLE, Commissioner of Public Lands
Department of Natural Resources

BY _____
William S. Lingley, Jr.: Regulatory Programs Manager
Division of Geology and Earth Resources

Permit No. 10898

11/84 (CHANGE OF OPERATOR)

Revised Operating Permit No. 10898

EXHIBIT "A"

ADDITIONAL CONDITIONS OF THE PERMIT

(1) This Operating Permit applies to the following property: A 20 acre portion of the SW1/4, NW1/4, Section 23, Township 27 North, Range 2 West W.M., Jefferson County, Washington.

(2) All operations shall comply with the Maximum Environmental Noise Levels as set forth in RCW 70.107 and WAC 173-60.

(3) All operations shall comply with the Washington Clean Air Act as set forth in RCW 70.94 and WAC 173-400.

Noise and air pollution statutes are administered by the Washington State Department of Ecology. For clarification of these conditions, please call the Department of Ecology at 206-459-6000.

(4) A minimum 25 foot undisturbed setback from all other adjacent properties is to be maintained on all sides of the pit. Mining and related activities shall not occur within this setback, except as necessary to complete final reclamation.

By _____
William S. Lingley, Jr.: Regulatory Programs Manager
Division of Geology and Earth Resources

Permit/
Permit Application
No. _____

FORM SM-8A
Standard Reclamation and Operating Plan

The Surface-Mined Lands Reclamation Act [RCW 78.44], as amended during 1987, requires that all mines exceeding the following thresholds shall have an approved reclamation and operating plan on file with the Department of Natural Resources:

(1) mine in which three acres of land (including highwalls, pit floors, stockpiled areas, sidecast areas, and processing-plant sites) have been disturbed by mining or related activities and/or,

(2) mines having working faces which are both higher than 30 feet and steeper than 1 horizontal to 1 vertical (45°).

Lands which have been reclaimed to the standards given in RCW 78.44 should not be included when calculating the disturbed-area or face-height thresholds.

The Department encourages operators of smaller mines to submit a reclamation/operating plan in order to protect against excessive reclamation costs should operations expand in the future. The following form is intended as guide to assist the operator in preparation of a reclamation/operating plan which meets all requirements of the Act.

GENERAL INFORMATION

(1) Operator Jefferson County
(2) Operator's Address P.O. Box 1220 Port Townsend Wa. 98368
(3) Operator's Phone Nos. 206-385-9160
(4) Landowner Jefferson County
(5) Landowner's Address P.O. Box 1220 Port Townsend Wa 98368
(6) Landowner's Phone (206) 385-9160
(7) Name of Mine _____
(8) Location of Mine SW¼ Quarter of the NW¼ quarter Section(s) 23 Township 27N Range 2W Jefferson County County(ies)
(9) Street Address of Mine Quilcene Washington off 101

(5) Maximum Finished Slopes for Sand and Gravel Pits:

(a) Slopes in deposits which contain at least 50% clay will be reclaimed to 1.5 horizontal (H) to 1 vertical (V) [34°] ☐ or.....

(b) Slopes which will be dressed with a minimum one-foot thick topsoil or clay cover will be reclaimed to 1.5H to 1V [34°] ☐ or.....

(c) Other slopes will be reclaimed to 1.75 H to 1 V (30°) to facilitate natural revegetation ☒ and/or..

(6) Maximum Finished Slopes for Bedrock Quarries:

(a) All bedrock working faces will be reclaimed with a bench no less than 15 feet wide no greater than 15 feet high continuously along the top of all cliffs in excess of 30 feet high [for safety] ☐ and/or..

(b) Highwalls benched to 10 feet wide by 30 feet high to enhance sceneic values ☐ or.....

(c) Highwalls sloped to an average of 1 H to 1 V ☐ or .....

(d) No slope-reclamation will be undertaken because existing natural topography at or adjacent to the proposed quarry constititutes a safety hazard indigenous to the area. ☐ and/or..

(7) Maximum Finished Slopes for mines reclaimed as lakes or ponds:

All lake/pond bottoms will be sloped at 1.5 H to 1 V to a depth at least 2 feet below the lowest water level to assure egress for non-swimmers. (Operations using dredges should consider this requirement carefully while planning the mine) ☐

(8) Post-Mining Topography Should be Designed to Blend with Adjacent Natural Topography:

(a) Contours will be arcuate when viewed in plan ☐ and...

(b) Contours and profiles will be graded to avoid 90° angles, especially at section corners and/or property boundary corners ☐ and...

(c) Chutes and buttresses will be graded periodically along reclaimed working faces ☐ and...

(d) Restored contours will be graded to tie existing offsite natural contours ☐

(9) Post-Mining Water Control (Note: even minor sedimentation and/or minor water-pollution is prohibited by state and federal law. Please help protect the water and fishing resources):

(a) All water including water originating from rainfall, dust control, breached water tables etc. contained on site ? (Do not check this box if the deposit contains greater than 50% clay) yes ☒ no ____

(b) Drainages armored with riprap and otherwise restored in such a fashion as to establish a permanent, erosion-resistant drainage yes ____ no ____

(c) Low topographic-relief areas sloped at approximately 2% into armored drainage yes____ no ____

(9) Post-Mining Water Control (continued):

(d) Water wil be routed around newly disturbed slopes taht have clay contents exceeding 50% by installing tight-lines or armoured drainages yes ____

(f) Lakes created by mining operations will be of suffiecient size for recreation, wildlife, and residential purposes yes ____

(g) All exposed coal beds covered with topsoil yes ____

(10) Landfill/backfill (Note: backfilling is generally an unacceptable reclamation technique and will be approved only in unique circumstances and only upon submission of a detailed operating plan. This plan should identify the source of fill, commit the operator to maintaining this fill source for reclamation only, and give evidence that backfilling is an economically reasonable method of reclamation for this mine.

(a) Noxious or combustible materials will not be placed in the mine Yes X

(11) Revegetation

(a) Natural revegetation (natural revegetation is acceptable for final reclaimed slopes of 1.75 H to 1 V and in some other cases). ☒

(b) Hydromulching ☐

(c) Grass ☐

(d) Noxious weed control planned ☐

PLAN OF OPERATIONS

(1) Area to be disturbed in next twelve months to nearest 0.5 acres:

(a) Access Road	1.00 acres
(b) Pit Floors and Highwalls	0.00 acres
(c) Spoil Banks/Overburden	0.00 acres
(d) Stockpiles	1.00 acres
(e) Total	2.00 acres

(2) Probable total area to be disturbed during life of the mine (This cannot exceed the total permitted acreage given on Form SM-2) 15.0 acres

(3) Natural vegetative screening from residences/roads will be preserved yes X

(4) No stockpiling around the base of screening trees yes X

(5) Water Control during Mining:

(a) All mining operations will be kept a minimum of 200 feet from rivers, lakes, and wetlands yes X or....

(5) Water-Control (continued)

(b) If no, do you have appropriate County, Dept. of Ecology, and or Federal NPDES permits yes_____

(c) All water including water originating from rainfall, dust control, breached water tables etc. contained on site ? (Do not check this box if the deposit contains greater than 50% clay) yes X no _____

(d) Sedimentation Ponds capable catching the a 10"-in-24-hour rain storm will be constructed immediately yes X

(e) All runoff from the operation including minor drainage on the access roads shown on the attached plan routed into the sediment pond yes _____

(f) Runoff routed around working faces to low elevation using tight lines and/or energy dissapators yes _____

(6) Public Safety (describe appropriate measures to mitigate danger to the public outside the mine during operations by checking the attached boxes and by attaching suitable plans on a separate sheet.

(a) Plan of blasting to limit flyrock attached ☐
(b) Blasting mats will be used ☐
(c) Fencing if appropriate [Note that fences should not be used for reclamation] ☒
(d) Truck traffic control planned
(e) Controlled access planned including posting of inter-visible signs ☒
(f) Slope stability accessed ☒
(g) Egress from ponds established ☐

(7) Topsoil stockpiled for future use and temporarily revegetated in high wind areas yes X no_____
If no, why?_____

8) Berms: Topsoil or overburdern stockpiled in such a fashion as to limit noise pollution and visual effects of mining yes X no _____
If no why?_____

(9) Crushers, truck access routes, batch plants, and other noise-producing apparatus placed in such a position as to make use of natural topography and screening in order to limit noise impacts outside of the pit. While this is not a requirement under the Act, and may not be possible owing to operational constraints, any effort to minimize noise will reduce public complaint regarding your operation. yes X no_____

EXPLANATION OF MAPS AND CROSS-SECTIONS ACCOMPANYING THE RECLAMATION AND OPERATING PLANS

The following maps and sections are required in order document the pre-existing geography, the proposed mining operations, and final reclamation of the site. For small mines, accurately hand-drawn maps on graph paper are acceptable. For larger proposals, an enlarged USGS 7 $^{1}/_{2}$ minute topographic sheet or engineering drawings may be appropriate.

(1) Map 1: A regional index map showing the mine in relation to adjacent towns and highways should be attached unless this information is shown on Map 2 below (we suggest photocopying a portion of a road map).

(2) Map 2: A topographic map showing all of the following:

(a) Existing contours
(b) Proposed contours upon final reclamation
(c) Access
(d) Boundaries of mined property
(e) Boundaries of disturbed areas
(f) Location and names of streams
(g) Railraods
(h) Roads
(i) Utilities
(j) Parks
(k) Names of adajcent surface owners
(l) Location of cross-sections
(m) Map scales and north arrow
(n) Setbacks from adjacent properties and utilities

(Note that most of these items are shown on USGS topographic sheets. Consequently, we recommend photocopying the relevant portion of a topographic sheet to use as a base-map for the reclamation plan)

(3) Sketch Maps showing the mine development as presently envisioned at five year intervals. These sketch maps should indicate direction of mining on easch working face, position of noise generating equipment, water-controil measures, etc. (These sketch maps are unnecessary for mines less than ten acres).

(4) Photographs may be attached to document pre-existing topography of mining activities (optional but it is generally it is in the operator's best interest to submit a photo).

(5) Two intersecting cross-sections showing:

(a) Final reclaimed slopes
(b) Setbacks
(c) Existing topography [dashed]
(d) Minerals exposed at surface
(e) Proposed vegetation
(f) Benches
(g) Berms
(h) Lakes/ponds.
(i) Water table if known

SIGNATURES

Signature of applicant: Robert L. Heckert
Date: 10 Aug 1989
Signature of Landowner approving proposed subsequent use:

Date: Robert L. Heckert
Print Name of Landowner: 10 Aug 1989
~~Robert~~ Jefferson County

FOR DEPARTMENTAL USE ONLY

(1) Are the facts accurately presented in the application and supplemental material? ____yes ____ no
(2) Can reclamation be reasonably and economically be accomplished as specified? ____yes ____ no
(3) Should a permit be issued? ____yes ____ no
(4) Recommendations and comments: _____

Inspection Date: 9-8-89 District: Straits-P.T.

Bond amount (No maximum per acre):$ N/A

Copy of Bond Calculation Form attached N/A yes

Signature Of Department of Natural Resources personnnel approving project: Michael R Cronin

Print Name of DNR personnel Michael R Cronin

Date: 9-7-89

Area Approval _____

Date _____

(10) Material(s) to be mined:

(a) Gravel	☒
(b) Sand	☒
(c) Basalt	☐
(d) Silicate rock	☐
(e) Limestone	☐
(f) Building Stone	☐
(g) Other _____	

(12) Type(s) of Deposit(s):

(a) Glacial	☐
(b) River Flood Plain [alluvial]	☐
(c) River Channel Deposits	☐
(d) Talus	☐
(e) Bedrock	☐
(f) Unknown	☐
(g) Other _____	

(13) Total Production to Date: Unknown tons or _____ yds.

(14) Estimated Annual Future Production: 3000 tons or _____ yds.

(15) Depth to Water Table:

_____ feet below _____ datum (i.e. sea level) or .....

Unknown ☒ (Do not check this box in Spokane, Island, San Juan or Walla Walla Counties)

RECLAMATION PLAN

(1) County/Municipality Form SM-6 attached proves that both mining and the proposed subsequent use of this mine site have been approved by the county Owned by Jefferson Co.. yes

(2) Subsequent Land Use:

(a) Industrial	☐
(b) Agricultural	☐
(c) Forestry	☒
(d) Residential	☐
(e) Wet land	☐
Other _____	
_____	

(3) Post-Reclamation Topography

(a) Less than 10 % Grade	☐
(b) Low rolling hills	☒
(c) Lake/pond	☐
(d) Bedrock Cliffs	
Other _____	
_____	
_____	

(4) Minimum setbacks to be maintained continuously along boundaries with adjacent properties not owned or leased by the permittee:

(a) Sand & Gravel Pits	
i. 25 feet for highwalls less than 50 feet high	☒ or ....
ii. 50 feet for highwalls greater than 50 feet	☐
(b) Bedrock Quarries	
i. Setbacks as above	☐ or....
ii An undisturbed 10 feet together with a 15 foot wide x 15 foot high bench at the top of working faces steeper than adjacent 1H to 1V.....	☐
(c) Written explanation for request for variance from setback requirements attached	☐

STATE OF WASHINGTON
BOARD
of
NATURAL RESOURCES
Olympia, Wa. 98504

COUNTY OR MUNICIPALITY RECOMMENDATIONS

SURFACE MINING

TO BE COMPLETED BY APPLICANT

APPLICANT (TYPE OR PRINT): Dutton - Willeach

ADDRESS: P.O. Box 677
Olympia, Wash.

TELEPHONE NO.: 943-7630

DESCRIPTION OF SITE: SW ¼, NW ¼
Approximately 25 Acres

SEC	T	RGE		COUNTY
23	27 N	2	○ E ◉ W	J

DISTANCE	DIRECTION FROM	NEAREST COMMUNITY
2	SW	Quilcene

INDICATE PROPOSED SUBSEQUENT USE OF SITE UPON COMPLETION OF RECLAMATION:
Forest Land and/or residential Tracts

SIGNATURE (APPLICANT'S)	TITLE	DATE
[signature]	Applicant	11/3/72

TO BE COMPLETED BY APPROPRIATE COUNTY OR MUNICIPALITY

TO: BOARD OF NATURAL RESOURCES
SUBJECT: RECOMMENDATIONS ON SURFACE MINING PERMIT APPLICATION FOR A NEW OPERATOR COMMENCING OPERATIONS

	Yes	No
1. Is the proposed subsequent use legal under current local zoning regulations?		
2. Does the applicant have an appropriate permit to conduct surface mining if required by local regulations? (Please attach a copy of the permit, written order or ordinance)		

3. Recommendations and comments:

No Zoning

ADDRESS: Jefferson Co. Courthouse
P.O. Box 563
Port Townsend, Wa. 98368

TELEPHONE NO.: 385-9161

SIGNATURE (PLANNING DIRECTOR OR ADMINISTRATIVE OFFICIAL): [signature]
Jefferson County Auditor

DATE: 11/10/72

NOTE: Chapter 64, Laws of 1970, 1st Ex. Sess., requires evidence that the proposed subsequent use would not be illegal under local zoning regulations.

PERMIT NO. 1089B

SM-6 Revised 5-9-72

Copy Distribution: White - Olympia, Yellow - District, Pink - Operator, Blue - County or Municipality

STATE OF WASHINGTON
BOARD
of
NATURAL RESOURCES
P.O. Box 168 Olympia, Wa 98501

APPLICATION FOR OPERATING PERMIT

SURFACE MINING

(SEE INSTRUCTIONS BELOW)

NAME OF APPLICANT (TYPE OR PRINT)
Carl A. Willrich

PERMANENT ADDRESS (INCLUDE 'ZIP')
P.O. Box 677
Olympia, Wash.

TELEPHONE NO. 943-7630

TEMPORARY ADDRESS (INCLUDE 'ZIP')

TELEPHONE NO.

OWNERSHIP: Surface of land to be surface mined (show names and addresses)
James D. Dutton &
Carl A. Willrich

OWNERSHIP: Mineral Rights (show names and addresses)
Same

SIZE AND LEGAL DESCRIPTION
SW 1/4, NW 1/4
Approximately 25 Acres

SEC	T	RANGE	COUNTY
23	27 N	2 (E) W WM	JEFFERSON

DISTANCE	DIRECTION FROM	NEAREST COMMUNITY
2	SW	QUILCENE

TYPE OF OVERBURDEN	APPROX. MAX. DEPTH OF OVERBURDEN
SANDY	6"

MATERIAL TO BE MINED OR REMOVED	QUANTITY (TONS OR YARDS) OVERBURDEN	MINERAL
GRAVEL	STOCKPILE	500,000 ULTIMATE

ESTIMATED TOTAL ACRES TO BE SURFACE MINED	ESTIMATED NUMBER OF ACRES TO BE MINED IN FIRST YEAR
20	4

METHOD OF MINING	EST. MAX. DEPTH TO BE SURFACE MINED
SURFACE CUT	25'

PURPOSE FOR WHICH THIS LAND IS TO BE USED AFTER MINING
TIMBERLAND

Do you or any person, partnership, or corporation associated with you now hold, or have ever held, an operating permit?	Yes ✓	No

If the answer to the above is yes, please list.

Permit No.	Active Operation Yes	Active Operation No	Reclamation Complete Or Current Yes	Reclamation Complete Or Current No
10708			✓	
10734	✓			

Have you had an operating permit or bond revoked or forfeited?	Yes	No ✓

If yes, give permit number and location of site.

INSTRUCTIONS

1. This application must be accompanied by the fee, a reclamation plan and a plan of surface mining.
2. Attach a statement (or form) from the appropriate zoning agency showing that the proposed subsequent use of the property is a legal use under present zoning classification.
3. Maps must be submitted with each application to the following scales. Contour intervals shall not be more than 5 feet. Variations are permitted subject to approval.

Area of Site	Not Less Than
0-5 Acres	1"=50'
5-10 Acres	1"=100'
Over 10 Acres	1"=200'

DESIGNATE NUMBER OF SITES COVERED BY THIS APPLICATION:	1	A BASIC FEE OF $25 PER SITE IS HEREWITH ATTACHED	

SIGNATURE: Carl A. Willrich — DATE: 10/3/72

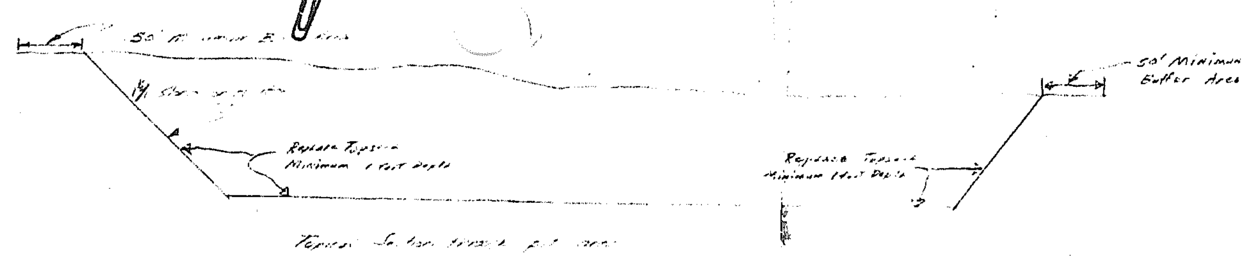
TITLE: Applicant — PERMIT NO.: 10898

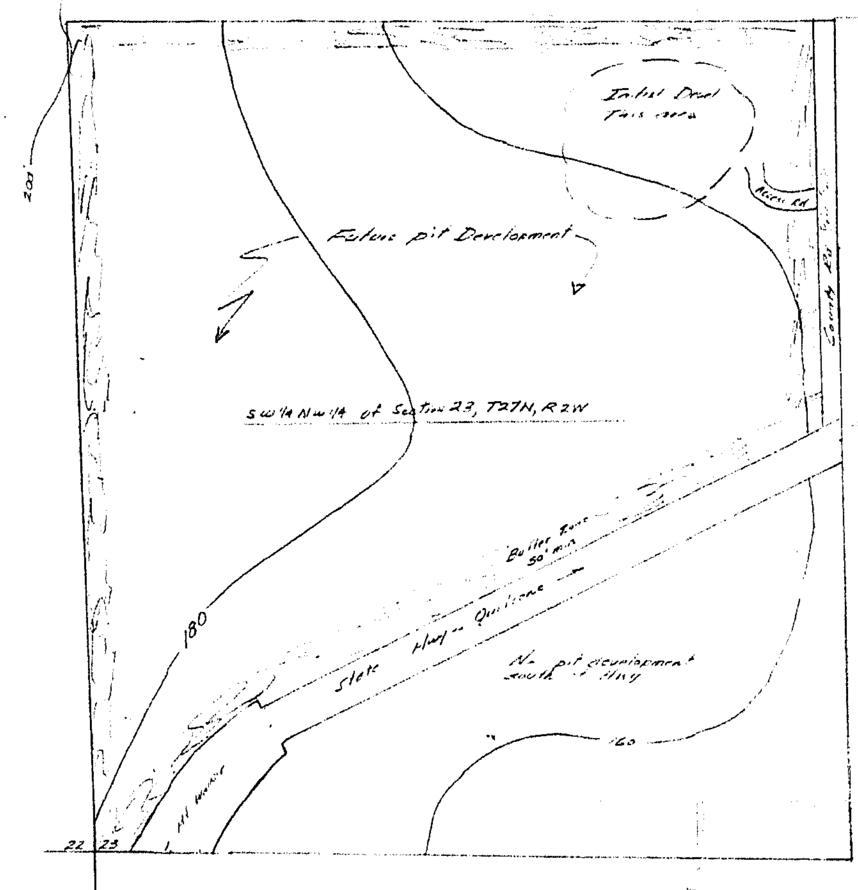
FOR DEPARTMENT USE ONLY

DATE ACCEPTED BY DEPARTMENT:	ACCEPTED BY:

SM-2

Copy Distribution: White - Olympia, Yellow - District, Pink - Applicant





Notes.

1 [illegible]

2 [illegible]

3 [illegible] undisturbed.

4. Douglas fir will reseed naturally from seed trees left in surrounding 50 foot buffer area.

5. Gravel is permeable to a depth greater than 25 feet maximum depth to be mined and ground water table is below 25 feet. There are no natural defined drainage channels.

RECLAMATION PLAN

Material Removal
Section 23, T27N, R2W
Existing Topography & Planned Development
11/2/72 Sheet 1 of 1

STATE OF WASHINGTON
BOARD
of
NATURAL RESOURCES
Olympia, Wa. 98504

COUNTY OR MUNICIPALITY RECOMMENDATIONS

SURFACE MINING

TO BE COMPLETED BY APPLICANT

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2. Does the applicant have an appropriate permit to conduct surface mining if required by local regulations? (Please attach a copy of the permit, written order or ordinance)		

3. Recommendations and comments:

No Zoning

ADDRESS: Jefferson Co. Courthouse
P.O. Box 35
Port Townsend, Wa. 98368

TELEPHONE NO.: 385-3101

SIGNATURE (PLANNING DIRECTOR OR ADMINISTRATIVE OFFICIAL): Betty J. Temple
Jefferson County Auditor

DATE: [illegible] 12, '72

NOTE: Chapter 64, Laws of 1970, 1st Ex. Sess., requires evidence that the proposed subsequent use would not be illegal under local zoning regulations.

PERMIT NO. 10898

SM-6 Revised 5-9-72

Copy Distribution: White - Olympia, Yellow - District, Pink - Operator, Blue - County or Municipality

Permit/
Permit Application
No. _____

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(7) Name of Mine _____
(8) Location of Mine SW¼ Quarter of the NW¼ quarter
Section(s) 23 Township 27N Range 2W
c/o Jefferson County County(ies)
(9) Street Address of Mine Quilcene Washington off 101

WASHINGTON STATE DEPARTMENT OF
Natural Resources

BRIAN BOYLE
Commissioner of Public Lands

Olympic Region Office
Route 1, Box 1375
Forks, WA 98331

July 11, 1989

Carl A. Wilrich
1824 Lakehurst Drive
Olympia, WA 98501

Subject: Surface Mining Permit #70-010898

In order to transfer your surface mining permit, we will need the following:

1) Signatures, on this form, from both parties acknowledging the transfer of the permit.

2) A statement from the proposed permittee accepting the current plan of operations and reclamation plan on file. (If changes are desired, new plans will need to be submitted and are subject to review and approval prior to the transfer of the permit.

3) Completion of the enclosed SM8a.

Until these requirements are satisfied, the permit is still in ownership of the existing permittee and therefore the permittee's liability.

Carl A Wilrich — CURRENT PERMIT HOLDER — 7/14/89 — DATE

Robert D Nesbitt — NEW PERMIT HOLDER — 8/10/89 — DATE

Sincerely,

Jodi Luedecker

Jodi Luedecker
Clerk Typist 3
For: John M. Calhoun
Regional Manager
Olympic Region

Enclosure

Permit/
Permit Application
No. _____

FORM SM-8A

Standard Reclamation and Operating Plan

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WASHINGTON STATE DEPARTMENT OF
Natural Resources

BRIAN BOYLE
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Olympic Region Office
Route 1, Box 1375
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Carl A Wilrich — 7/14/89
CURRENT PERMIT HOLDER — DATE

[signature] — 8/10/89
NEW PERMIT HOLDER — DATE

Sincerely,

Jodi Luedecker

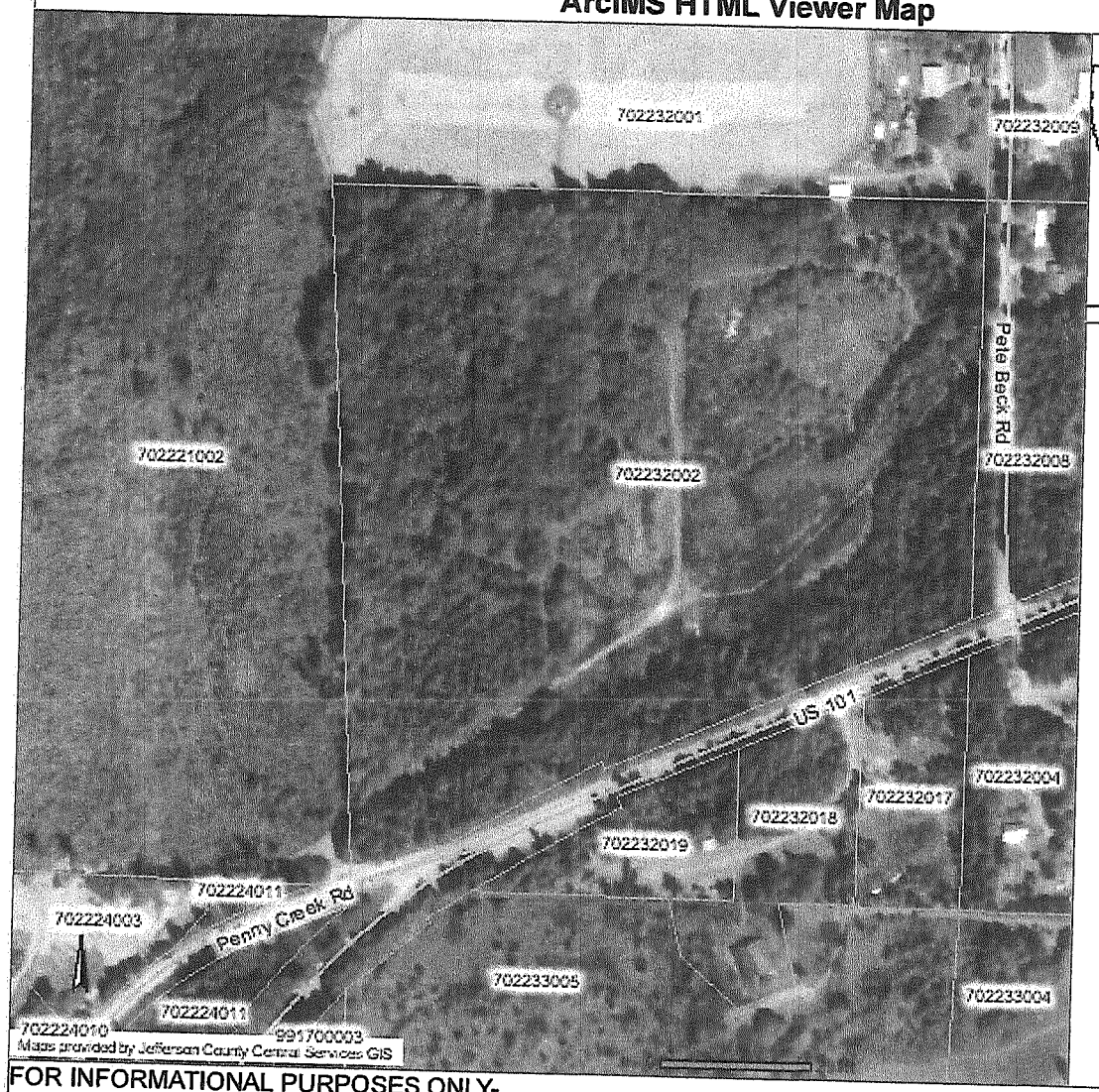
Jodi Luedecker
Clerk Typist 3
For: John M. Calhoun
Regional Manager
Olympic Region

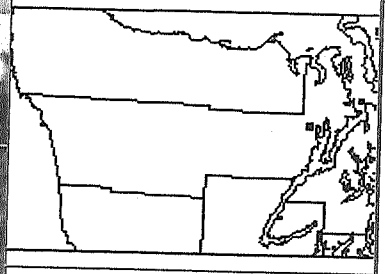
Enclosure

TITLE REPORTS

We have included the Statutory Warranty Deed, transferring the property from Carl and Mavis Willrich to Jefferson County Department of Public Works, February 22, 1989. McLucas has also included the Jefferson County Assessor & Treasurer property details indicating that the property taxes are paid and the property if free and clear of all liens. These documents are included for your review.

ArcIMS HTML Viewer Map





Legend

Towns

County Seat

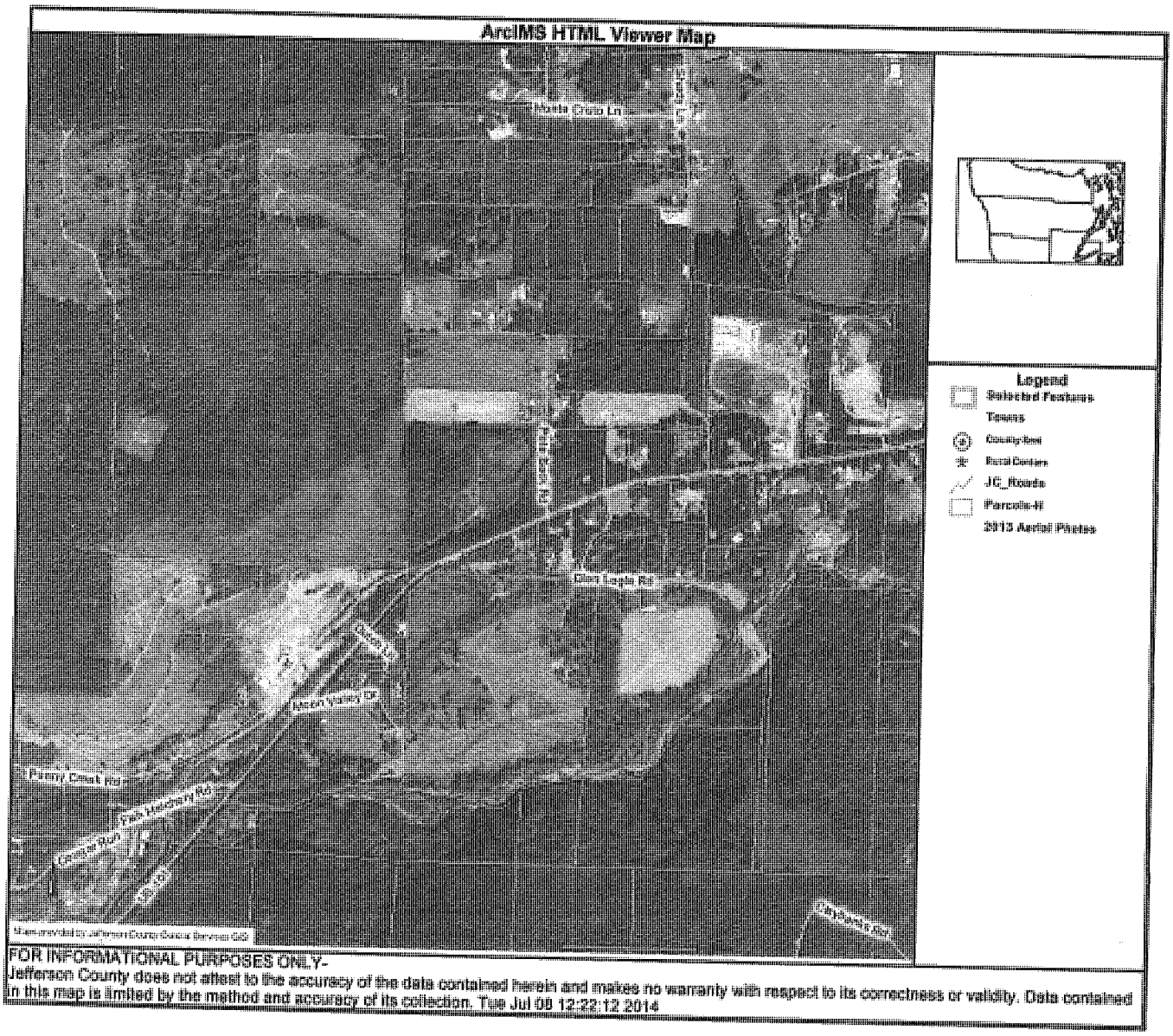
Rural Centers

JC_Roads

Parcels-H

2013 Aerial Photos

FOR INFORMATIONAL PURPOSES ONLY-
Jefferson County does not attest to the accuracy of the data contained herein and makes no warranty with respect to its correctness or validity. Data contained in this map is limited by the method and accuracy of its collection. Wed Jul 02 2014 08:24:42 GMT-0700 (Pacific Standard Time)


ArcIMS HTML Viewer Map
Legend
Selected Features
Towns
JC_Roads
Parcels-If
2013 Aerial Photos
FOR INFORMATIONAL PURPOSES ONLY-
Jefferson County does not attest to the accuracy of the data contained herein and makes no warranty with respect to its correctness or validity. Data contained in this map is limited by the method and accuracy of its collection. Tue Jul 08 12:22:12 2014

Jefferson County Assessor & Treasurer

18369 JEFFERSON COUNTY for Year 2013 - 2014

Property

Account

Property ID:	18369	Legal Description:	S23 T27 R2W SW NW LESS R/W LESS PTN S OF ST HWY
Parcel Number:	702232002	Agent Code:	
Type:	Real		
Tax Area:	0324 - 1-48F2H2C2L1Z3	Land Use Code	01
Open Space:	N	DFL	N
Historic Property:	N	Remodel Property:	N
Multi-Family Redevelopment:	N		
Township:		Section:	
Range:			

Location

Address:		Mapsco:	
Neighborhood:	S23 T27N R2W & TRANQUILCENE & ANDERSON S.P. & JONES S.P.	Map ID:	
Neighborhood CD:	2560		

Owner

Name:	JEFFERSON COUNTY	Owner ID:	18998
Mailing Address:	COURTHOUSE PO BOX 1220 PORT TOWNSEND, WA 98368-0920	% Ownership:	100.0000000000%
		Exemptions:	EX

Taxes and Assessment Details

Property Tax Information as of 07/08/2014

Amount Due if Paid on:

NOTE: If you plan to submit payment on a future date, make sure you enter the date and click RECALCULATE to obtain the correct total amount due.

Click on "Statement Details" to expand or collapse a tax statement.

Year	Statement ID	First Half Base Amt.	Second Half Base Amt.	Penalty	Interest	Base Paid	Amount Due
▸ Statement Details							
2014	8267	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
▸ Statement Details							
2013	8335	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Values

Taxing Jurisdiction

Improvement / Building

Sketch

Property Image

Land

#	Type	Description	Acres	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value

1	1371	Land Type:1371	1.0000	0.00	0.00	0.00	$37,500	$0
2	1875	Land Type:1875	28.4000	0.00	0.00	0.00	$85,200	$0

Roll Value History

Year	Improvements	Land Market	Current Use	Total Appraised	Taxable Value
2014	N/A	N/A	N/A	N/A	N/A
2013	$0	$122,700	$0	$122,700	$0
2012	$0	$122,700	$0	$122,700	$0

Deed and Sales History

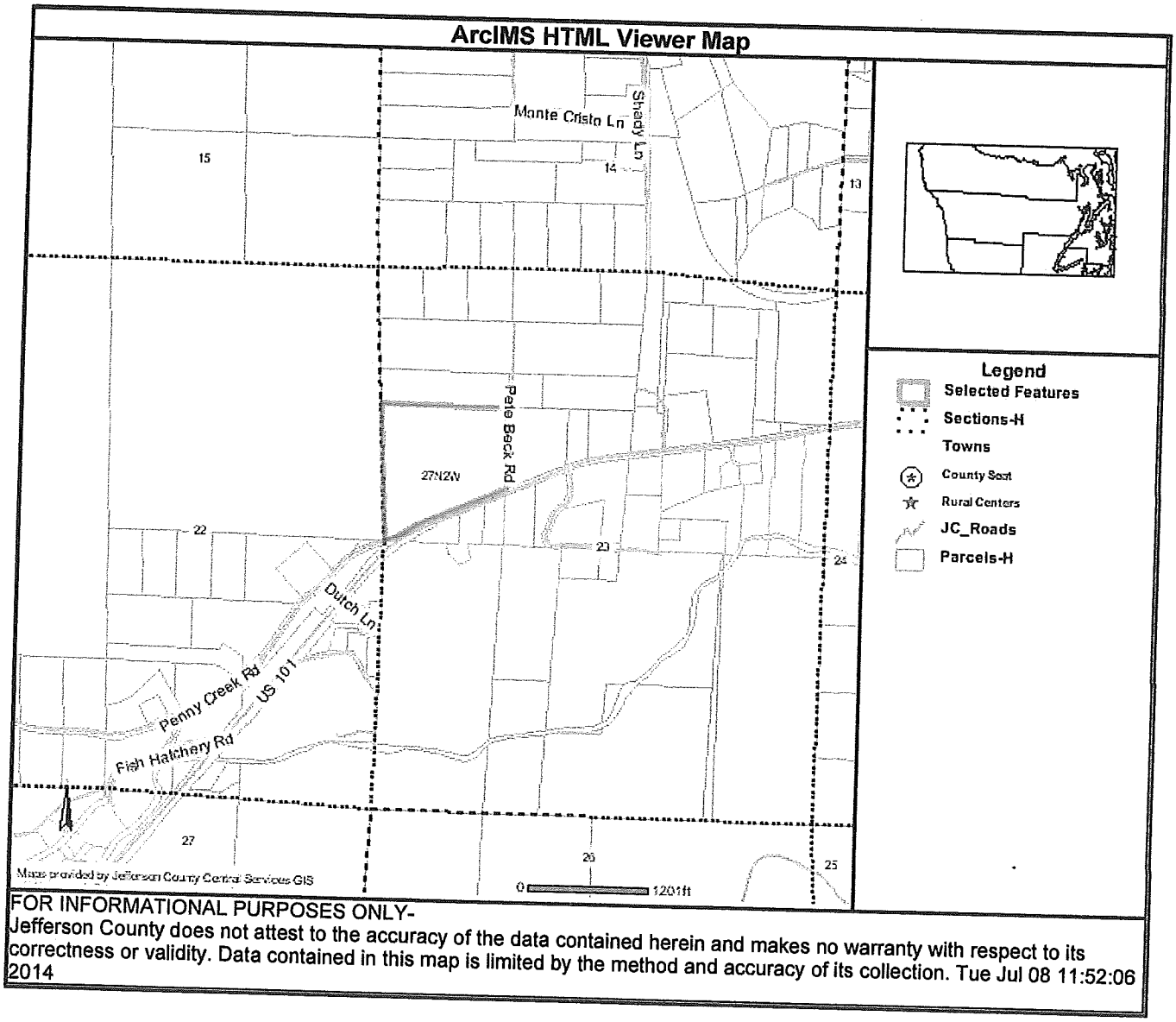
Payout Agreement

This website is under active development. Some functionality is not yet available and data is not guaranteed.

Assessor Home Page Treasurer Home Page County Maps Disclaimer

Website version: 9.0.32.2200

Database last updated on: 7/8/2014 4:13 AM



FOR INFORMATIONAL PURPOSES ONLY-
Jefferson County does not attest to the accuracy of the data contained herein and makes no warranty with respect to its correctness or validity. Data contained in this map is limited by the method and accuracy of its collection. Tue Jul 08 11:52:06 2014

Parcel Number: 702232002

06/19/2014

Owner Mailing Address:
JEFFERSON COUNTY
COURTHOUSE
PO BOX 1220

PORT TOWNSEND WA 98368-0920

Site Address:

98368-0920

Section:	23	School District:	Quilcene (48)
Qtr Section:	NW1/4	Fire Dist:	Quilcene (2)
Township:	27N	Tax Status:	COUNTY
Range:	2W	Tax Code:	0324
Planning area:	98368-0920		
Sub Division:			
Land Use Code:	9700		

98368-0920

Property Description:
S23 T27 R2W SW NW LESS R/W LESS PTN S OF ST HWY

VOL. 374 PAGE 40

THIS SPACE PROVIDED FOR RECORDER'S USE:

Jefferson County Public Works

MAR -3 PM 1:17

JEFFERSON CO. AUDITOR

DEPUTY

FILED FOR RECORD AT REQUEST OF

320154

WHEN RECORDED RETURN TO

Name Jefferson County Department of Public Works

Address P.O. Box 1220

City, State, Zip Port Townsend, WA 98368

Statutory Warranty Deed

THE GRANTOR Carl A. Willrich and Mavis Y. Willrich, husband and wife.

for and in consideration of Ten Dollars and other valuable considerations

in hand paid, conveys and warrants to County of Jefferson

the following described real estate, situated in the County of Jefferson, State of Washington:

The Southwest quarter of the Northwest quarter of Section 23, Township 27 North, Range 2 West, W.M. EXCEPT 30' wide strip along the East side of a portion thereof conveyed to Jefferson County by deed dated February 3, 1930 and recorded in volume 98 of Deeds on page 171, and EXCEPT portion conveyed to the State of Washington for State Highway by deed dated April 24, 1935 and recorded under Auditior's File No. 74051, and EXCEPT 60' wide strip of land conveyed to Jefferson County for county road (old state highway) by instrument recorded May 10, 1909 in Volume 1 of Road Waivers on page 4a records of Jefferson County.

EXCEPTING there from that portion of premise lying southeasterly margin of State Road No. 9

JEFFERSON COUNTY EXCISE TAX

Aff. No. 58408

Date Paid 3-3-89 Amt. 0

By K. Mullen, Deputy

Dated Feb 22, 19 89

Carl A Willrich

Mavis Y. Willrich

STATE OF WASHINGTON
COUNTY OF Thurston } ss.

On this day personally appeared before me Carl A. & Mavis Y. Willrich to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that They signed the same as Their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 22nd day of February, 1989.

Notary Public in and for the State of Washington, residing at Olympia

MY COMMISSION EXPIRES

STATE OF WASHINGTON
COUNTY OF ..... } ss.

On this ..... day of ....., 19....., before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared .....

and .....

to me known to be the .....President and .....Secretary, respectively, of .....

the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that ..... authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above written.

Notary Public in and for the State of Washington, residing at .....

VOL 274 PAGE 40
(THIS SPACE PROVIDED FOR RECORDER'S USE:
REQUEST OF
Jefferson County Public Works
'89 MAR -3 PM 1:17
JEFFERSON COUNTY AUDITOR
BY Jmorello DEPUTY

FILED FOR RECORD AT REQUEST OF

320154

WHEN RECORDED RETURN TO

Name Jefferson County Department of Public Works

Address P.O. Box 1220

City, State, Zip Port Townsend, WA 98368

Statutory Warranty Deed

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EXCEPTING there from that portion of premise lying southeasterly margin of State Road No. 9

JEFFERSON COUNTY EXCISE TAX
Aff. No. 58408
Date Paid 3-3-89 Amt. 0
By K. [illegible], deputy

Dated Feb 22, 1989

Carl A. Willrich

Mavis Y. Willrich

STATE OF WASHINGTON
COUNTY OF Thurston } ss.

On this day personally appeared before me Carl A. & Marvis Y. Willrich to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 22nd day of February, 1989.

Karen K[illegible]

Notary Public in and for the State of Washington, residing at Olympia

MY COMMISSION EXPIRES [illegible]

STATE OF WASHINGTON
COUNTY OF .... } ss.

On this .... day of ...., 19...., before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared .... and .... to me known to be the .... President and .... Secretary, respectively, of .... the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that .... authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above written.

Notary Public in and for the State of Washington, residing at ....

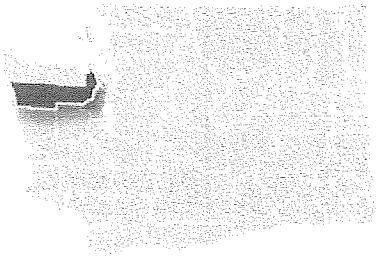
APPENDICES

(1) Jefferson County Profile

(2) Sand & Gravel Producers

Jefferson County profile

by Jim Vleming, regional labor economist - *updated November 2016*



Overview | *Geographic facts* | *Outlook* | *Labor force and unemployment* | *Industry employment* | *Wages and income* | *Population* | *Useful links*

Overview

Regional context

Jefferson County is located on the Olympic Peninsula in northwestern Washington state. Jefferson County is nestled between the Admiralty Inlet and Clallam, Mason, Grays Harbor and Kitsap counties. It faces the Pacific Ocean to the west and Hood Canal to the east. Named for President Thomas Jefferson, it was created in 1852 from a portion of Lewis County. The county seat is Port Townsend.

Much of the county is publicly owned land. About 60 percent of the county comprises the Olympic National Park and Olympic National Forest and roughly 20 percent is under the jurisdiction of federal and state agencies. The Hoh Reservation and a small corner of the Quinault Reservation are also located in Jefferson County.

Jefferson County is a mid-sized county, ranking 18th in the state in land area. Its population density, as measured by persons per square mile, ranks 29th among the other counties.

Local economy

Jefferson County's current economic base grew from a rich history of natural resources extraction in logging and fishing in the late 1880s. By the turn of the 20th century, sawmills, fish processing and shipbuilding were firmly established in the coastal areas of the county. The county also was known for smuggling spirits from Canada in and out of the county's many hidden coves and forests during prohibition.

Port Townsend, the economic center of the county, has experienced periods of boom and bust over the century due to its dependency on these volatile industries. During 2011, Port Townsend finally started to recover from the Great Recession with visible signs of economic growth including new shops, new investments and rebounds in tourism. Annual taxable sales in the county have grown strongly since 2013.

The economy of Jefferson County is comprised of both an industrial and an agricultural base. Industrially, the county's history, climate and terrain support healthy forest products and maritime sectors, including lumber, fish processing, ship repair and maintenance as well as ship and boatbuilding. The agricultural base encompasses tree farms for logging, aquaculture and a flourishing organic farming sector. Food production, stemming from this growing agricultural segment, includes artisan cheeses and breads. Tourism also provides revenue streams to the county. Economic activity is supported by a vibrant port and airport, ferry terminal and state highways.

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Geographic facts

(Source: *U.S. Census Bureau QuickFacts*)

	Jefferson County	Rank in state
Land area, 2010 (square miles)	1,803.7	18
Persons per square mile, 2010	16.6	29

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Outlook

The outlook for Jefferson County for the remainder of 2016 and into 2017 is one of growth, but it is likely to be modest at best. While the goods-producing sector has shown some growth during 2016, the service-providing sector seems to be treading water. In 2016 the construction, manufacturing and trade sectors showed modest gains as government remained steady.

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Labor force and unemployment

(Source: Employment Security Department)

Current labor force and unemployment statistics are available on the Labor area summaries page (../../../labormarketinfo/labor-area-summaries).

The preliminary September 2016 figure for the civilian labor force was 11,194, more than the September 2015 level of 10,898. This increase indicates a reversal of years past where the labor force was shrinking. With new confidence and new opportunities presenting themselves, it appears that a return to an expanding labor force has begun.

The September 2016 figures show an unemployment rate of 7.3 percent compared to 6.4 percent in September 2015. This over the year increase in unemployment is due to more folks in the labor force looking for fewer jobs. The current annual average for 2016 puts the rate above 2015's but below the 2008 pre-recession rate.

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Industry employment

(Source: Employment Security Department)

Current industry employment statistics are available on the Labor area summaries page (../../../labormarketinfo/labor-area-summaries).

In Jefferson County the nonfarm sector has still not rebounded from the sharp losses resulting from the Great Recession. In 2006, total nonfarm jobs within the county totaled approximately 9,680. A sharp drop to 8,550 occurred in 2009 and continued through 2013. Nonfarm employment in 2015 was 8,170. Nonfarm jobs have averaged 8,310 during the first nine months of 2016.

- The goods-producing sector was up 80 jobs year-over-year ending in September 2016, with construction showing a 90 job increase. Manufacturing showed a decline of 10 jobs.
- The service-providing sector gained 90 jobs from September 2015 to September 2016. Trade, transportation and utilities, leisure and hospitality and government all showed gains over this time period.

For historical industry employment data, contact an economist (../../../labormarketinfo/economists).

Industry employment by age and gender

(Source: The Local Employment Dynamics)

The Local Employment Dynamics (LED) database, a joint project of state employment departments and the U.S. Census Bureau, matches state employment data with federal administrative data. Among the products is industry employment by age and gender. All workers covered by state unemployment insurance data are included; federal workers and non-covered workers, such as the self-employed, are not. Data are presented by place of work, not place of residence. Some highlights:

The population of Jefferson County is older than that of the state, which is also reflected in the labor force figures. Over 31.9 percent of the workforce was age 55 or older in 2015.

- Those aged 55 and older dominated the utilities, educational services and transportation services jobs, while younger workers (14 to 24) made up 25.4 percent of accommodation and food services positions.

When looking at all industries, men held 46.9 percent of the jobs while women made up 53.1 of all workers in 2015. In spite of this imbalance, males in the county tended to be employed in higher wage jobs in what are generally considered traditionally male fields such as manufacturing and construction. There are wide differences in the composition of industry sector by gender in Jefferson County.

- Male-dominated industries included construction (81.8 percent), manufacturing (75.3 percent), agriculture, and forestry and fishing and hunting (75.8 percent).
- Female-dominated industries included finance and insurance (78.9 percent), healthcare and social assistance (80.7 percent) and educational services (70.6 percent).

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Wages and income

(Source: Employment Security Department; Bureau of Labor Statistics; Bureau of Economic Analysis; U.S. Census Bureau; U.S. Census Bureau, American Community Survey)

In 2015, Jefferson County had 8,126 jobs covered by unemployment insurance system, with a payroll of $296.2 million.

The 2015 average annual wage for Jefferson County was $36,451 well below the state's average annual wage of $56,650.

The median hourly wage in 2015 was $19.95, less than that of the state's median hourly wage at $23.15 and for the state less King County at $20.24.

Median household income, according to U.S. Census QuickFacts, was $47,202, well below that of the state's $60,294 over the period 2010 through 2014.

Personal income

Personal income includes earned income, investment income, and government payments such as Social Security and Veterans Benefits. Investment income includes income imputed from pension funds and from owning a home. Per capita personal income equals total personal income divided by the resident population.

Per capita personal income in Jefferson County in 2014 was $43,311 compared to $49,610 for the state and $46,049 for the nation. Jefferson County ranked 8th in the state in 2014 in per capita income. It ranked fourth in 2012.

According to the U.S. Census QuickFacts, 12.6 percent of those in the county were living below the poverty level compared to 111.8 percent of the state population and 15.6 percent of the U.S. population in the period 2010 through 2014. The state and national rates are not directly comparable to the county rate because they each use different data sources.

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Population

(Source: U.S. Census Bureau)

The population of Jefferson County was 30,466 in 2015. It grew from 29,872 in 2010.

Jefferson County's largest city, Port Townsend, had a population of 9,485 in 2015, up from 9,113 in 2010, an increase of 1.6 percent.

Population facts

(Source: U.S. Census Bureau QuickFacts)

	Jefferson County	Washington state
Population 2015	30,466	7,170,351
Population 2010	29,872	6,724,543
Percent change, 2010 to 2015	2.0%	6.6%

Age, gender and ethnicity

(Source: U.S. Census Bureau QuickFacts)

Jefferson County's population was older than the population of the state in 2015.

- The county's residents in the 65 and older category made up 33.3 percent of its population compared to 14.9 percent of the state's population.
- There were proportionately fewer young residents in Jefferson County compared to the state.

There were 15,466 females in the county's population at compared to 15,020 males in

2015.

The population also includes a much smaller percentage of people of color than the state averages with the exception of American Indians and Alaskan Natives, who accounted for 2.3 percent of the population in the county, higher than the state's percentage of 1.9 percent.

Demographics

(Source: U.S. Census Bureau QuickFacts)

	Jefferson County	Washington state
Population by age, 2015		
Under 5 years old	3.3%	6.2%
Under 18 years old	13.2%	22.5%
65 years and older	33.3%	14.4%
Females, 2015	50.7%	50.0%
Race/ethnicity, 2015		
White	91.4%	80.3%
Black	1.0%	4.1%
American Indian, Alaskan Native	2.3%	1.9%
Asian, Native Hawaiian, other Pacific Islander	2.0%	9.1%
Hispanic or Latino, any race	3.8%	12.4%

Educational attainment

(Source: U.S. Census Bureau QuickFacts)

Most of Jefferson County residents age 25 and older (94.4 percent) were high school graduates, which compares favorably with 90.2 percent of Washington state's residents and 86.3 percent of U.S. residents in the period 2010-2014.

Those with a bachelor's degree or higher made up 37.3 percent of Jefferson County residents age 25 and older compared to 32.3 percent of state residents and 29.3 percent of U.S. residents over the same period.

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Useful links

- County data tables (https://esdorchardstorage.blob.core.windows.net/esdwa/Default/ESDWAGOV/labor-market-info/Libraries/Regional-reports/County-Data-Tables/Jefferson%20County%20data%20tables.xlsx)
- Jefferson County Chamber of Commerce (http://jeffcountychamber.org/)
- Jefferson County Economic Development Council (http://www.edcteamjefferson.com/)
- Visit Jefferson County (http://visitjeffersoncountywa.com/)
- Jefferson County History (http://www.historylink.org/index.cfm?DisplayPage=output.cfm&File_Id=7472)
- Jefferson County home page (http://www.co.jefferson.wa.us/)
- Jefferson County on ofm.wa.gov (http://www.ofm.wa.gov/localdata/jeff.asp)
- Jefferson County on ChooseWashington.com (http://choosewashingtonstate.com/why-washington/our-region/)
- Kitsap County Workforce Development Council (Part of Olympic Consortium based in Kitsap) (http://www.kitsapgov.com/hr/wsolympic/olympdev/owdc.htm)
- Olympic Consortium WorkSource (http://www.olympicworksource.com/)
- Port of Port Townsend (http://www.portofpt.com/)
- Self Sufficiency Calculator for Washington State (http://www.thecalculator.org/)
- U.S. Census Bureau QuickFacts (http://www.census.gov/quickfacts/table/PST045214/53031)
- Washington Ports (http://www.washingtonports.org/)
- Workforce Development Areas and WorkSource Office Directory (https://seeker.worksourcewa.com/microsite/content.aspx?appid=MGSWAOFFLOC&pagetype=simple&seo=officelocator)

(back to top)

How are we doing? (https://fortress.wa.gov/esd/webform/contact-us)
Report fraud (../../../newsroom/report-fraud)
Unemployed-Workers.pdf)
Records office (../../../newsroom/public-records)
Veterans (../../../jobs-and-training/veteran-services)
Newsroom (../../../newsroom)

About us

Agency leadership (../../../newsroom/ESD-leadership)
Our mission and goals (../../../newsroom/about-ESD)
Bids & contracts (../../../newsroom/bids-and-contracts)ESD
Advisory committee (../../../newsroom/ESAC)
Legislative resources (../../../newsroom/legislative-resources)

Contact us

Ask a question about your claim (https://fortress.wa.gov/esd/webfc
Info for workers (../../../unemployment/unemployec workers-contact)
Info for employers (../../../employer-taxes/contact-info-for-employers)
WorkSource (https://seeker.worksourcewa.com
Webmaster (../../../newsroom/contact-webmaster)
ESD headquarters (../../../newsroom/contact-ESD)

State government

Access Washington (http://access.wa.gov/)
Register to vote (https://wei.sos.wa.gov/agency/osos/en/voters/Pages/register_to_vote.aspx)
Washington Healthplanfinder (https://www.wahealthplanfinder.org/HBEWeb/Annon_DisplayHomePage.actio authn_try_count=0&contextType=external&username=string&contextValue=%;
Find a rule or a law (http://leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx)

OTHER LANGUAGES (../../../newsroom/UI-languages)

Español (../../../espanol)

ខ្មែរ (../../../newsroom/UI-languages/cambodian)

Afaan Oromoo (../../../newsroom/UI-languages/oromo)

Tagalog (../../../newsroom/UI-languages/tagalog)

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العربية (../../../newsroom/UI-languages/arabic)

ਪੰਜਾਬੀ (../../../newsroom/UI-languages/punjabi)

Tiếng Việt (../../../newsroom/UI-languages/vietnamese)

فارسی (../../../newsroom/UI-languages/farsi)

한국어 (../../../newsroom/UI-languages/korean)

Русский (../../../newsroom/UI-languages/russian)

中文(简体) (../../../newsroom/UI-languages/chinese)

ພາສາລາວ (../../../newsroom/UI-languages/laotian)

Soomaali (../../../newsroom/UI-languages/somali)

(../../../employee)

bing maps

sand and gravel

① Peninsula Sand & Gravel

Address: 50 NE Peninsula Blvd, Belfair, WA 98528
Phone: (360) 275-1000
Website: http://peninsulatopsoil.com/

② Burien Sand & Gravel Llc

Address: 18203 Des Moines Memorial Dr S, Seatac, WA 98148
Phone: (206) 246-7000
Website: http://buriensandandgravel.com

③ Miles Sand & Gravel Inc

Address: 1920 SW Pine Rd, Port Orchard, WA 98367
Phone: (253) 857-7100
Website: http://www.milessandandgravel.com/

④ Port Orchard Sand & Gravel

Address: 14119 Colony Ave SE, Port Orchard, WA 98367
Phone: (253) 857-3006

⑤ Peninsula Topsoil

Address: 24943 NE State Route 3, Belfair, WA 98528
Phone: (360) 275-1000
Website: http://peninsulatopsoil.com/

⑥ Purdy Topsoil & Gravel

Address: 5819 133rd St NW, Gig Harbor, WA 98332
Phone: (253) 857-5850
Website: http://www.randlessandandgravel.net/Purdy-Topsoil-and-Gravel

⑦ Morrison Gravel

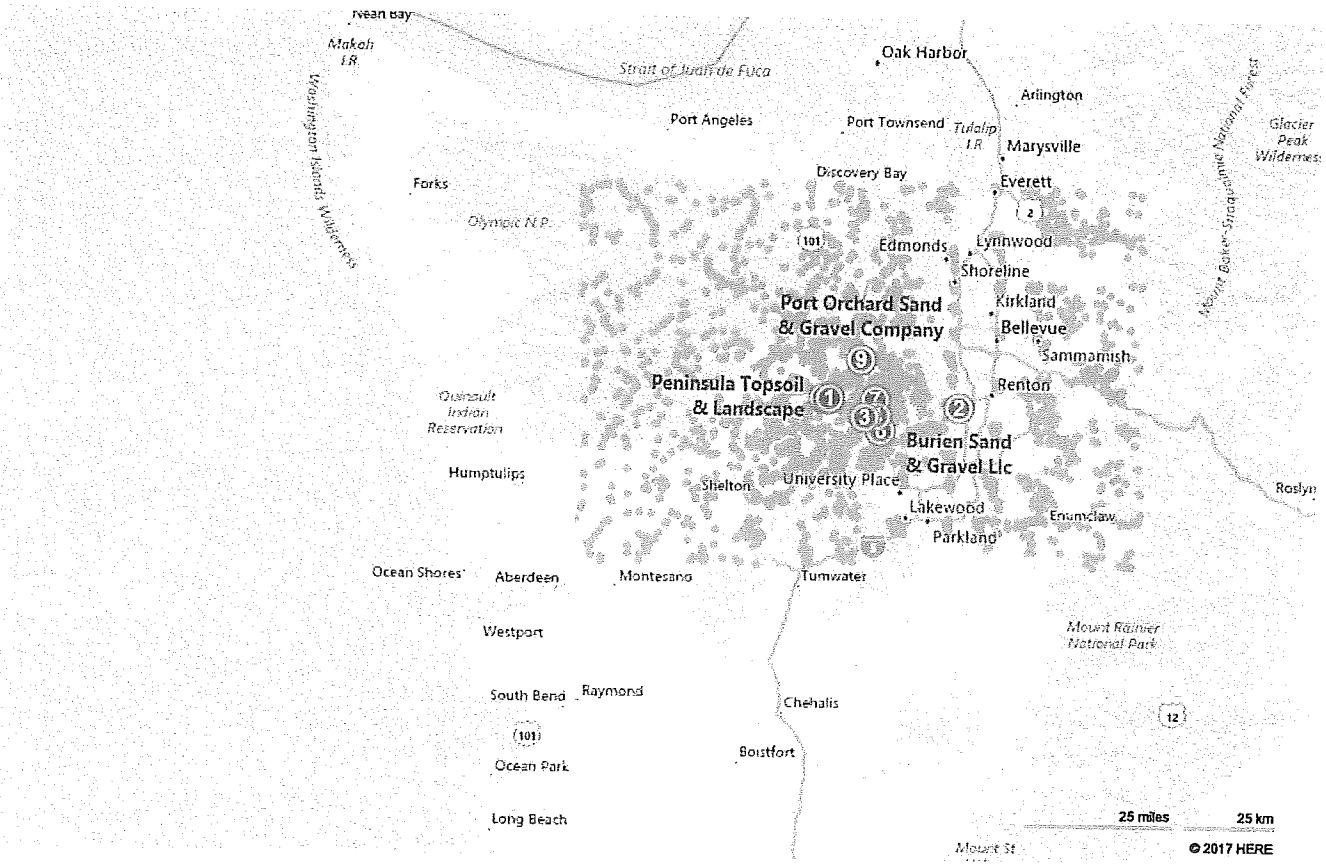
Address: 1004 SE Spencer Ave, Port Orchard, WA 98367
Phone: (360) 876-4701
Website: http://www.morrisongravel.com/

⑧ Peninsula Topsoil & Landscape

Address: NE Timberline Dr, Belfair, WA 98528
Phone: (360) 275-1000
Website: http://peninsulatopsoil.com/

⑨ Port Orchard Sand & Gravel Company

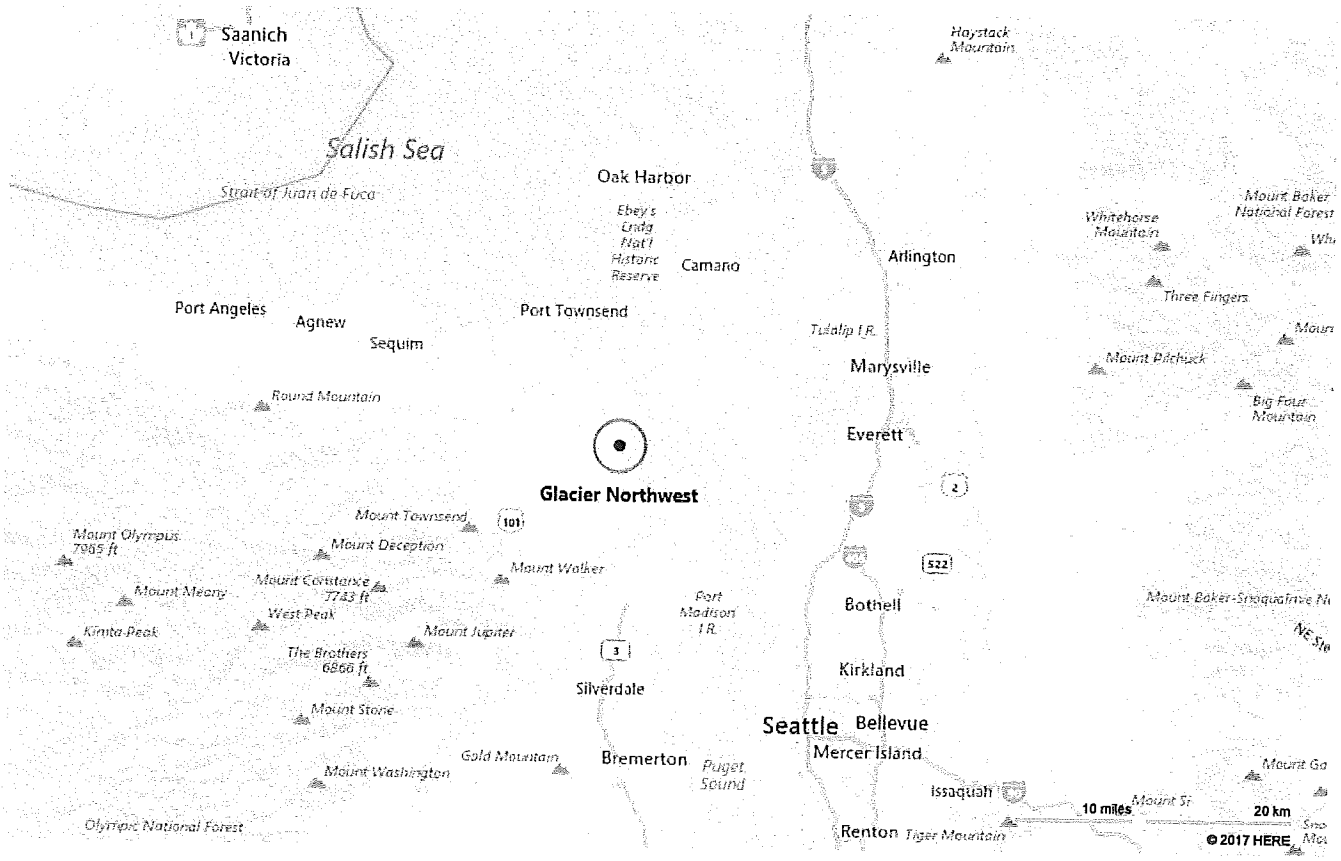
Address: 7000 W Werner Rd, Bremerton, WA 98312
Phone: (206) 682-6349


Neah Bay
Makah I.R.
Strait of Juan de Fuca
Oak Harbor
Arlington
Port Angeles
Port Townsend
Tulalip I.R.
Marysville
Glacier Peak Wilderness
Discovery Bay
Everett
Forks
Olympic N.P.
Edmonds
Lynnwood
Shoreline
Port Orchard Sand & Gravel Company
Kirkland
Bellevue
Sammamish
Peninsula Topsoil & Landscape
Renton
Quinault Indian Reservation
Burien Sand & Gravel Llc
Humptulips
Shelton
University Place
Roslyn
Lakewood
Enumclaw
Parkland
Ocean Shores
Aberdeen
Montesano
Tumwater
Mount Rainier National Park
Westport
South Bend
Raymond
Chehalis
Ocean Park
Boistfort
Long Beach
25 miles
25 km
© 2017 HERE

bing maps

Glacier Northwest

Address:
360 Quarry Rd, Port Ludlow, WA 98365
Phone:
(360) 437-2211
Website:
http://www.calportland.com/



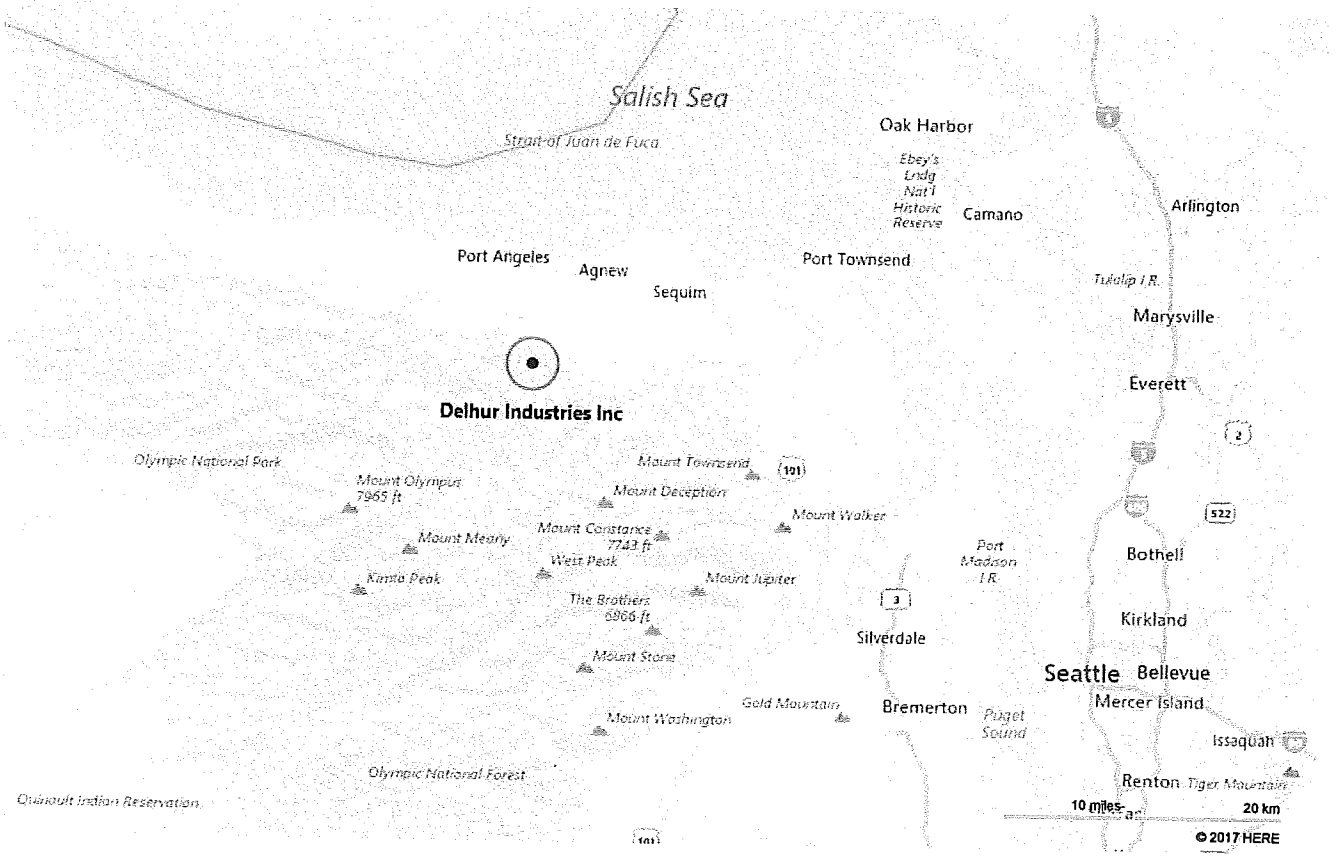
bing maps

Delhur Industries Inc

Address:
PO Box 1116, Port Angeles, WA 98362

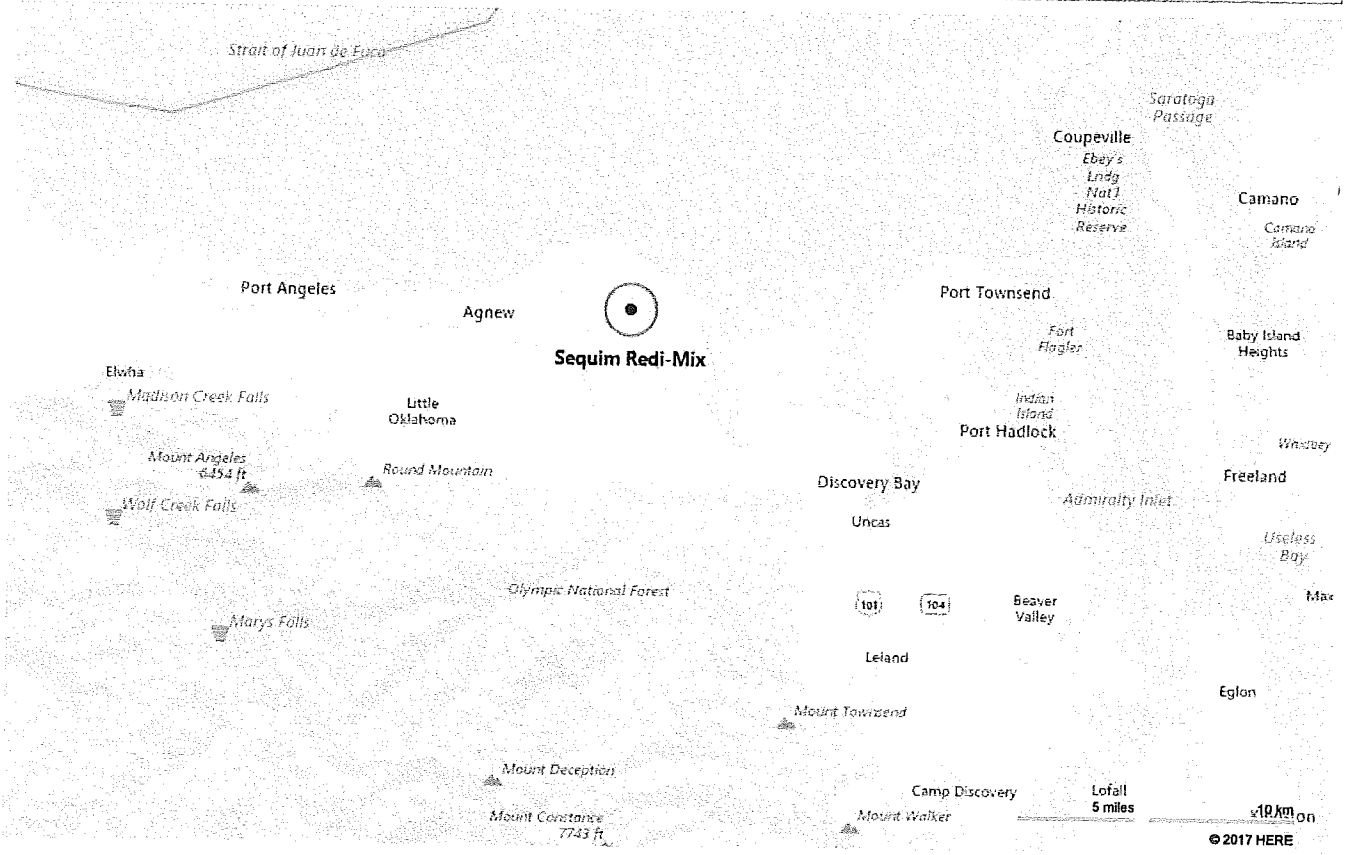
Phone:
(360) 457-1133

Website:
http://www.delhur.com/



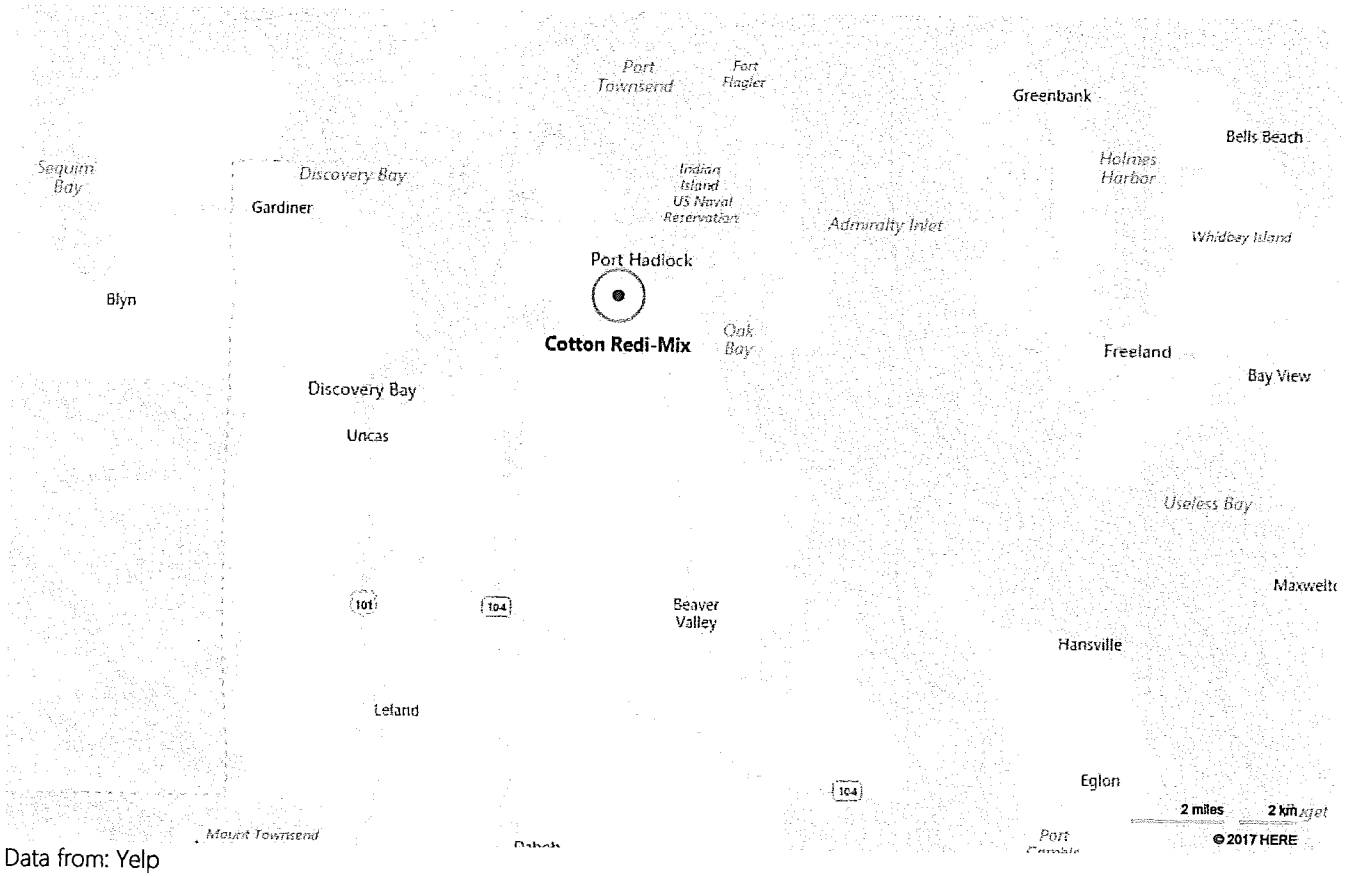
bing maps

Sequim Redi-Mix
Address:
932 Evans Rd, Sequim, WA 98382
Phone:
(360) 683-5680



bing maps

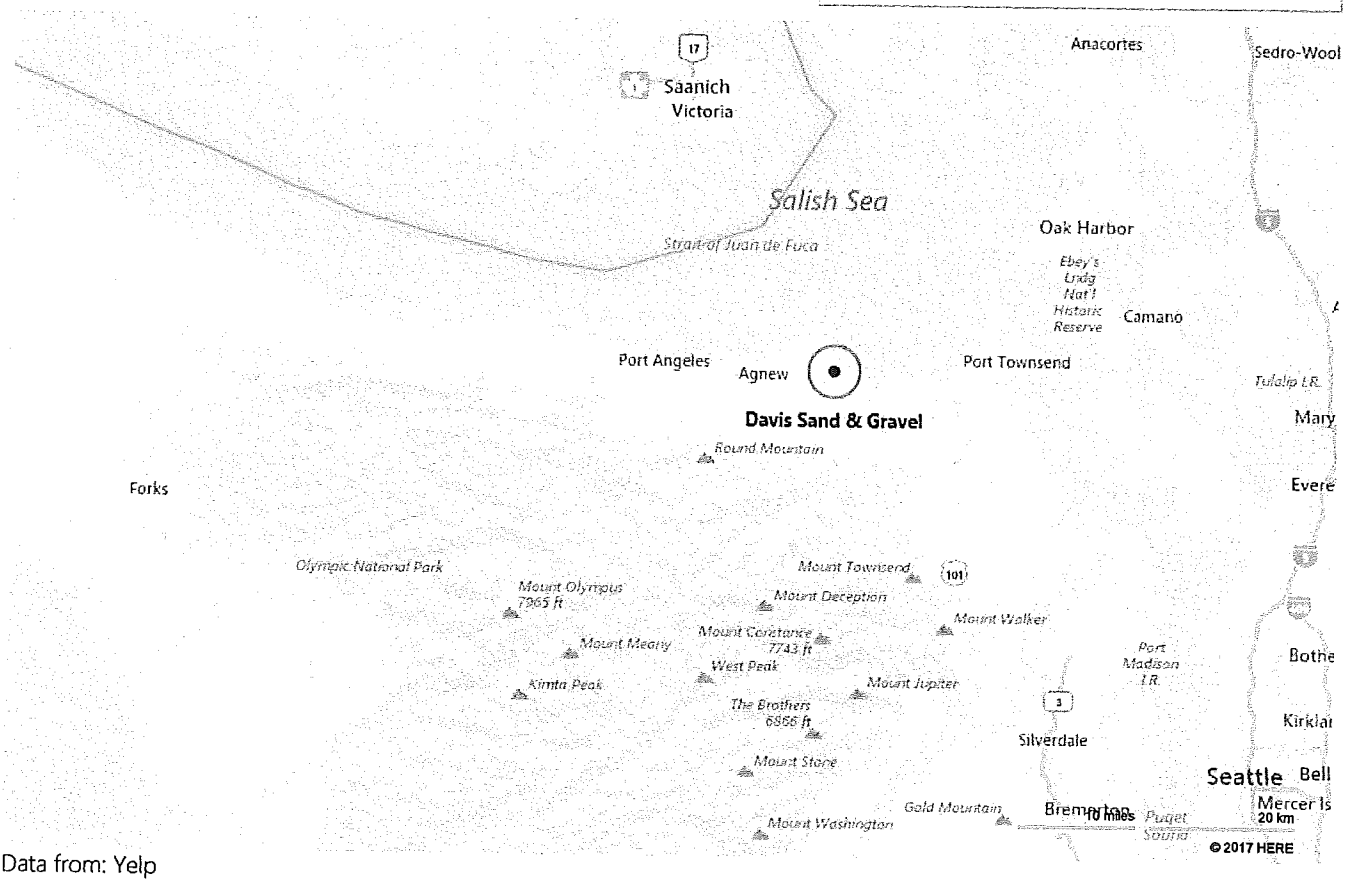
Cotton Redi-Mix
Address:
121 Promwell Rd, Port Hadlock, WA 98339
Phone:
(360) 385-0582
Website:
http://www.cottonshold.com/



Data from: Yelp

bing maps

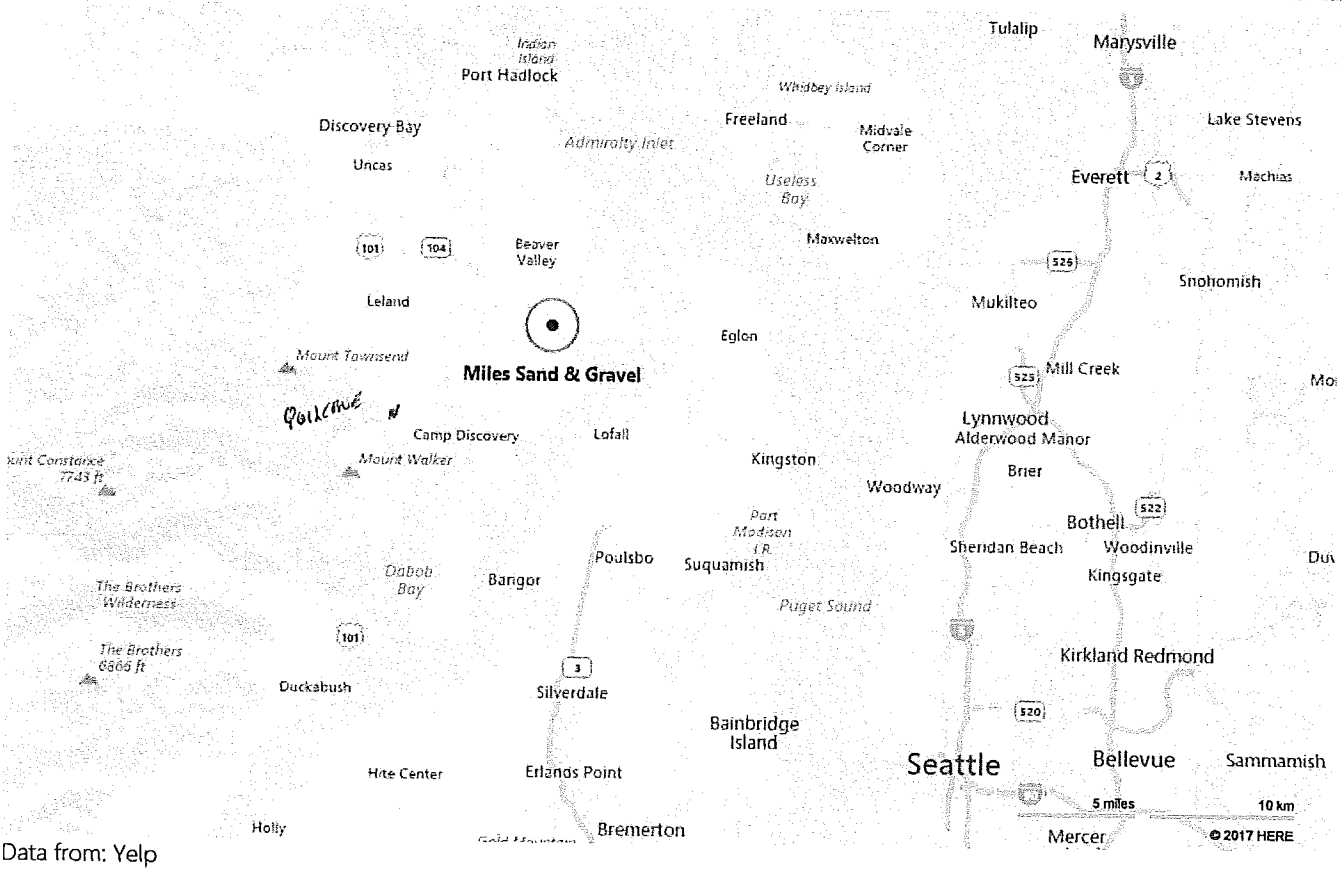
Davis Sand & Gravel
Address:
870 Evans Rd, Sequim, WA 98382
Phone:
(360) 683-5680



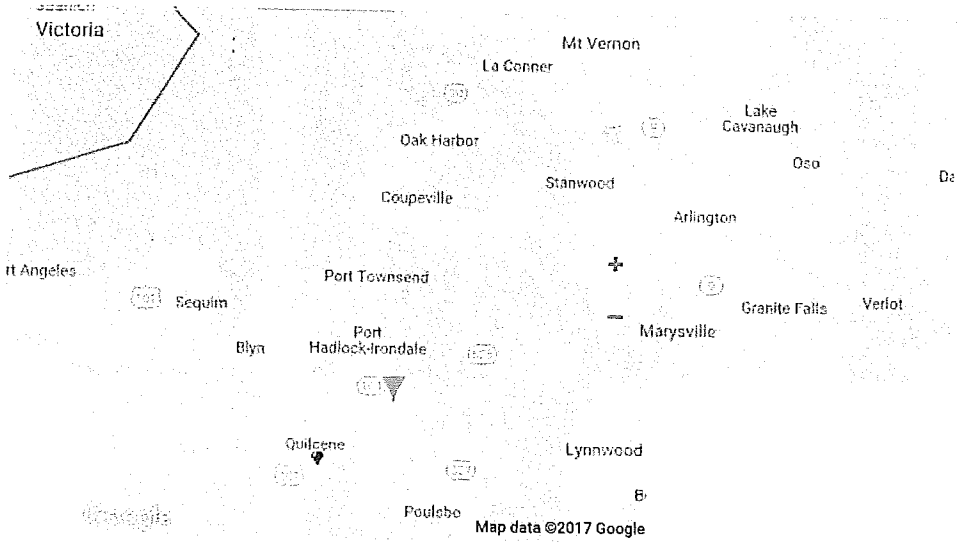
Data from: Yelp

bing maps

Miles Sand & Gravel
Address:
9868 State Route 104, Port Ludlow, WA 98365
Phone:
(360) 437-8232



Data from: Yelp



Site Name	Company	Commodity
Shine Pit	Fred Hill Materials, Inc.	Sand and Gravel
Port Townsend Pit	Fred Hill Materials, Inc.	Sand and Gravel
Mats Mats Quarry	Glacier Northwest, Inc.	Crushed Stone
Shine Quarry	Shine Quarry, Inc.	Crushed Stone

360-779-4431
Poulsbo

bing maps

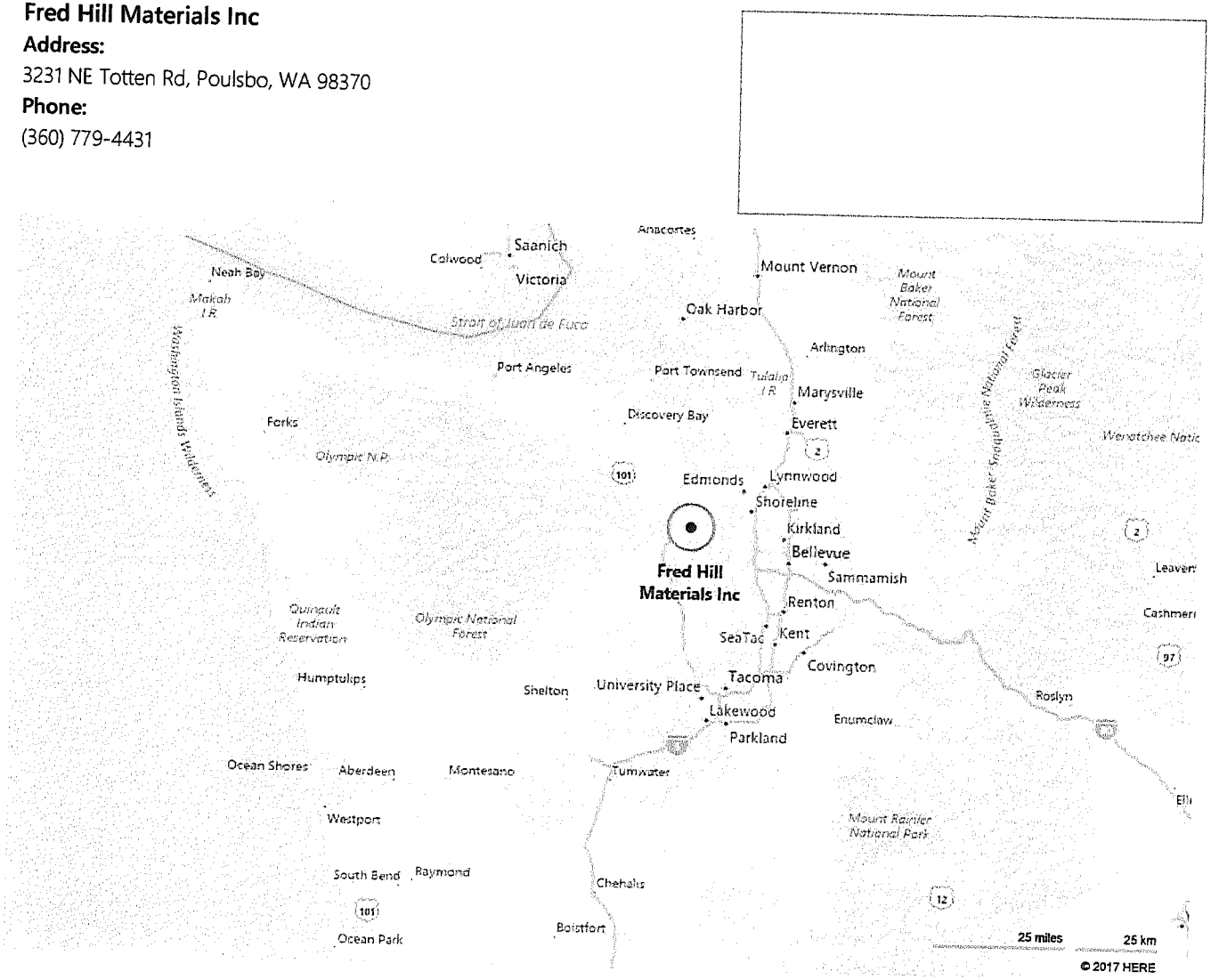
Fred Hill Materials Inc

Address:

3231 NE Totten Rd, Poulsbo, WA 98370

Phone:

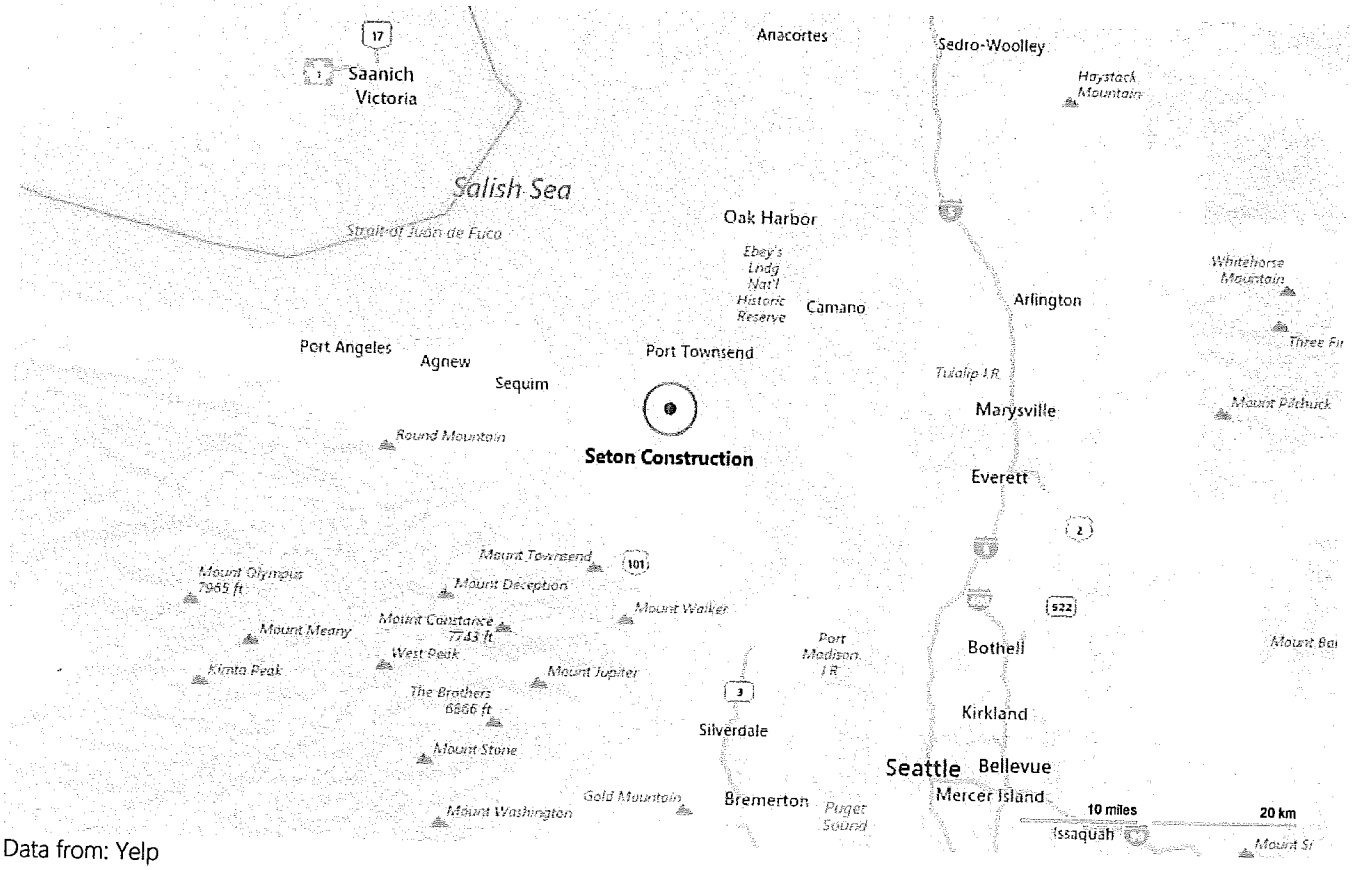
(360) 779-4431



bing maps

Seton Construction

Address:
4640 S Discovery Rd, Port Townsend, WA 98368
Phone:
(360) 385-0213
Website:
http://setonconstruction.com/



Data from: Yelp

Qualifications of Appraisers

Qualifications of Gregory L. Goodman, MAI

Managing Director

Valbridge Property Advisors | Allen Brackett Shedd

Experience

Principal of *Allen Brackett Shedd*. Involved in the real estate field since February of 1999. Appraisal experience includes a wide variety of appraisal assignments, consisting of vacant and improved commercial, industrial, residential and mixed-use properties. Examples of the wide variety of properties appraised include: large scale mixed-use projects comprised of retail, office and residential uses, subdivisions, sensitive area properties, rail and utility corridors, lake bedlands, shopping centers, auto dealerships, as well as more typical commercial, industrial and residential improved properties.

Valuations have been performed for acquisitions in fee, leased fee and leasehold interests, as well as various partial interests including conservation easements, utility easements, subsurface easements and air rights easements. Numerous appraisal assignments performed have been associated with condemnation of all or a part of a property and involved mediation and other litigation support work.

Appraisal assignments include work throughout the Puget Sound Region, including King, Pierce, Snohomish, Kitsap, Thurston, Whatcom, Skagit, and Island Counties.

Professional Affiliations

Member, Appraisal Institute. Received MAI designation May 12, 2008
Member of the International Right-of-Way Association

Education

University of Washington, Seattle, Washington: BA Degree in Business Administration with concentrations in Finance and Information Systems, December of 1998.

Have completed all appraisal courses required for MAI designation. Additional seminar and continuing education includes:

- Appraisal Institute: Basic and Advanced Condemnation courses
- Appraisal Institute: UASFLA (Yellow Book) course
- Appraisal Institute: Attacking and Defending an Appraisal in Litigation
- Appraisal Institute: Valuation of Easements and other Divided Interests

Representative Client List:

Government/Public Agencies

City of Auburn
City of Bellevue
City of Bellingham
City of Bothell
City of Edmonds
City of Everett
City of Kent
City of Kirkland
City of North Bend
City of Puyallup
City of Redmond
City of Renton
City of SeaTac
City of Sumner
City of Seattle
City of Tukwila
City of University Place
Covington Water District
Edmonds School District
Jefferson County
King County Dept. of Transportation
King County Open Space
King County Public Works
Monroe Public Schools

Government/Public Agencies (cont.)

Pierce County Public Works
Port of Seattle
Renton Housing Authority
Seattle Housing Authority
Seattle Monorail Project
Seattle Public Library
Seattle Public School District
Seattle Public Utilities
Shoreline Public Schools
Sound Transit
US Army Corps of Engineers
US Navy
Washington State Dept. of Transportation
Woodinville Water District

Attorneys-at-Law

Cairncross & Hempelmann
Davis Wright Tremaine
Foster Pepper
Graham & Dunn
Hanson, Baker, Ludlow & Drumheller
K&L Gates
Lane, Powell, Spears & Lubersky
Lasher, Holzapfel, Sperry & Ebberson
Perkins Coie
Riddell Williams
Short, Cressman & Burgess
Stella Pitts and Associates
Tousley Brain Stephens
Washington State Attorney General's Office
Williams & Williams

Private Sector

Burlington Northern Santa Fe
Cadman, Inc.
Cascade Land Conservancy
Certified Land Services
Clise Properties Inc.
David Evans and Associates
Deposit & Associates
Development Services of America
Evergreen Center Associates
Greenwell/Renton LLC
Jefferson Land Trust
Johnson Underwood Properties
Kittitas Conservation Trust
Lakeside Industries
Lynden Incorporated
Master Park
McDonald's Corporation
Nature Conservancy
Newmark Realty Capital
New Ventures Group
Palmer Coking Coal
Pharos Corporation
Port Blakely Communities
Puget Sound Energy
Puget Western
Quadrant
San Juan Preservation Trust
Seattle Art Museum
Seattle Pacific University
Staubach
Stellar Holdings, Inc.

Financial Institutions

Anchor Savings Bank
Bank of America
Charter Bank
Frontier Bank
Timberland Bank
Toyota Financial Services
Sterling Savings Bank
Union Bank
US Bank

State Certification Number – General: 27011-1101089 **Expiration**: 12/02/17
(Revised 12/03/13)