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COMMENTS REGARDING SEPA REVIEW  
AND THE SCOPE OF THE  
ENVIRONMENTAL IMPACT STATEMENT  
FOR THE NEW SHINE QUARRY

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THE PORT LUDLOW VILLAGE COUNCIL, INC. SUBMITS THESE COMMENTS TO THE JEFFERSON COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT REGARDING SEPA REVIEW AND THE SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT REQUIRED FOR IRON MOUNTAIN QUARRY INC'S NEW SHINE QUARRY DESCRIBED IN THEIR APPLICATIONS DATED FEBRUARY 25, 2010



PORT LUDLOW VILLAGE COUNCIL  
P.O. BOX 65012  
PORT LUDLOW, WA 98365

Approved by Resolution of the Port Ludlow Village Council on April 20, 2010

## DIRECTORS OF THE PORT LUDLOW VILLAGE COUNCIL

**Anthony U. Simpson, President**  
MA (Cantab), MSME, PhD (Chemical Eng), PEng (ME CA & PQ)

**Jack A. McKay, Secretary**  
BA Geography, MA, EdD, Dean, Emeritus Professor

**Arthur Zoloth, Chair, "Future of Port Ludlow"**  
Pharm D, Director of Pharmacy, Virginia Mason

**Dean Mosier**  
Director Community and Economic Development, Seattle, WA

**James Boyer**  
Developer, Licensed Contractor CA, NA, NM, CO

**Edwin Howard Koester, Director SBCA**  
BS U.S. Naval Academy, PEng (ME CA), CA State Energy Consultant

**Thomas E. Stone, Vice President**  
BS Eng, MS EE, Rear Admiral USN (Ret.)

**Lawrence Nobles, Chair, "Community Development"**  
MS, PhD (Harvard), Dean & Emeritus Professor Geology NWU

**Laurason T. Hunt**  
BA (History), Lawyer Washington Bar, Hunt Law Offices

**Shane Seaman**  
Lawyer WA and Fed Bars, County Judge Pro Tem & Prosecutor

**Elizabeth Van Zonneveld, President LMC**  
BSc, Life Sciences, Parks & Recreation, Community Affairs

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# CONTENTS

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*(Note: Headings and Page Numbers are Linked to Text)*

Directors of the Port Ludlow Village Council.....	2
Acknowledgements.....	2
Contents.....	3
1 Introduction.....	7
2 Project Overview.....	8
Project Description.....	8
3 Chronological, Geographical, and Land Use Scope for SEPA Review.....	9
Chronological Scope.....	9
Conclusions.....	9
Geographical Scope.....	9
Conclusion.....	10
Land Use Scope.....	10
Conclusion.....	11
4 Clarification of Relationships and Responsibilities between the Parties.....	12
Relationship between Pope Resources (PR) and Pope & Talbot (P&T).....	12
Conclusion.....	12
Relationship between the Mason Shine Quarry (MSQ) and the New Shine Quarry (NSQ).....	12
Conclusion.....	13
Relationship between Pope Resources and Port Ludlow Associates.....	13
Conclusion.....	13
Relationship between Iron Mountain Quarry (IMQ) and Pope Resources (PR).....	13
Conclusion.....	13
Relationship Between the joint PLVC and SBCA Quarry Committee, Pope Resources, and Iron Mountain Quarry.....	13
Conclusion.....	14
Relationship Between Port Ludlow Property Owners and Pope Resources.....	14
Conclusion.....	14
5 Pope Resources' Property Disclosures.....	15
Relevance.....	15
Background.....	15
What are These Property Disclosures?.....	15
What Do Property Disclosures Show?.....	15

Conclusion.....	16
Actual Wording of Property Report Disclosures .....	17
Conclusion.....	17
Resolving Property Report Disclosures in the EIS Scope .....	17
Conclusion.....	17
6 Ridgeline.....	18
Purpose of Ridgeline Preservation.....	18
Definition of a Ridgeline .....	18
Visualization .....	18
2009 Decision-Making Process.....	19
Jefferson County Hearing Examiner’s Decision.....	19
Mineral Resource Land Overlay (MRLO) Perspective.....	19
Profiles from Ridgeline towards Golf Course and towards Olympic Terrace area.....	20
Ridgeline Conclusions .....	21
7 Air Quality and Dust.....	22
Airborne Dust.....	22
Conclusion.....	22
Waterborne Dust .....	22
Conclusion.....	23
8 Surface Water, Streams, Wetland.....	24
Relation of NSQ Wetlands to Port Ludlow Golf Course Bird Sanctuary.....	24
Conclusion.....	25
Shine Creek Watershed from New Shine Quarry to Squamish Harbor .....	25
Conclusion.....	25
Conclusion.....	25
9 Ground Water.....	26
Port Ludlow Conditions Under the NSQ.....	26
Conclusion.....	27
New Shine Quarry Aquifer Recharge Areas Report.....	27
NSQ AQUIFER RECHARGE PLAN (CLICK TO ENLARGE) .....	28
South Acquirer.....	28
Lowest depth of Mining.....	29
Conclusion.....	29
Who pays for damages? .....	29

Conclusion.....	30
10 Plants, Animals.....	31
Port Ludlow Golf Course is an Audubon International Certified Bird Sanctuary .....	31
Conclusion.....	31
Squamish Harbor Salmon Reintroduction .....	31
Conclusion.....	32
11 Traffic.....	34
Mitigation of Quarry Transportation through Port Ludlow MPR.....	34
Conclusion.....	34
TSI Report on Quarry Traffic through Port Ludlow .....	34
Conclusion.....	35
TSI Report on Traffic Growth for SR-104 .....	35
Conclusion.....	35
TSI Report Use of Averaging Techniques .....	35
Conclusion.....	35
12 Fly Rock.....	36
Conclusion.....	36
13 Noise.....	37
AMEC Identification of Appropriate EDNA Level.....	37
Conclusion.....	37
AMEC Use of Modeling Instead of On-Site Verification.....	37
Conclusion.....	37
Effect of Noise from SR-104 .....	37
Conclusion.....	38
Blasting Noise.....	38
Conclusion.....	38
14 Vibration.....	39
Vibration Induced Low Frequency Noise .....	39
Conclusion: .....	39
Propagation of Vibration into Sub-Surface Structures at the Quarry .....	40
Conclusion.....	40
Propagation of Vibration into Sub-Surface Structures on Oak Bay Road.....	40
Conclusion.....	41
15 Land Use.....	42

Conclusion.....	42
16 Aesthetics and Visual Impact .....	43
Ridgeline Loss .....	43
Location and Description of Site.....	43
IMQ's Study of Ridgeline Loss.....	43
PLVC Assessment of Ridgeline Loss .....	43
Photographic Analysis .....	44
Conclusion.....	44
Aesthetics of Quarry Truck Traffic .....	44
Conclusion.....	44
17 Cumulative Impacts.....	45
Cumulative Quarry Water Pollution .....	45
Conclusion.....	45
Cumulative Quarries and Road Noise.....	45
Conclusion.....	45
Cumulative Dust Air Pollution .....	46
Conclusion.....	46
Cumulative Quarry Traffic .....	46
Conclusion.....	47
18 Restoration .....	48
Conclusion.....	48
19 References.....	49
References Not Attached (Jefferson County has easy access to its own copies):.....	49
References Attached (except © copyright and others that are Internet accessible but not re-printable):.....	49
20 Acronyms.....	51

# 1 INTRODUCTION

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This report submits the Port Ludlow Village Council's (PLVC) comments on the recommended scope of the Environmental Impact Statement for Iron Mountain Quarry's project proposal as provided under WAC 197-11-408 ([Ref. B WAC 197-11-408](#)). PLVC recommends that the Lead Agency require the Environmental Impact Statement to carefully consider the significant environmental issues outlined in this report, as well as the non-environmental issues outlined in Section 5 of this report as allowed under WAC 197-11-440(8) ([Ref B WAC 197-11-440-8](#)). Additionally, given the potential impacts of this extraordinary proposal within a stone's throw distance from the Port Ludlow Master Planned Resort, we highly encourage the Lead Agency to option into the expanded scoping process provided under WAC 197-11-410 ([Ref B WAC 197-11-410](#)). We encourage the distribution of information packets, and the use of public meetings and workshops to provide the Lead Agency a full and fair opportunity to outline carefully the environmental inquiries and study that should be part of the Environmental Impact Statement.

In addition, the report highlights some of the defects found in Iron Mountain Quarry's (IMQ) State Environmental Policy Act (SEPA) Applications ([Ref. A](#)) to the Jefferson County (County or JeffCo) Department of Community Development (DCD) for SEPA review and consideration. Given these deficiencies, we encourage the Lead Agency to include a "no action" option as part of the scope of the Environmental Impact Statement as provided under WAC 197-11-440(5)(b)(ii) ([Ref B WAC 197-11-440-5-b-ii](#)).

We understand the status of the Application is that the DCD made a determination of significance (DS) ([Ref. 3](#)) and that an Environmental Impact Statement (EIS) will be necessary. We also understand that with the DS, IMQ has automatically withdrawn its offer of mitigation for no traffic through Port Ludlow. We further understand the IMQ and Pope Resources have filed a lawsuit against the County to require that the DS be withdrawn.

The next four sections (2, 3, 4, and 5) address issues that are relevant to all environmental topics. Following these are comments on individual environmental impacts that PLVC assert should be carefully vetted as part of the EIS. The list of [references](#) is in the next-to-last section. The last section lists the [acronyms](#) used in the report.

Many members of the PLVC Board are highly qualified professionals, have extensive consulting experience, and have peer-reviewed the work of others. We understand the consulting business and the pressures that customers can exert. The customer's choice of consultant, the work scope, and the budget may determine what material the consultant includes and excludes. We review the IMQ's consultants' reports with the necessary experience to do so.

When the report is transmitted as a Portable Document Format (PDF) attachment by e-mail, links from headings and pages in the Table of Contents, links to external documents referenced in the text, links to bookmarks within the text, and links in figures to enlarged versions are all active.

A convenient way to read this document is to print it for reading and annotation and to use the computer PDF version to look up the references.

If you have only a printed copy, the PDF version is on the Internet at [pl-wa.org](http://pl-wa.org) and quickly found using its Archive search feature. The Universal Resource Location of this document is:  
[http://pl-wa.org/sites/default/files/documents/archives/PLVC\\_SEPA\\_Review\\_Comments\\_and\\_Scope\\_of\\_EIS\\_for\\_NSQ\\_22-Apr-2010.pdf](http://pl-wa.org/sites/default/files/documents/archives/PLVC_SEPA_Review_Comments_and_Scope_of_EIS_for_NSQ_22-Apr-2010.pdf)

## 2 PROJECT OVERVIEW

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### PROJECT DESCRIPTION

The DCD project overview ([Ref. 3](#)) states:

*“The proposed project is a new rock quarry to the southeast of the existing Shine Quarry located to the northwest of Shine, WA, to the north of SR 104. IMQ proposes to conduct mining in three phases (phase 1A, Phase 1 B and Phase 2), beginning in 2010.*

*Mining for Phase 1A is expected to last approximately 10 years. The overall life of the mine is expected to be approximately 40 years. The purpose of this report is to address the storm water control and treatment requirements for Phase 1A of the Shine Quarry mining operations. Storm water control for Phase 1B and Phase 2 have been addressed conceptually only. Separate design calculations and permits for Phase 1B and Phase 2 will need to be obtained near the completion of Phase 1A based on the site conditions at that time.*

*The proposal is to mine a one hundred and forty two (142) acre site south of Port Ludlow in three (3) phases over a period of approximately forty (40) years. The hours of operation will generally be from 6:30AM to 4:30PM. The hours of physical operations, including mining and processing will be from 7:30AM to 3 :30PM, or as daylight allows. The mine could produce as much as 400,000 tons per year with volume in the winter months between 8,000 and 16,000 tons per month and during the summer between 26,000 and 52,000 tons per month. This project requires a Stormwater Management Permit with SEPA from Jefferson County, an NPDES permit for Ecology, a Reclamation Permit from Natural Resources (DNR) and a Jurisdictional Determination from the U.S. Army Corps of Engineers.”*

## 3 CHRONOLOGICAL, GEOGRAPHICAL, AND LAND USE SCOPE FOR SEPA REVIEW

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### CHRONOLOGICAL SCOPE

The IMQ Application is unclear about the interaction of the SEPA review process and the three sequential phases (1A, 1B, and 2) of the quarry project. The overview in Section 1 infers that SEPA review could be in three phases over 40 years. This proposal may simply be an effort by IMQ to avoid careful examination of cumulative environmental effects. If so, it is contrary to SEPA and should not be allowed by the Lead Agency ([Ref B WAC 197-11-060-5-d-ii](#)) The County could grant the phase 1A permit only if subsequent phases are reasonably certain to receive permits—otherwise IMQ might not be able to recover fully its return on initial investment. Additional SEPA reviews would then be required in order for IMQ to proceed from one phase to the next.

The timeline can only be approximate—the capacities indicated in the overview assume a steady demand for product. If the consumption of aggregate increases in the local area, or in wider areas, additional crushers etc. could easily increase production several fold and reduce the life of the quarry. The environmental impact of such accelerated production schedule could be large.

### Conclusions

The sequence of phased review ([Ref. B WAC 197-11-060-5-b](#) and [WAC 197-11-776](#)) of the NSQ project could be from the entire 142 acre quarry to the three 10 to 20 year operational phases. An additional review would occur prior to each future phase when adequate information was available to evaluate the environmental impacts. Each phase involves use of the entire plant but different environmental consideration will occur over time—e.g., traffic on SR-104, noise propagation into the MPR as IMQ demolish the ridgelines, new geologic information on viability of aquifers, any changes to the lowest mining elevations, verification of dust containment adequacy, history of impact on public health in Port Ludlow. However if phased review is allowed, the County is requested to insist that cumulative impacts be made a part of the environmental examination at each SEPA step.

### GEOGRAPHICAL SCOPE

In his April 9, 2008 CONCLUSION ([Ref. 6 Conclusion p. 12-13, #4](#)), Jefferson County Hearing Examiner Causseaux found in his fourth conclusion that:

*“Pope has not abandoned its nonconforming use rights by development of Port Ludlow. However, the location of Port Ludlow and its amenities must be considered in both SEPA review and review under the JCC mining requirements.”*

On November 19, 2008, Superior Court Judge Verser ([Ref. 7. Nonconforming Rights p. 6](#)) ruled on Port Ludlow’s appeal of the Examiner’s decision as follows:

*“The Court considered the complete record.... The Report and Decision of the hearing examiner is AFFIRMED.”*

Thus, the Examiner’s report with its conclusions stands supported by the Superior Court.

The second sentence of the Examiner’s fourth conclusion (see above) is a qualification condition to the grant of nonconforming rights. The words “must be considered” make compliance mandatory. The second sentence is unnecessary unless the Examiner deliberately intended to make nonconforming rights conditional on protecting the residents from adjacent quarry activities by the

community's Developer. Moreover, the decision contains no severability clause; failure to fulfill part voids the whole.

Note also that, in these April 9, 2008 FINDINGS [\(Ref. 6 Findings p. 4, #2\)](#), Examiner Causseaux found that:

*"This appeal is exempt from SEPA review."*

This means that SEPA review cannot overturn or change the Appeal. However, it does not restrict the Appeal from mandatory use in the present SEPA review.

## **Conclusion**

In the general case, the entire MPR area is included in a SEPA review. The amenities of Port Ludlow include the marina, golf course, bird sanctuary, trails, etc. some of which extend beyond the MPR boundary (e.g., into the bay and into easements) but are nevertheless included as part of the MPR amenities.

## **LAND USE SCOPE**

A consistent error in all of IMQ's SEPA submissions is the failure to recognize that Port Ludlow is a designated Washington State Master Planned Resort. A search of IMQ's application finds not a single reference to the words MPR or "Master Planned Resort".

A Development Agreement between Jefferson County and Pope Resources created the Master Planned Resort on May 8, 2000. The complete document is 569 pages long. Both organizations have copies and it is available on the Internet [\(Ref. F\)](#). The Agreement covers matters such as land descriptions, map of properties, land use ordinance, development code, storm water, critical areas, land use procedures, and shoreline management program.

Under Washington State Law [\(Ref. E RCW 36.70A.360\)](#) GMA definition:

*"A master planned resort means a self-contained and fully integrated planned unit development, in a setting of significant natural amenities, with primary focus on destination resort facilities consisting of short-term visitor accommodations associated with a range of developed on-site indoor or outdoor recreational facilities."*

The Municipal Research and Services Center of Washington [\(Ref. 4\)](#) explain MPRs as follows:

*"In other words, MPR's are more than just overnight lodging for visitors or a single recreation use. They are carefully planned and integrated developments, centered on special recreational opportunities and natural settings. They provide a package of facilities, services and amenities that largely meet the daily needs of visitors. Visitors are drawn for extended stays because of the high quality and varied recreational opportunity and the area's natural splendor. In several other states, they are called destination resorts to emphasize their special attractions and ability to draw visitors from distant places and even other countries.*

*While most counties will not be home to a planned resort of Disneyland dimensions, Washington is already home to a number of resorts (representing varied levels of planning and self-containment).*

*Examples include ski and mountain sports-oriented Crystal Mountain, with lodging, restaurants and other services, in the shadow of Mt. Rainier. A major expansion has been proposed for Crystal Mountain. Port Ludlow, in its Hood Canal setting, offers boating and other activities, and a variety of services and accommodations. The new Skamania Lodge offers retreat-type conference facilities, lodging, restaurant, golf,*

horseback riding, and other activities. The lodge overlooks the Columbia River Gorge National Scenic Area. Sun Mountain Resort in Okanogan County, WA has become a destination resort for cross country skiing and includes lodging, restaurants, and supporting commercial services. Developers of major resort areas such as Aspen and Breckenridge have shown an interest in Washington's potential.

Careful planning and siting of resort facilities coupled with design excellence are essential ingredients to the success of an MPR. Successful resorts must balance development of an attractive package of amenities with preservation of the features and natural settings that are a major key to attracting visitors. As noted in the MountainStar Resort Draft EIS Summary Report (related to an MPR in Kittitas County, WA):

*"The objective of the master planning process is for the developer, local jurisdiction and community to agree on a set of parameters that will guide long-term development of a resort site in a way that provides opportunities for economic development while protecting environmentally sensitive areas"* (Trendwest Resorts, Inc., 1999).

As one observer of resort development notes: *"The crucial ingredients of great resorts are those of great neighborhoods or cities: good architecture, a sense of place, economic vitality, inviting public spaces, and convenient, efficient traffic...The job ahead is to create resorts that match the grandeur of their settings while providing the services, amenities, and ambience expected by today's tourist."* (Shaw & Rebecca Zimmerman, 1997)"

## **Conclusion**

In omitting consideration of the MPR designation, IMQ and its consultants misinterpret, amongst other things, the significance of amenities such as trails, marina, golf course, and bird sanctuary, which are of comparable importance in an MPR as residential areas. Identify mitigation (Ref. B [WAC 197-11-158](#) and [WAC 197-11-330-1-c](#)) is appropriate to bring the SEPA proposal in line with the MPR identity of Port Ludlow, and to require that this issue be included within the scope of review in the Environmental Impact Statement.

## 4 CLARIFICATION OF RELATIONSHIPS AND RESPONSIBILITIES BETWEEN THE PARTIES

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The relationship and responsibilities between the parties needs definition for many readers, otherwise discussion of several issues will be unclear. The conclusion at the end of each relationship explains its relevance.

### RELATIONSHIP BETWEEN POPE RESOURCES (PR) AND POPE & TALBOT (P&T)

In 1968, P&T Development, a subsidiary of P&T, started development of the first plat in Port Ludlow.

In January 1985, P&T merged (spun off) its P&T Development subsidiary, which held its Washington State timber and real estate assets, into PR, a Delaware master limited Partnership ([Ref. 8. Pope Merger](#)). It was not a sale of assets but a merger with full transfer of all obligations and liabilities of P&T into PR.

Mr. David L. Nunes, the President of PR, confirms these merger relationships in his letter ([Ref. 9. Nunes Letter](#)) under oath ([Ref. 19 p. 25 l. 14-15 Appeal Transcript](#)) and declared true and correct ([Ref. 20, p. 1, #4 Declaration](#)) to Jefferson County dated May 21, 2007, as follows:

*“The purpose of this letter is to clarify that all of the area proposed to be leased to Iron Mountain Quarry is within an area of known mineral deposits that Pope Resources and its predecessor, Pope & Talbot, owned and intended to be used for hard rock mining from the time the first mining occurred at this location in the 1970’s.”*

### **Conclusion**

The point here is that Property Reports, filed with Washington State and the Federal Government by P&T, are binding on PR and are as if PR had prepared them under its own name.

### RELATIONSHIP BETWEEN THE MASON SHINE QUARRY (MSQ) AND THE NEW SHINE QUARRY (NSQ)

In 1984, Clifford and Danae Larrance began building logging roads for Pope & Talbot (P&T) on an informal understanding and registered the name “Shine Quarry”. In 1990, they entered into a 10-year lease agreement with Pope Resources and expanded sales commercially to contractors other than PR. January 1997, the arrangement was formalized ([Ref. 12](#)) as a 20-acre Shine Quarry lease. The lease required Larrance to obtain a surface mining permit from the Washington Department of Natural Resources, which he received in December 1989.

In June 2004, the County DCD issued a Type I Land Use Permit ([Ref. 32](#)) to expand the quarry, from 20 to 40 acres based on the diminished asset doctrine. The quarry must be over ½-mile from any urban growth area. The designated SEPA agency was the DNR. Construction activities cannot encroach upon stream and wetland buffers. The quarry was part of a Mineral Resource Lands Overlay (MRLO) District.

In April 2006, PR renewed the 40-acre lease through 2011 with two further 5-year renewal options. In May 2007, Danae Larrance, now widowed, sold the Shine Quarry (MSQ) to James Mason with PR’s written consent dated April 2007. By May 2007, without consulting Mason who was making substantial quarry improvements, PR signed a lease for the NSQ with IMQ.

The PR-IMQ SEPA applications are for a New Shine Quarry—not an expansion of the existing MSQ. Therefore, the existence of the MSQ permits and legal constraints do not flow to PR and the NSQ. Consequently, the MSQ not relevant to the SEPA review for the NSQ except insofar as cumulative impacts are concerned ([Ref. B WAC 197-11-792 Scope](#)).

### **Conclusion**

Therefore, the existence of the MSQ is not relevant to the SEPA review of the NSQ except insofar as cumulative impacts are concerned ([Ref. B WAC 197-11-792-2-c-iii Scope](#)).

### **RELATIONSHIP BETWEEN POPE RESOURCES AND PORT LUDLOW ASSOCIATES**

PR's news release ([Ref. 17 Port Ludlow Sale](#)) on August 10, 2001 states that PLA bought the Port Ludlow development for a total consideration of approximately \$16.7 million. This was a sale of assets ([Ref. 18 Business Advisor](#)), which generally does not include any liabilities unless clearly identified.

### **Conclusion**

Therefore, Pope Resources is still responsible for all liability implications of the Property Report disclosures created before the sale of Port Ludlow development to PLA.

### **RELATIONSHIP BETWEEN IRON MOUNTAIN QUARRY (IMQ) AND POPE RESOURCES (PR)**

IMQ and PR have entered into a lease agreement that they have chosen not to make public. We have heard unofficially but credibly that PR based the wording of the IMQ lease on PR's lease to the Mason Shine Quarry ([Ref. 12 Mason Lease](#)), which is public. The Mason Shine Quarry lease's financial arrangements are typical of many mining leases in which there is a minimum monthly or annual payment (to stop lessee "sitting" on the project) and a royalty based on some measure of the value of material shipped. In this case, royalties are a percentage of gross receipts. Lessee is also responsible for getting all permits. Lessor warrants that it has the right to lease the Premises to Lessee, and Lessor will defend Lessee's right to quiet enjoyment of the premises from the lawful claims of all persons during the term of the Lease.

The sharing of product income from the project gives the lease many aspects of a joint venture. The left hand is intertwined inexorably with the right hand; each knows what the other is doing. They both assume risk that the quarry may not produce the return on land or financial investments that each expects, they share all the revenue, and they work cooperatively for their common advantage.

### **Conclusion**

Therefore, in their NSQ venture, IMQ and PR are to all intents and purposes a single entity; lessee and lessor are the only ones able to sort out who is liable and who is responsible for what.

### **RELATIONSHIP BETWEEN THE JOINT PLVC AND SBQA QUARRY COMMITTEE, POPE RESOURCES, AND IRON MOUNTAIN QUARRY**

Throughout 2009, the joint PLVC and SBQA Quarry Committee met with Pope Resources; IMQ attended the last two meetings. The object was to find ways that all parties might benefit from agreement on some issues.

The Quarry Committee arranged community meetings at the South Bay Club on March 5, 2009 and on October 14, 2009 at which PR and IMQ could present their positions and answer residents'

questions. Audio-visuals ([Ref. 29](#)) are available of both meetings and a transcript ([Ref. 5](#)) was prepared of the second meeting.

On February 18, 2009, PR and Quarry Committee representatives inspected the most northerly high ridgeline between the NSQ and the MPR. On March 5, 2009 the first Community Meeting got off to a good start. Issues such as ridgeline preservation for noise and view protection, expanding the existing trail easement area, etc. all appeared to be on the table. PR ended the meeting with a commitment to come to the second community meeting with specifics mitigation proposals.

IMQ joined the discussions in the summer and held hard to its original plans. At the October 14, 2009 community meeting, IMQ presented these plans without change and PR offered no significant mitigation proposals—though IMQ did repeat that it had no need to run quarry trucks through Port Ludlow.

On March 2, 2010 in a letter from IMQ to DCD, IMQ committed in writing that it would not transport NSQ product through Port Ludlow. However, it was conditional on no County EIS requirement, which the County now requires, thereby voiding IMQ's commitment.

### **Conclusion**

The efforts in 2009 to find common ground and trust with PR and IMQ failed. PLVC requests that the County clearly spell out all SEPA mitigations without potential loopholes or end runs.

## **RELATIONSHIP BETWEEN PORT LUDLOW PROPERTY OWNERS AND POPE RESOURCES**

Those who have visited IMQ's operation in Granite Falls, especially before the current recession and during the summer, will know that quarry traffic though a community is a disaster for that community ([Ref. 14 Hearing](#) , [Ref. 15 Clash](#) , [Ref. 16 Truck Traffic](#)). Often quarry towns that develop in symbiotic relationship between the quarry and the town have their own uniqueness, not least because the principle employer is the quarry. However, Port Ludlow was always a vacation and retirement community and classified by the State and County as a Master Planned Resort—it is the antithesis of a quarry town.

As an MPR, the value of Port Ludlow Property as of August 5, 2008 was \$687 million ([Ref. 13 Assessor](#)). Port Ludlow's property owners have environmental rights established by PR in the Property Reports filed with Washington State and the Federal Government.

### **Conclusion**

The Port Ludlow community anticipates that Port Ludlow's environment will be severely impacted by the NSQ. Moreover, besides the direct environmental effects of the NSQ, the anxiety, worry, sleeplessness, and commitment of time by the community will cause noticeable health deterioration in many residents.

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## 5 POPE RESOURCES' PROPERTY DISCLOSURES

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### RELEVANCE

This section is relevant to the scope of the EIS wherein non-environmental issues need consideration (Ref. B [WAC 197-11-440-8](#), [WAC 197-11-448](#), [WAC 197-11-450](#), and [WAC 197-11-640](#)). We recognize that property disclosures and their consequences are not strictly environmental issues ([Ref. B WAC 197-11-448-3](#)); however, the Lead Agency should include an analysis of such issues received in the scoping process.

### BACKGROUND

The County has made a determination of significance ([Ref. 3](#)), which triggers an Environmental Impact Statement (EIS). We understand that Pope Resources (PR) and Iron Mountain Quarry (IMQ) have [jointly](#) appealed the County's DS decision in County Superior Court.

We are concerned because we have observed directly the effects of the dichotomy confronting PR and IMQ. Pope Resources has been involved with the Port Ludlow community for over 40 years as the Developer of an environmentally attractive community and now is the lessor of a new large commercial quarry proximate to and environmentally affecting that same community. The Property Report disclosures discussed below exemplify this dichotomy.

### WHAT ARE THESE PROPERTY DISCLOSURES?

Until about 1985, all Developers had to file a current property-report disclosure statement for each plat of land. All salespersons had to get each lot purchaser's signature saying that the purchaser received the disclosure statement before they bought the property—otherwise the purchaser could void the purchase.

Port Ludlow disclosure statements were over 40 pages and signed by the president of Pope Resources ([then called Pope & Talbot](#)). They included meticulous detail to disclose all “facts about this development which will make purchase a risk.” They include risks such as Mats Mats quarry, and risks as far away as the Mill in Port Townsend and Jefferson County Airport.

Examples of these Property Report disclosures are attached from 1974 ([Ref. 10, p. 6](#)), 1976 ([Ref. 21, p. 16](#)), and 1978 ([Ref. 22, p. 16](#)), and a typical salesperson's document checklist and receipt ([Ref. 27](#)). Port Ludlow is a retirement community, so original purchasers 25 to 40 years ago are now almost all deceased or moved to care facilities. Homeowners keep Property Reports in their personal files (title companies do not file them) and they are discarded during postmortem cleanout. If Port Ludlow had not started a digital archive of records in late 2009, all trace of the Property Report disclosures would very soon have disappeared.

### WHAT DO PROPERTY DISCLOSURES SHOW?

These 1970s Pope Resources disclosures identified the following specific quarry risks:

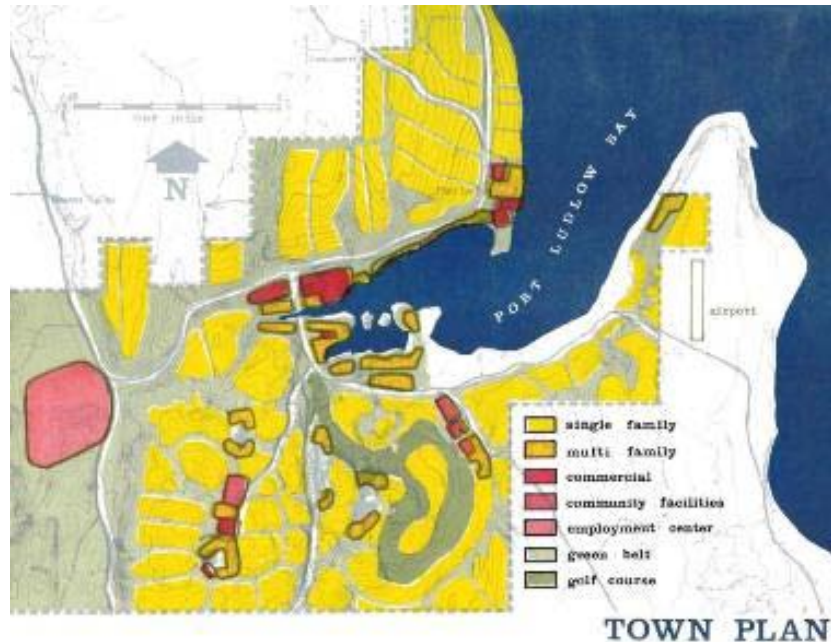
1. A rock quarry alongside the south side of Oak Bay Rd (County Road #10) between the village center and Beaver Rd (now defunct)
2. A gravel pit in North Bay (now defunct)
3. A rock quarry between Paradise Bay Rd and the Golf Course (now defunct)
4. A large commercial quarry at Mats Mats about 2 miles North of Port Ludlow (now unused but restorable with a dock that is maintained)

The PR president in the 1970s (R. D. Bruce) never disclosed or mentioned the 142 acre NSQ region, which is less than ½ mile from Port Ludlow, in any of the 1970s property report disclosure statements he signed.

In contradiction, PR's current president (D. L. Nunes) in his 2007 testimony ([Ref. 9](#)) stated that PR has always intended to develop the 142 acre quarry (now known as the NSQ) since the 1970s and that PR has had some form of mining activity there from that time. His words carried crucial gravitas by reaffirming his testimony and adding, "The foregoing is made under penalty of perjury under the laws of the state of Washington and is true and correct." ([Ref. 20](#))

This contradiction is a core manifestation of PR's dichotomy and the underpinning of the environmental harm it can do to Port Ludlow Master Planned Resort specifically created by Washington State law.

The Port Ludlow Town Plan (click to enlarge) from PR's 1967 planning report ([Ref. 1, p. 63](#)) shows that Port Ludlow always extended to the region proximate to the 142 acres now known as the NSQ. The Golf Course surrounded by homes was always a central theme. The NSQ is located a little below the bottom of the plan.



Pope Resources' continuing omission of the NSQ region from the property Report disclosures is extraordinary and seemingly inexplicable. It is clear that PR had actual knowledge via its Presidents at all times.

PR has issued no subsequent documents or amendments that remedy PR's disclosures, which effectively state that Port Ludlow homebuyers should not anticipate risk of a quarry where PR plans to open the NSQ. The first date on which Port Ludlow became aware of the possibility a commercial quarry was in the PR letter of May 2007 ([Ref. 9](#)).

## **Conclusion**

Since PR has:

1. provided exhaustive and credible detail in its Property Reports,
2. filed its disclosure Property Reports with State and Federal Governments under the signature of the PR president, and
3. required property purchasers to sign a receipt that they received a copy,

Port Ludlow residents have relied on PR to honor their Property Report disclosures, most especially those that affect the environment, when making their decision to purchase and live in this environmentally conscious community.

However, since the 1970s, PR has continuously failed to disclose:

1. PR's mining activities in the 142 acres that is now know as the NSQ and
2. PR's intention to open a 142-acre quarry next to their Port Ludlow development

### ACTUAL WORDING OF PROPERTY REPORT DISCLOSURES

There are slight differences between the wordings over the sequential release of Property Report disclosures, but their intent is uniform. For example, the Federal Government 1978 version ([Ref. 22, p. 16-17](#)) states

*"Off-site land uses and nuisances which may affect the subdivision include:..."*

PR listed all the quarries here. PR should have included their prior mining activities in the 142 acres that they describe as the NSQ.

The next section starts

*"The Developer does not know of proposed plans; private or governmental, for construction of any facility which may create a nuisance or adversely affect the use of the land [i.e., MPR] except:..."*

This is where PR lists the future planned facilities. PR should have listed their intention to open a 142-acre quarry near to their Port Ludlow development.

### Conclusion

By not disclosing quarrying in the region of the NSQ, PR is stating in its Property Report disclosures that Port Ludlow buyers of property will not incur nuisance or adverse effects from quarrying in that region.

### RESOLVING ROPERTY REPORT DISCLOSURES IN THE EIS SCOPE

PR's State and Federal Property Report disclosures define the conditions that could affect purchaser's decision and by omission conditions that will not affect purchaser's decision. Since PR never disclosed the NSQ, the NSQ cannot now generate nuisance or adverse affects without violating the State and Federal Property Report disclosures that failed to address any such quarry.

### Conclusion

After issuance of a permit, it is hard to see how the NSQ can cause no nuisance or adverse impacts as required by the Property Report disclosures. PR's property disclosures appear to rule out ***any*** nuisance and adverse impacts. However, the NSQ by its very existence will negatively affect the community. Therefore, the County could consider require analysis of a "***no action***" option in the EIS ([Ref B WAC 197-11-440-5-b-ii](#)). This would safeguard the County from effectively nullifying Port Ludlow residents' State and Federal property-disclosure protections.

## 6 RIDGELINE

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### PURPOSE OF RIDGELINE PRESERVATION

Ridgeline preservation reduces quarry and SR-104 highway road noise heard in Port Ludlow—particularly in the Olympic Terrace and un-built areas—and its amenities—particularly golf course, marina, bird sanctuary, trails. It also preserves the view from the golf course and the most southerly housing developments. It also reduces wind speed and dust transmission. When the quarrying has finished, the noise from SP-104—by then almost certainly a very busy 4-lane freeway with heavy truck traffic—will continue unabated. Once IMQ removes the ridgeline it can never be restored.

### DEFINITION OF A RIDGELINE

A ridgeline connects the highest points along a range of hills or mountains. If you walk along a ridgeline, the land slopes down on each side. If you look at a ridgeline from the land on one side, you cannot see land on the other side. If someone on one side cuts away the land, people on the other side would see no before-and-after difference in the profile.

At the end of a ridgeline there are no more high points, just a descent to lower land. Here, tangents from the hillside to a reference point—e.g., the closest buildable residences—define the line down the hillside. With the ridgeline preserved, the view from Port Ludlow will look as it did before IMQ commenced quarrying.

### VISUALIZATION

Readers please click figures to enlarge or get them at higher resolution in the references.



PLAN OF SHINE QUARRIES I



AERIAL VIEW OF SHINE QUARRIES 1

IMQ submitted the plan ([Ref. A Vol. 2, Sec 1](#)) in their SEPA documentation. The plan shows the existing Mason Shine Quarry covering just less than 40 acres and the New Shine Quarry (NSQ) covering 142 acres. The green line denotes the approximate right-hand edge of the photo.

The aerial photo ([Ref. 2](#)) looks approximately ENE while the centerline of the NSQ is approximately due north. The light blue at the top of the photo is the Puget Sound. The photo and plan do not exactly align but the reader should be able to see the general correspondence. A red line shows the approximate outline of the northern half of the NSQ. The purple arrow points roughly at the golf course. The last and highest ridgeline is marked roughly in yellow.

## 2009 DECISION-MAKING PROCESS

After Pope Resource's (PR) March 14, 2009 presentation to the Port Ludlow community, the community expected that PR/IMQ would preserve the final high ridgeline separating MPR from the NSQ as shown in yellow in the aerial view.

However, in the latter half of 2009, PR/IMQ dropped ridgeline preservation from the plan they eventually submitted to the County for SEPA review. Their reasons were that it reduced the quantity of rock that they could extract and it involved a higher back wall and grading.

## JEFFERSON COUNTY HEARING EXAMINER'S DECISION

On April 9, 2008, the Hearing Examiner determined ([Ref. 6, p. 11, finding #16, paragraph 3](#))

*"Development of Port Ludlow, the golf course, and the trails a minimum of 1,250 feet from the exterior boundary of the 182 acre parcel does not establish an intent to abandon a nonconforming use right to mine. However, the appellant acknowledges that it must meet all requirements of the JCC covering mines as well as undergo SEPA review. Such review may impose limitations on the mining of portions of the site. See Quality Rock v. Thurston County, 139 Wn. App 125 (2007), and Rhod-A-Zelea and 35th Inc. v. Snohomish County, 136 Wn. 2d 1 (1998)."*

Moreover, in his April 9, 2008 conclusions ([Ref. 6, p. 12-13, conclusion #4](#)), the Hearing Examiner stated,

*"Pope has not abandoned its nonconforming use rights by development of Port Ludlow. However, the location of Port Ludlow and its amenities must be considered in both SEPA review and review under the JCC mining requirements."*

The last sentence is an intentional and clear qualification of the nonconforming use rights to ensure consideration of Port Ludlow and its amenities originally planned, developed, and sold by Pope Resources for economic gain from the 1960s through 2000. Contempt of this qualification will call into question the whole decision on nonconforming rights, since it contains no severability stipulation.

## MINERAL RESOURCE LAND OVERLAY (MRLO) PERSPECTIVE

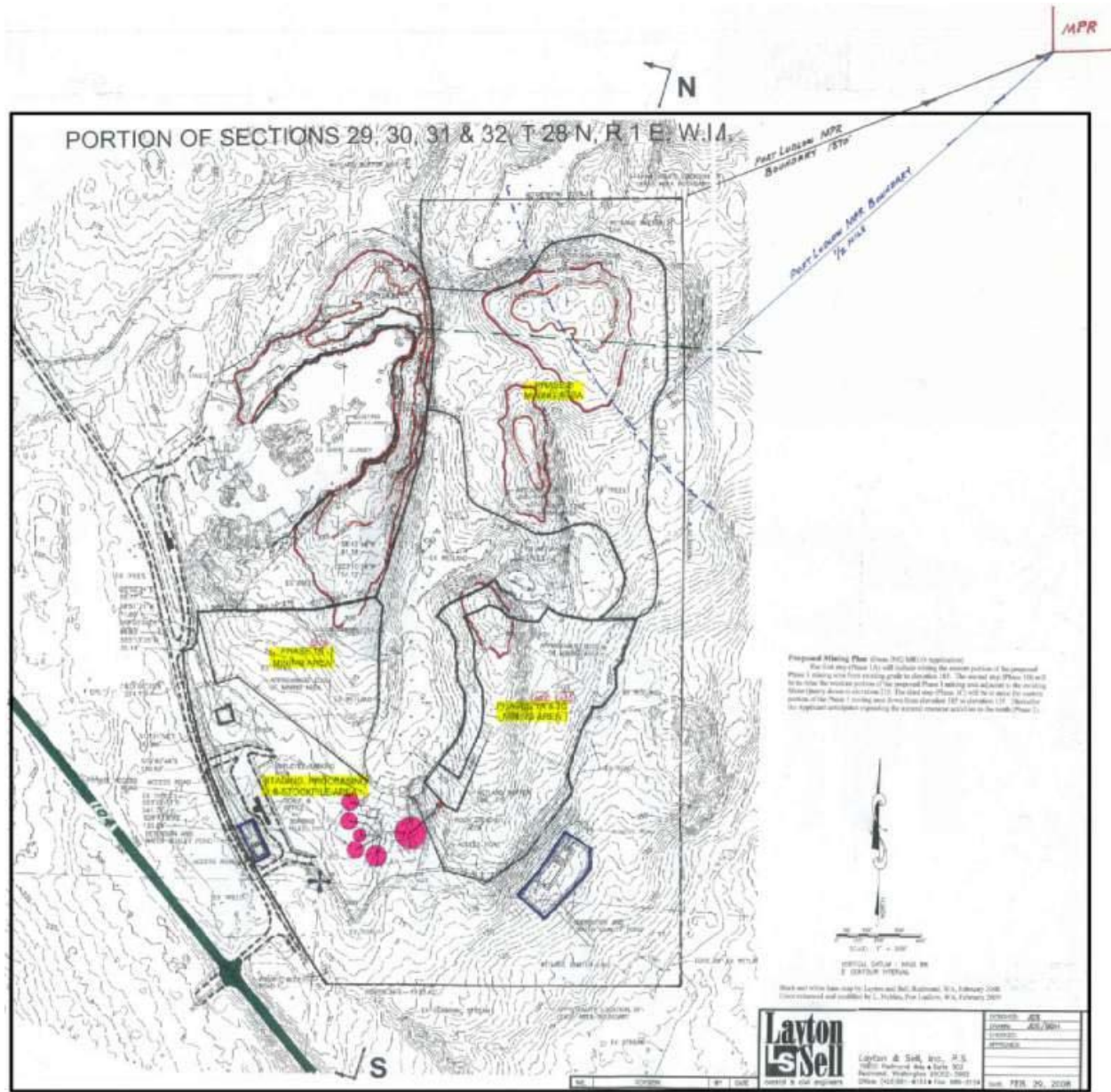
Before PR/IMQ obtained their nonconforming rights, their alternative was to apply for a Mineral Resource Land Overlay (MRLO). PR/IMQ chose to process the two applications in parallel to save time. After receiving their grant of nonconforming rights, PR/IMQ withdrew its MRLO application. In the meantime, the DCD had incorporated its MRLO analysis into the Jefferson County Comprehensive Plan dated September 3, 2008. A key determination was ([Ref. 23, p. 2-53, #1](#))

*"The MRL Overlay amendment shall not extend any closer than one-half mile to the Port Ludlow Master Planned Resort boundary."*

The following map ([Ref. 24](#)) prepared by L. Nobles in February 2009 from an IMQ plan shows the proximity of the NSQ to the MPR (not to scale). The closest distance from the NSQ land to the MPR

land is 623 yards or 0.35 miles—i.e., much less than a half mile. (By comparison, the length of the NSQ is much greater than the NSQ's distance from the MPR.)

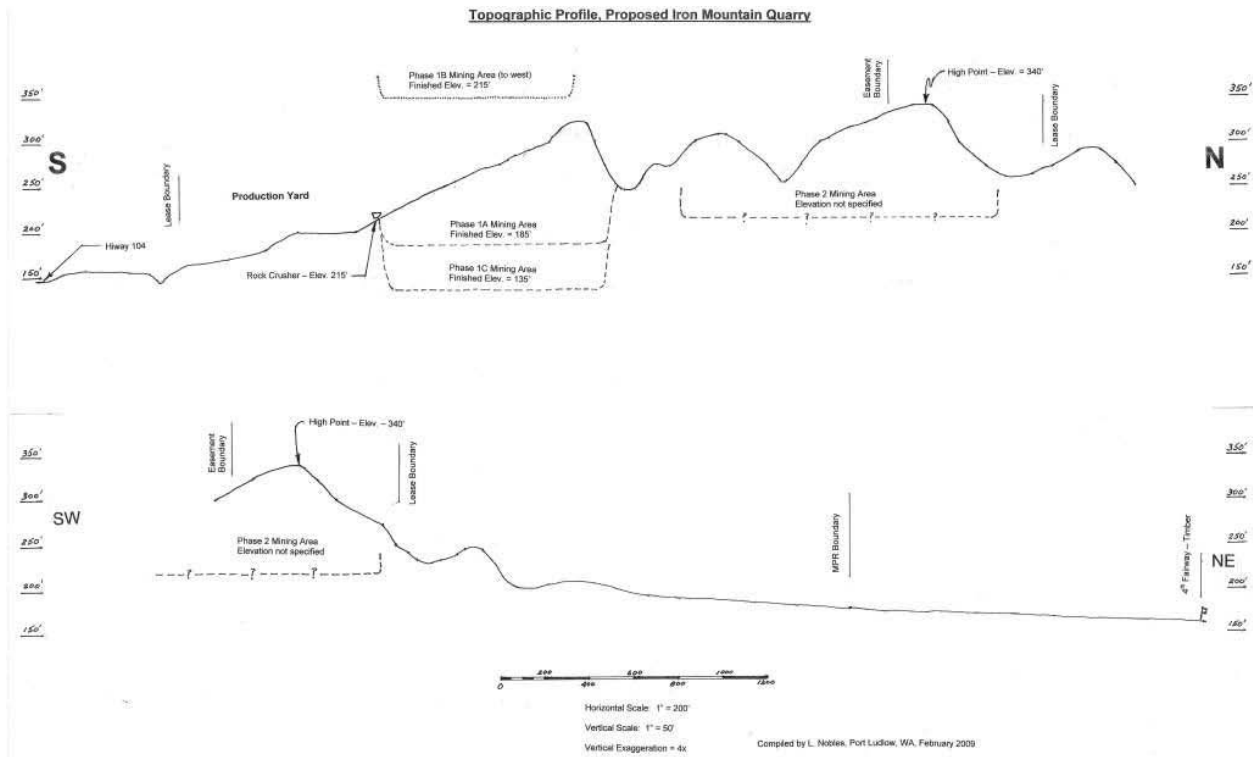
The map clearly shows that much of the ridgeline is contained within the one-half mile arc from the MPR (click to enlarge).



MPR-QUARRY DISTANCE AND 1/2 MILE ARC 1

### PROFILES FROM RIDGELINE TOWARDS GOLF COURSE AND TOWARDS OLYMPIC TERRACE AREA

The top half of the following figure [\(Ref 24\)](#) prepared by L. Nobles in February 2009 shows the profile through the NSQ. The highest point is the ridgeline at 340 feet. North of the ridgeline there is little protection for the golf course and its surrounding community.



N-S QUARRY SECTION AND PROFILE TO MPR (CLICK TO EMLARGE)

The lower half shows a SW-NE profile from the ridgeline’s highest point towards the developing Olympic Terrace communities. Once IMQ removes the ridgeline, they will have essentially zero protection.

### **Ridgeline Conclusions**

A relatively small change in elevation affects sound, wind, view, and dust propagation. For example, being upwind of a 20-foot high house and downwind are quite different environmental conditions. Looking down over a low ridge into a quarry is quite different from looking up to a higher ridge.

Birds and mammals seek the shelter of a ridge during high winds and bad weather. Walkers enjoy a quiet trail through the woods but avoid a trail full of machinery noise.

Removing the ridgeline creates an 80-foot loss to the North of the NSQ and a 150—foot loss to the Northeast of the NSQ towards the Olympic Terrace area. It is evident that the Olympic Terrace environment will be eroded by the removal of the Ridgeline, contrary to the qualification contained in the hearing examiner’s decision on nonconforming rights ([Ref. 6, p. 12-13, conclusion #4](#)).

The County is asked to require complete and careful analysis of the environmental aspects associated with project activities related to the Ridgeline.

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## 7 AIR QUALITY AND DUST

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IMQ's application ([Ref.A](#)) does not address the issue of air quality and dust.

### AIRBORNE DUST

Airborne dust is of particular concern in Port Ludlow because many of its residents experience breathing problems greatly exacerbated by airborne dust.

A hard-rock quarry creates dust throughout the production process. Within virgin basalt rock there are veins of chemicals, which are especially likely to convert into dust. Most processes in the quarry create dust, e.g.:

1. Dust from soil during its removal before the hard-rock is blasted
2. Dust and chemicals created by the explosives used to lift the solid rock face into piles of various sized rocks from boulders to fines
3. Dust from rock movement from quarry face to processing plant,
4. Dust from the crusher(s)
5. Dust from grading
6. Dust from conveying to reserve piles, and then to trucks
7. Dust from the trucks during transportation away from the quarry

When you walk through a quarry, the ground it is not hard rock, it is dust. This is especially noticeable after a rainstorm when the ground becomes dust slurry that sticks to shoes and clothing.

In a quarry town such as Granite Falls, dust settles in the homes and businesses in thick layers especially in the summer when it is drier and windows may remain open. It is normal to be able to draw in the dust on store counters and to clean thick dust from horizontal surfaces daily.

One chemical often present in basalt quarries is arsenic. We understand that arsenic is in Port Ludlow's well water at concentrations close to and sometimes above the legal limit. Mixing well water from low arsenic wells with water from high arsenic wells keeps the final mix below the legal limit. It is reasonable to presume that dust from the quarry will contain arsenic amongst many other chemicals. Moreover, it is certainly possible there are other dangerous chemicals or asbestos-like strands in the NSQ dust.

### **Conclusion**

A competent study would have determined what chemical and physical risks there are in the dust. Samples from exposed rock and from the boreholes in the New Shine Quarry, plus samples of the actual dust in the Mason Shine Quarry would have been a good and relatively inexpensive place to get samples for analysis.

Such examination needs to be part of the Environmental Impact Statement and if possible, in consultation with the National Pollutant Discharge Elimination System (NPDES) permit for Ecology to ensure comprehensiveness.

### WATERBORNE DUST

It is common policy at rock quarries to wash the product before it shipping to minimize truck dust on the road or at destination. Rainwater and surface water have a similar affect and leach chemicals from the dust and rock over time. The waterborne dust should mostly precipitate in the holding ponds. However, dissolved chemicals and materials of various types are more difficult to remove and tend remain in the effluent from the plant. We discuss this further under [Plants and Animals](#).

## **Conclusion**

Omission of an Air Quality and Dust study is not acceptable. Quarry dust has an environmental impact and potential health hazard. The extent of and mitigation of its harmful chemical and physically abrasive content should be required. Again, the EIS should analyze these impacts.

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## 8 SURFACE WATER, STREAMS, WETLAND

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### RELATION OF NSQ WETLANDS TO PORT LUDLOW GOLF COURSE BIRD SANCTUARY

As discussed [elsewhere](#) in this report, the Port Ludlow Golf Course is an Audubon International Certified Bird Sanctuary recognized by the Washington State Department of Fish and Wildlife. The NSQ wetlands are an immediate extension of that sanctuary.

The NSQ wetlands are extensive—the IMQ application lists twenty wetlands ([Ref. B Vol. 3, Sec 0 p. 2](#)) and as shown in the [groundwater plan](#). The NSQ wetlands currently form a continuous sanctuary with the golf course sanctuary. The NSQ will affect wildlife, but appropriate avoidance of harm and reclamation mitigation at an early date should help to reverse some harm and IMQ has done a thorough job in this area ([Ref. B Vol. 3, Sec. 1, Vol. 3, Sec. 2, Vol. 3, Sec. 3](#)). The study admits honestly that some permanent damage is inevitable ([Ref. B Vol. 3, Sec. 2, p. 2](#)):

*“These impacts are unavoidable as has been demonstrated in Gordon Derr’s Wetland Mitigation Sequencing Analysis. As shown in that document it is infeasible to avoid impacts to all wetlands but through redesign, the direct impacts have been minimized. In addition to direct impacts, a worst case estimate of indirect wetland impacts from reduction of wetland hydrology has been determined. Unavoidable direct and indirect impacts are discussed...”*

IMQ’s offsite mitigation plans ([Ref. B Vol. 3, Sec. 2, p. 4-5](#)) are:

*“Proposed offsite compensation would preserve or protect at least 20 acres of a Category I estuarine intertidal wetland and approximately 21 acres of forested uplands (outlined in green) now in commercial forest lands owned by Pope Resources within the same drainage basin as shown in Attachment B. Total commercial timberlands that would be placed in a conservation easement and protected from logging and associated potential impacts for perpetuity is 55.5 acres. This site is on the west side of South Point Road near Squamish Harbor. An estimated 34.3 acres within the red cross hatched area in Attachment B are estuarine intertidal wetlands. Only 20 acres of this total wetland acreage is proposed for use as offsite mitigation for impacts from the proposed NSQ. Removal of future disturbance (timber harvesting) in this area will contribute to repairing natural or historic functions of the estuary that were degraded by historic harvesting operations. The episodic disturbance associated with harvesting which may include alteration of microclimate, erosion and sedimentation processes, light and nutrient availability, and other important processes that drive plant community structure and functions would be eliminated and natural succession patterns allowed to continue. Elimination of episodic disturbance will promote restoration in intertidal wetlands and adjacent forested uplands. Considering the importance of estuarine intertidal wetlands to the life history and recovery of listed salmonid species and other marine dependent species in Puget Sound, this proposed off-site mitigation plan is clearly in line with state and federal regulatory guidelines for using preservation as a mitigation option. The western Washington wetland rating system (Hruby 2004) and interagency guidelines for mitigation in Washington and JCC all clearly recognize the relative importance of protecting estuarine intertidal wetlands because of the higher values and functions these ecosystems provide. Considering that the overall goal and objective of JCC and state and federal laws pertaining to protection of wetlands and waters of the state and United States is no net*

*loss of function and acreage, this conceptual mitigation plan would meet these goals by recreating at least the same amount of acreage that is lost plus protecting Category I wetlands offsite in perpetuity.”*

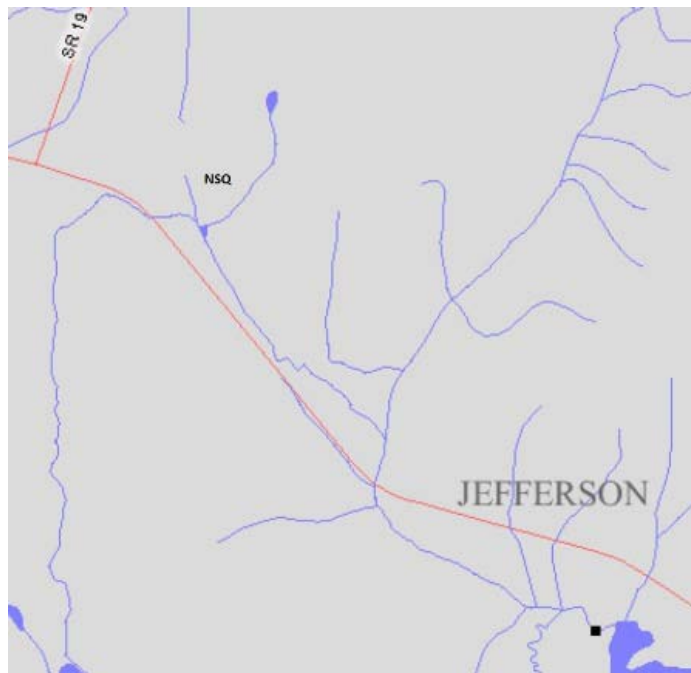
Nevertheless, because IMQ’s Environ consultants appear to be unaware of the proximity of the Bird Sanctuary and wetlands in the MPR, they ignored the potential for their use to help preserve species and maintain population between mining and restoration. Moreover, the Golf Course has 253 acres and the 80-acre Trails Nine is not currently in use—more land than IMQ proposed above. These lands are very close to the NSQ and larger than the lands proposed in the study.

### **Conclusion**

The EIS should consider and create opportunities to help preserve species and maintain adequate population between start of soil stripping and ultimate restoration of wetlands in lands that are closely allied with the lands being quarried.

### **SHINE CREEK WATERSHED FROM NEW SHINE QUARRY TO SQUAMISH HARBOR**

The NSQ is part of the Shine Creek watershed as shown in the watershed plan. Shine Creek ends at Squamish Harbor (Ref. 36). Both the Shine Creek and Squamish Harbor are environmentally sensitive areas as [discussed later](#).



The “Y” junction below the NSQ will receive essentially all effluent and soluble pollutants from the NSQ and it will join soluble pollutants and effluent from the MSQ.

### **Conclusion**

As [detailed previously](#), the absence of any chemical and physical analysis of quarry dust mentioned previously is a cause for great concern until the facts become available known.

### **Conclusion**

These impacts need to be examined carefully in the Environmental Impact Statement to avoid downstream environmental damage.

## 9 GROUND WATER

### PORT LUDLOW CONDITIONS UNDER THE NSQ

The South Valley Aquifer is under the NSQ and is not a major source of Port Ludlow's water at this time. The nearby South Aquifer is a major source of Port Ludlow's water. The figure below is from the first Environ study (Ref. A, Vol. 2, Sec. 4) and shows their locations. This study discusses the existing ground water conditions beneath and in the vicinity of the NSQ.



LOCATION OF SOUTH VALLEY ACQUIFER (CLICK TO ENLARGE)

Environ states that:

*Given the hydrogeologic conditions within and surrounding the NSQ site as determined from well logs and water supply information in published reports, site vicinity topography, and observations of ground water in open boreholes onsite, **it is unlikely that ground water flow within bedrock at the NSQ site would be in communication with the nearest water supply wells located to the southeast (i.e., the Graves well and the Reed well, Figure 1) and to the northeast (e.g., Well 13, Well 14 and Well 16).** This is primarily due to the fact that the same basalt that outcrops at the surface of the NSQ site underlies the producing zones in Graves, Reed, Well 13, Well 14 and Well 16; these wells are not screened in the basalt horizon and are therefore not capable of effectively pulling water from the basalt.*

We generally agree with above discussion. However, the word “unlikely” in the above quote is an important qualifier. The adjective “unlikely” is inadequate in a SEPA review of a new quarry that could affect the water for Port Ludlow however unlikely.

The Environ study states from the beginning that they wrote it on behalf of IMQ. Later, it states:

*“The South Valley Aquifer, primarily consisting of unconsolidated sands and silts, is shown in Figure 1. A portion of the South Valley Aquifer occupies the eastern portion of the NSQ site. As of 1992 (per Robinson & Noble 1992), it supplied a few low-yielding domestic wells in Shine and in the Tala Shores area to the east of Port Ludlow. Information reviewed for this report including the 2004 Reid Middleton Draft Supplemental Environmental Impact Statement<sup>4</sup> indicates that **no ground water is currently withdrawn from the South Valley Aquifer. Accordingly, it is not a drinking water source.**”*

As of September 2009, there are 1,666 unique tax-paying owners of real property in Port Ludlow. We await the 2010 census for a current population count, but the general opinion appears to be that about 2,500 people live here. These people are entirely dependent on the aquifers for their water supply—there is no other source.

Moreover, wells silt up periodically and newly drilled wells must replace them. Though capacity is adequate, there is little spare capacity. Consequently, risk of damage to any aquifer is cause for alarm.

### **Conclusion**

IMQ’s existing studies do not address the issue of population growth or loss of other well capacities that can cause an increase in demand necessitating use of all available drinking water sources. In effect, Environ believes that Port Ludlow must give up its rights to use wells into this aquifer and therefore IMQ need not consider it as a significant factor in the operation of their quarry. It indeed true that the South Valley Aquifer currently has low yield; however, the future is not predictable due to crack propagation and ensuing conduit channels in basalt especially under the impact of quarry explosions over a 40-year period, specialized heavy truck equipment, and powerful vibration.

### **NEW SHINE QUARRY AQUIFER RECHARGE AREAS REPORT**

In this report ([Ref. A, Vol. 2, Sec. 5, p. 1](#)) Environs acknowledges it has prepared the report to “support your application” for the proposed NSQ—not the wording to introduce an unbiased technical study.

The study deals with the consumption of water by the NSQ, and in particular ([Ref. A, Vol. 2, Sec. 5, p. 1](#)):

*Water supply needs for the proposed development include process water for mining operations (dust control) and sanitary purposes. Water for dust control will be obtained from an exempt industrial well. The scale house and maintenance building will each have toilet facilities with an associated septic system; water for sanitary uses will be obtained from an exempt domestic well. It is anticipated that both wells would be exempt from new regulations recently adopted by the Washington State Department of Ecology in Chapter 173-517 WAC and that maximum use would not exceed 5,000 gallons per day per exempt well.*

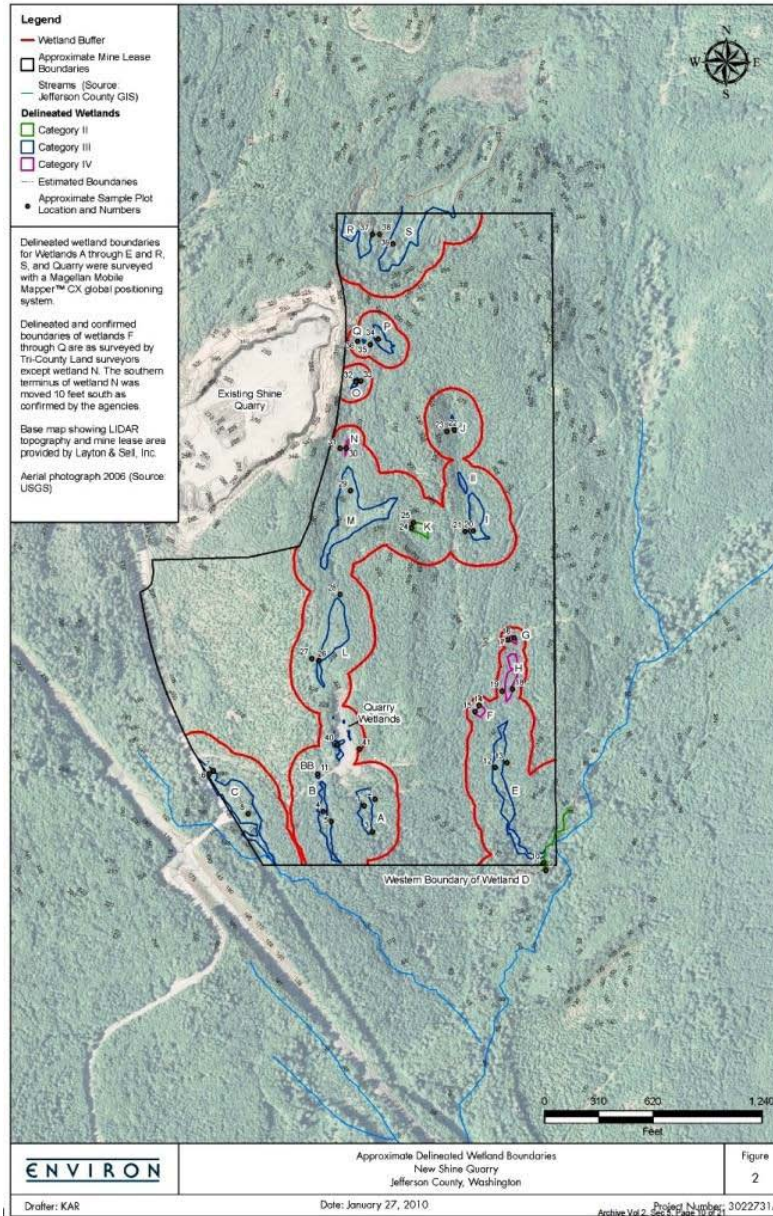
The use of 10,000 gallons per day is not trivial. It infers two things:

1. A lot of water will be used to control dust with its inclusive chemicals, which will ultimately be discharged

2. NSQ is a competitor for water use North of SR-104

Environs' study of water for the NSQ is more extensive than for Port Ludlow's water above. The plan (Ref. A, Vol. 2, Sec. 5, p. 10) on the following page shows the extensive wetlands in the NSQ and the streams draining from the MSQ and the MPR.

NSQ AQUIFER RECHARGE PLAN (CLICK TO ENLARGE)



**SOUTH ACQUIFER**

This is a vital source of water for Port Ludlow. It is outside the NSQ footprint and Environ does not address it. A report dated December 23, 2008 by Bender Consulting (Ref. 30) commissioned by PR provides much information on its importance especially as it may affect the Tala Point development.

The main concern for Port Ludlow is the risk of cracks connecting into the South Aquifer causing drainage, contamination, or lost recharge capacity. This is a vital issue but not amenable to exact science. Cracks in rock are similar science to earthquakes and volcanoes. We know they can happen but we cannot predict them except in a gross statistical sense. Nevertheless, they happen. Moreover, they are often related events, an earthquake triggers a volcano and vice versa. The analogy holds for aquifers when to some degree rock cracks are definitely more likely when blasting occurs in the rock formation. The very reason for blasting is to induce cracking and movement.

### LOWEST DEPTH OF MINING

The plans call for mining down to a nominal 150 feet elevation. We recognize that some flexibility is necessary for practical operation and drainage. However, the plans do not specify the range of this flexibility. Deeper mining will approach even closer to the aquifer and greatly increase the risk of damage. Even reclamation may require deeper penetration to recreate wetlands. We understand that Mats Mats basalt quarry is an example that initial mining depth can be lowered, potentially even below sea level.

### Conclusion

The EIS should investigate the true maximum depth of mining IMQ will not exceed, its location ranges, and its potential to impact risk of aquifer damage.

### WHO PAYS FOR DAMAGES?

Environ acknowledges ([Ref. A. Vol. 2, Sec. 4, p. 2](#)) that

*“Ground water movement in basalt is fracture-controlled and difficult to predict, and formal studies of ground water movement in bedrock have not been completed in Eastern Jefferson County.”*

IMQ intends to use explosives to fracture the basalt above the aquifer. This is subject to human error. Even though the intended explosions occur in a well-planned sequential order, there is always risk that the larger quantities or even the entire stock of explosives could accidentally be detonated. Moreover, the cumulated effect of explosions over many years is unpredictable. Moreover, IMQ cannot be aware of existing weaknesses in the basalt that would allow a fracture to propagate long distances. The truth is that no one can predict the effect of blasting in basalt. Conceivably, fracture propagation through weakened basalt could extend long distances.

The problem for Port Ludlow is what it can do if it loses part of its water supply capacity. The answer is that someone will have to pay for an alternate source of water. The County is required to consider this type of effect by State law ([Ref. E RCW 43.21H.020](#)), which requires that

*“All state agencies and local government entities with rule-making authority under state law or local ordinance shall adopt methods and procedures which will insure that economic values will be given appropriate consideration in the rule-making process along with environmental, social, health, and safety considerations.”*

IMQ expects to form a NSQ corporation to operate the quarry ([Ref. 5, p. 108-109](#)). IMQ does not plan to capitalize this company for other than operations. It will serve as a cutout to prevent losses reaching IMQ, which itself serves as a cutout to prevent losses reaching PR. Thus, the NSQ will not be able to pay for this type of eventuality.

## **Conclusion**

Though the risk of IMQ causing a serious loss or contamination of Port Ludlow's water supply is low, there is a risk ([see more under Vibration](#)). Environs' study incorrectly equated the risk to zero. However, it is not zero, in the same way that earthquake risk is low but not zero.

Earthquakes are an act of God and homeowners pay for their insurance. Serious loss or contamination of Port Ludlow's water is an act of IMQ and is an issue for mitigation.

PLVC asks that Groundwater issues be included in the Environmental Impact Statement.

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## 10 PLANTS, ANIMALS

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### PORT LUDLOW GOLF COURSE IS AN AUDUBON INTERNATIONAL CERTIFIED BIRD SANCTUARY

The Washington State Department of Fish and Wildlife (WDFW) report that Port Ludlow Golf Course is one of about a dozen Golf Courses in Washington State that Audubon International has certified as a bird sanctuary. In WDFW's "Crossing Paths" March 2010 publication ([Ref. 33](#)) they report:

*"Whereas privately-owned natural lands may fall to the bulldozer at any time," they write, "profitable golf courses are more permanent fixtures in the developed landscape... (And) whatever shortcomings they have as wildlife habitat may be correctable."*



*"Although most of what's known about wildlife use of golf courses comes from studies of birds, Burdge and Cristol note a diversity of other wildlife can benefit, too....and some courses can provide breeding habitat for other vulnerable amphibians."*

*"While golf courses cannot yet be considered adequate replacement habitat for displaced wildlife," conclude Burdge and Cristol, "they may play a role in mitigating habitat loss."*

IMQ's Environ study ([Ref. A Vol. 2, Sec. 6](#)) seems unaware of the Port Ludlow bird sanctuary—it is not mentioned anywhere in the report, though they reference WDFW often.

Even though the golf course is proximate to the NSQ, with its surrounding MPR woodlands and wetlands it could help mitigate wildlife effects of the NSQ in general. It could also help to bridge the lengthy (many years) unavailability of relocated NSQ wetlands. This is especially important for bird migration Pacific Flyways through the area.

Where the habitat is deciduous, typical species are cedar waxwing, willow flycatcher, black-headed grosbeak, warbling vireo, and western tanager. Port Ludlow volunteers maintain a large number of nesting boxes and keep unwelcome vegetation such as scotch broom under control. Small wetlands fringed by conifers are not attractive to migratory water birds. However, permanent and occasional migratory water bird species are attracted to the relatively open lake by the fourth fairway on the Tide Nine and the ponds at the ninth tee on the Timber Nine.

### **Conclusion**

The Environ study should have addressed both the Port Ludlow Bird Sanctuary and their use in mitigation to reduce the damage from lengthy relocation of NSQ wetlands. These impacts need to be more fully addressed in the EIS

### **SQUAMISH HARBOR SALMON REINTRODUCTION**

The Shine Creek watershed map ([Ref. 36](#)) from NSQ to Squamish Harbor appears [earlier](#). In effect, two upper tributaries form a "Y" configuration that intersects all surface drainage from the NSQ—see IMQ's Environs report ([Ref. A Vol. 2, Sec. 5, p. 1](#)). Contaminated water ends up in the Shine Creek—there is no other exit. Moreover, since NSQ is a basalt rock quarry, virtually all drainage is on the surface.

The Shine Creek has recovered many fish species including spawning by Coho and Chum salmon. At its mouth there is an estuary and salt marsh used by Cutthroat Trout. The Hood Canal Salmon Enhancement Group has already spent \$500,000 installing culverts to improve salmon access to Shine Creek. The map below (click to enlarge) shows the fish distribution data for Coho salmon (Ref 37). There are no Coho in the tributary from the quarries, but there are Coho in the tributary it joins.

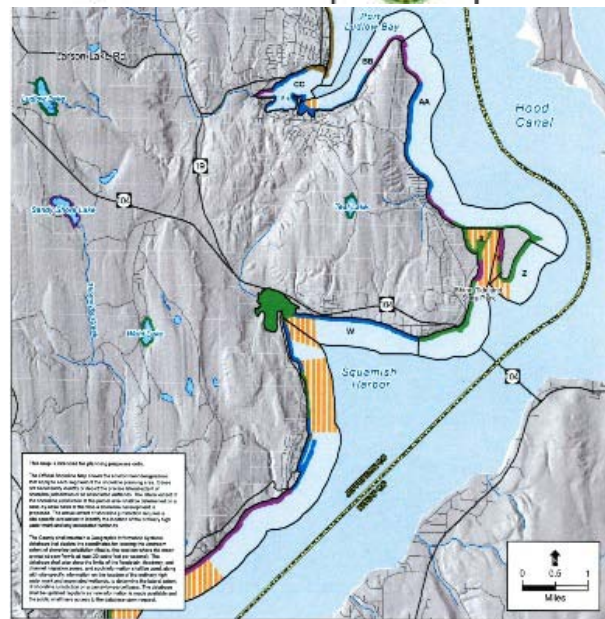


The Department of Fish and Wildlife makes no guarantee concerning the data's content, accuracy, completeness, or the results obtained from queries or use of the data. WDFW makes no warranty of fitness for a particular purpose, no representation as to the quality of any data, and assumes no liability for the data represented here. These data do not represent exhaustive inventories, but are compilations of existing knowledge from field biologists that are updated periodically as knowledge improves. These data should be used cautiously because they are not exhaustive, and are subject to change. When conducting projects or planning for fish and wildlife, please consider using additional information gathered from field investigations and consultations with WDFW or other professional biologists.



The Department of Fish and Wildlife  
Olympia, Washington

The map (right) is from the Jefferson County Shoreline Master Program update MLA08-00475 Appendix A Official Shoreline Map, Page 4 (Ref. 33). The Shine Creek is shown by the blue line WNW of Squamish Harbor (click to enlarge).



The green in the map shows Natural Land designation at Squamish Harbor; the vertical yellow lines show Priority Aquatic Marine designation off shore at Squamish Harbor.

There are several important environmental organizations with active interests in this area, e.g., [Port Gamble S'Klallam Tribe](#), [Point No Point Treaty Council](#), [Washington Department of Fish and Wildlife](#), [Hood Canal Coordinating Council](#), [North Olympic Salmon Coalition](#), [Hood Canal Salmon Enhancement Group](#), and [Jefferson County Conservation District](#).

### Conclusion

As [noted previously](#), the IMQ's omission of dust chemical and physical analysis makes risk-assessment impossible. For example, Port

Jefferson County Shoreline Master Plan 08-1310  
 DRAFT Official Shoreline Map - Subject to Final Approval and Adopted  
 Port Listow Bay - Northeastern Jefferson County, WA  
 FEBRUARY, 2009

Ludlow's monitored water supply shows that arsenic is a likely contaminant at potentially high concentrations. Settlement ponds can remove rock dust, but not the soluble chemicals from the basalt veins and leached from the dust. We suspect chemicals such as arsenic (a known contaminant in Port Ludlow wells) and a risk of heavy metal contamination.

The fact that there are no Coho in the tributary from the MSQ (next to the NSQ) but there are Coho in the tributary it joins, gives some indication that contamination from the existing MSQ may be occurring. However, this is conjecture—without analysis and sampling no factual information is available.

These issues mandate further EIS study to determine what is happening and what should be done. Moreover, to accommodate the multiple environmental organizations for conservation in this region, the Lead Agency may well find it essential to option into the expanded scoping process ([Ref B WAC 197-11-410](#)).

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## 11 TRAFFIC

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### MITIGATION OF QUARRY TRANSPORTATION THROUGH PORT LUDLOW MPR

At a presentation by Pope Resources (PR or Pope) and Iron Mountain Quarry (IMQ) to the residents of Port Ludlow on October 14, 2009, Jim Burnett, co-owner and manager of IMQ stated [\(Ref. 5 p. 9 Transcript of Presentation\)](#).

*“One of the questions was we were going to have trucks running through Port Ludlow. Just not true. We don't have any reason to run a truck through Port Ludlow. It doesn't go anywhere, unless if they want to go to your house to deliver the rock. If that's the case, local deliveries, sure. But there's no place for us to go -- we don't have any issues. We took that off the table a year and a half ago.”*

Mr. Burnett gave similar assurances several times at the presentation and has given similar verbal assurances on other occasions dating back to October 2008.

IMQ recently submitted a SEPA mitigation [\(Ref. B WAC 197-11-330-1-c\)](#) proposal, which, to the best of our knowledge, reads:

*“To address concerns of the Port Ludlow community, Iron Mountain Quarry voluntarily agrees that the following shall be imposed as a condition of the Jefferson County SEPA Determination of Non-Significance or Mitigated Determination of Non-Significance for the New Shine Quarry proposal:*

*Quarry product from the New Shine Quarry shall not be transported on any Port Ludlow streets except to deliver product to a specific home or business. Quarry product from the New Shine Quarry shall not be transported using any dock in the Mats Mats Bay site.”*

### **Conclusion**

IMQ has made a promise of no trucks through Port Ludlow and should be held to its promise.

It will be necessary to close loopholes e.g., including independent truckers, whom IMQ use for most product transportation. The County should not leave these issues of quarry product transportation through Port Ludlow and its amenities to the voluntary generosity of IMQ.

A careful review of transportation alternatives and impacts needs to be part of the Environmental Impact Statement.

### TSI REPORT ON QUARRY TRAFFIC THROUGH PORT LUDLOW

The first sentence on Page 1 of the analysis Introduction states [\(Ref. 21, p. 1 Traffic Impact\)](#):

*“This report summarizes a traffic analysis for a proposed Iron Mountain Quarry that would be located off of State Route (SR) 104 in Jefferson County, Washington.”*

This SEPA Review Application fails to address any of the severe environmental effects of quarry traffic in the Port Ludlow Master Planned Resort. It deals exclusively with the SR-104 issues. In effect, it presumes that IMQ mitigation of MPR traffic will ultimately be adequate. However, as shown below, IMQ has not offered adequate mitigation and the potential for an environmental impact statement still exists [\(Ref. B WAC 197-11-330-1-c\)](#).

## **Conclusion**

IMQ's SEPA Traffic proposal does not address the most severe traffic environmental impact issue—traffic through Port Ludlow—and is therefore incomplete. More work should be conducted in the EIS process.

### **TSI REPORT ON TRAFFIC GROWTH FOR SR-104**

IMQ plan a NSQ life of 40 years. It is inevitable that SR-104 will become a three-lane and probably a four-lane freeway. Yet the TSI report addresses only current traffic, stating [\(Ref. 21.p.5\)](#):

*“For the purposes of this analysis it is assumed that vehicle volumes will remain at existing levels.”*

By comparison, SEPA requires review up to full project lifetime and beyond [\(Ref. B WAC 197-11-060-4-c\)](#):

*“Agencies shall carefully consider the range of probable impacts, including short-term and long-term effects. Impacts shall include those that are likely to arise or exist over the lifetime of a proposal or, depending on the particular proposal, longer.”*

## **Conclusion**

IMQ's SEPA Traffic proposal does not address inevitable traffic growth that will substantially affect and exacerbate the impact of quarry traffic entering and leaving SR-104. This issue should be addressed in the EIS.

### **TSI REPORT USE OF AVERAGING TECHNIQUES**

TSI averages data over time during the day and over seasons. On the other hand, traffic problems mostly occur when traffic peaks. For example, TSI's methodology is roughly equivalent to taking the annual throughput on Interstate 5 and averaging it by dividing by 8,760—the number of hours in a year. On this basis, TSI would conclude that Interstate 5 has no traffic problems whatsoever because it will easily handle this average hourly load. Whereas, as we all know to our irritation, peak-hour traffic is bad, add rain and it becomes terrible, and then add an accident and you will be lucky to get home before the kids go to bed. Moreover, Interstate 5 does not even have Hood Canal openings.

## **Conclusion**

The averaging methods used by TSI lead to major underestimates of traffic problems. A complete study needs to be completed as part of the EIS.

## 12 FLY ROCK

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IMQ's application ([Ref.A](#)) does not address the issue of fly rock and it has not offered any mitigation.

However, it is a significant issue. Automobile drivers often avoid following trucks loaded with aggregate—a key product of a basalt hard-rock quarry. They know that the cost of replacing a damaged windshield or repairing bodywork damage is significant and extra insurance is expensive. Often the cost of fly-rock insurance is in the comprehensive portion of coverage that insurance companies can adjust by the insured's address.

Serious damage to a windshield and drivers' automatic responses to impact are significant safety issues.

A practice in many places is to cover trucks with plastic or tarpaulin to prevent small rocks from flying off. Alternatively, the trucking companies can establish a trust. IMQ did not offer any mitigation or offer any other solution to the issue.

IMQ will probably contract out the trucking to independent carriers and will lay the blame for damage to the public's vehicles to these independents. However, it is between near impossible to trace origin of the culprit truck after the fact. Who will pay for damaged auto glass? It will not be IMQ unless SEPA requires it.

The County is obliged to consider extra costs or economic losses to the value of residents' property ([Ref. E.RCW 43.21H.020](#)).

### **Conclusion**

Omission of a fly rock study or mitigation is inadequate and should be part of the Environmental Impact Statement.

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## 13 NOISE

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AMEC Geomatrix, Inc. of Seattle, Washington performed the Community Noise Assessment Study, dated December 2009.

### AMEC IDENTIFICATION OF APPROPRIATE EDNA LEVEL

In the Executive Summary ([Ref A p. ES1](#)) AMEC chose a nearest residential receptor as a worst-case example:

*“Noise at the nearest residential receptor in Port Ludlow with the best line of sight towards the proposed quarry (Mt. Lena Lane) was predicted to range from 38.0 to 39.8 decibels, which is below the existing ambient noise level measured during daytime hours in that neighborhood, and well below the maximum permissible environmental noise level for the property of 60 decibels.”*

Unfortunately, AMEC appears to be unaware that Port Ludlow is a [Master Planned Resort](#). The closest Class A EDNS areas are the Golf Course and Trails, which are far closer to the NSQ than Mt. Lena Lane—that, in any case, is not the closest planned line-of-sight residence to the NSQ.

### Conclusion

AMEC has from the start failed to understand the fundamental nature of Port Ludlow MPR and the protections afforded ([Ref E WAC 173-60-020](#), [173-60-030](#), [173-60-040](#), [173-60-050](#), and [173-60-060](#)). Noise impacts and mitigation alternatives should be included in the Environmental Impact Statement.

### AMEC USE OF MODELING INSTEAD OF ON-SITE VERIFICATION

A simple walk along the MPR trails closest to the Mason Shine Quarry when it is running its crusher and other heavy equipment reveal that the sound is far above Class A EDNS standards without resorting to modeling or computer simulation.

AMEC based their study on equipment noises from another IMQ quarry that uses different equipment from the NSQ.

### Conclusion

AMEC did not perform sufficient on-site due diligence to find the actual quarry sound levels and used incorrect assumption is its modeling. A better review should be conducted as part of the EIS.

### EFFECT OF NOISE FROM SR-104

Truck engine brakes of all types (e.g., compression-release engine brakes, “Jack Brakes”, “Banks Brake”, “Pacbrake”, etc) retard a vehicle on long declines and during emergency stops. For heavy trucks, they are an important braking aid, reducing wheel brake wear, and improving safety. They often cause a very loud chattering or machine-gun exhaust noise that can travel long distances. As a major transportation route, SR-104 permits their use.

For major Pacific Northwest industries such as forestry and quarrying, SR-104 is the only road from the Northern half of the Olympic Peninsula. These industries use the heaviest vehicles allowed—the maximum gross vehicle weight of a fully loaded quarry truck/trailer rig is 105,500 pounds (i.e., 50 tons or 25 times the weight of a full size automobile). They are generally fitted with engine brakes whose muffling is often minimal.

The NSQ is immediate north of section of SR-104 descending to the Hood Canal Bridge where heavy trucks need to control their downhill speed. Thus, this is a relatively noisy section of road. It will get somewhat noisier with the addition of NSQ trucks, most of which will use it to take product to Kitsap County. Moreover, slow entry of NSQ trucks will cause other trucks to break more severely.

Traffic volume on SR-104 will steadily increase as population-pressure increases relocations to the Olympic peninsula. It will inevitably be expanded to three or four lanes.

The prevailing summer wind is from the SSW—directly from SR-104 over the NSQ area towards Port Ludlow. Noise travelling with the wind is magnified, appearing to have come from a closer source. Thus, noise effects combine in the worst ways to affect Port Ludlow.

Loss of the high ridgeline will aggravate the entire problem substantially.

### **Conclusion**

AMEC omitted SR-104 noise from their study. Yet this noise, greatly enhanced by loss of the high ridgeline, will remain forever after IMQ has gone. This should be included in the EIS.

### **BLASTING NOISE**

The assumption that older people always hear less is not valid. The auditory ossicles ([Ref. 35](#)) transmit noise to the ear's hearing nerves. Muscles control their movement. In young people the muscles are supple and limit loud noises before they reach the acoustic nerves. Elderly people tend to lose this suppleness so loud noises reach the acoustic nerves undiminished. It is why elderly people can be both hard of hearing yet complain vigorously of loud noises. For some older people, loud noises reach very painful levels.

### **Conclusion**

AMEC paid no attention to this loud-noise fact of life for the MPR's residents. This factor should be addressed in the EIS.

## 14 VIBRATION

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Vibrations arise from many types of equipment in a quarry, and especially crushers. New equipment is usually well balanced and bearings are tight. However, as it ages it loses balance and the bearing become looser. Thus, manufacturer's data on vibration often grossly underestimate the real-world levels of vibration

Vibration has two major consequences:

1. It is a major source of low frequency noise
2. In stationary equipment it can propagate through any foundations into subsurface rock and in moving equipment is directly propagates to the underlying materials

### VIBRATION INDUCED LOW FREQUENCY NOISE

Oversimplifying the phenomena, low frequency noise travels around corners while high frequency noise travels in straight lines. It makes low frequency noise harder to hide and harder to muffle. Low frequency noise can travel unexpectedly long distances. A well-known example is low frequency elephant communications travelling two to three miles. For some older humans, low-frequency noise can become a serious problem. As noted by H. G Leventhall in Noise and Health ([Ref. 28](#))

*“Low frequency noise, the frequency range from about 10Hz to 200Hz, has been recognised as a special environmental noise problem, particularly to sensitive people in their homes. Conventional methods of assessing annoyance, typically based on A-weighted equivalent level, are inadequate for low frequency noise and lead to incorrect decisions by regulatory authorities. There have been a large number of laboratory measurements of annoyance by low frequency noise, each with different spectra and levels, making comparisons difficult, but the main conclusions are that annoyance of low frequencies increases rapidly with level. Additionally the A-weighted level underestimates the effects of low frequency noises. There is a possibility of learned aversion to low frequency noise, leading to annoyance and stress which may receive unsympathetic treatment from regulatory authorities. In particular, problems of the Hum often remain unresolved. An approximate estimate is that about 2.5% of the population may have a low frequency threshold which is at least 12dB more sensitive than the average threshold, corresponding to nearly 1,000,000 persons in the 50-59 year old age group in the EU-15 countries. This is the group which generates many complaints. Low frequency noise specific criteria have been introduced in some countries, but do not deal adequately with fluctuations. Validation of the criteria has been for a limited range of noises and subjects.”*

In other words, older people may tend to lose their hearing, but some become especially sensitive to low frequency sound.

### **Conclusion:**

Omission of a vibration study is not acceptable. It is not clear the health effects can be mitigated. These issues must be addressed included in the Environmental Impact Statement.

## PROPAGATION OF VIBRATION INTO SUB-SURFACE STRUCTURES AT THE QUARRY

The use of powerful equipment and explosives maximizes worker productivity. Quarry equipment such as crushers, special off-road trucks, etc is heavy and powerful. The power is converted into useful work, but some is always lost in vibration—noise vibrations in the air and low frequency mechanical vibrations into the ground. Even though stationary equipment will usually have a concrete base to spread these effects, the vibration energy still has to go somewhere.

If the ground were granite it would easily accommodate the vibrations because granite has substantial tensile strength. On the other hand, basalt is hard but is brittle with low impact resistance. The obvious analogy is glass—it is very hard but brittle, shatters into small sharp pieces upon moderate impact, and cracks easily propagate long distances. Basalt behaves in much the same way—it is the reason explosives fracture is easily, the reason crushers can easily break it into smaller jagged pieces of aggregate.

If you hit a pane of glass that has a crack, the crack will quickly lengthen. In basalt bedrock similar effects occur but you cannot see them because you cannot see through basalt. Vibration energy transmitted into the basalt bedrock can result in cracks. These will normally be small and irrelevant unless there is a pre-existing weakness. An analogy here is an aircraft where vibration is an everyday norm. The aircraft operates for years with no trouble. However, when a crack starts the vibration energy goes to increasing the crack and ultimately causes failure—there have been some crashes as a result. It is the reason why maintenance staff checks aircraft periodically for cracks using sophisticated detection equipment. In the rock under a quarry, checking for cracks and fissures is not feasible because there is neither access nor visibility.

It is very unlikely that quarry vibrations, even over 40 years, will result in cracks and fissures will could result in connections between aquifers. However, unlikely does not mean impossible. The analogy here is earthquakes. They are very unlikely to occur. The major offshore subduction earthquake in the Pacific Northwest occurs on average about once every 500 years—definitely an unlikely event. Nevertheless, when it does occur, the impact will be disastrous. Consequently, many residents of Port Ludlow carry earthquake insurance.

For the unlikely event that the quarry might damage our water supply, we could probably each take out insurance. However, an earthquake is an act of God; loss of water supply is an act of IMQ. It is reasonable that the one creating and benefiting from the hazard should also provide the insurance. ([see more under Groundwater-Who Pays for Damages?](#))

### **Conclusion**

Omission of a vibration study is not acceptable and must be addresses in the EIS.

## PROPAGATION OF VIBRATION INTO SUB-SURFACE STRUCTURES ON OAK BAY ROAD

Standard manuals on road building and economics deal with optimization of pavement thickness as the principle design criteria. Maintenance for the truck traffic depends on the axel loading and the strength of the roadbed. There are masses of data that public works engineers can access on the subject (e.g., [Ref. 34](#)). However, these standard guides make the reasonable assumption that compressive stresses form the road will dissipate as they penetrate deeper into the subsurface.

We have an entirely different circumstance on Oak Bay Road over the gully immediately north of the intersection with Paradise Bay Rd. Here the gully has week fill. An automobile is short enough

that its weight dissipates in the “V” of the gully; whereas the solid sides of the “V” shape will focus and concentrate a long vehicle’s weight towards the weak central fill.

The result is that a road that may last many years with short 4,000-pound automobile traffic will be totally inadequate to deal with long 105,500-pound quarry truck/trailer rigs.

The stiff suspension of quarry trucks creates considerable high-frequency vibration. Vibration is anathema for weak fills—vibration semi-fluidizes weak subsurface as happened with earthquake vibrations where damage is always far greater in areas of weak subsoil.

Quarry trucks going over this gully create a “perfect storm” of road disaster waiting to happen—long vehicles that concentrate rather than dissipate the load in a gully, increase of 25 times the gross vehicle weight, and greater higher-frequency vibration. It should not surprise anyone with technical knowledge to see catastrophic road collapse with a truck at in the gully and a toll of death or serious injury. Moreover, it would take years to rebuild Oak Bay Rd and in the meantime traffic would divert via the residential route of Osprey Ridge Rd and Walker Way.

### **Conclusion**

Omission of a vibration study is not acceptable. Its impact on subsurface road structures must be included in the EIS.

## 15 LAND USE

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The NSQ's most direct effect on land use is in the areas immediately North of the quarry:

1. Niblicks Trail (Amenity in MPR about 2,300 feet from NSQ)
2. Golf Course (Amenity in MPR about 2,500 feet from NSQ)
3. Olympic Terrace (New development area in MPR about 5,000 feet from NSQ)
4. Timberton Trail (Amenity partially in MPR and partially on Easement from PR to PLA and Letter of Understanding between PR and PLVC about 1,200 feet from NSQ)

Since the prevailing winds are from the south or southwest, the dust and the plume from the blasting will drift over both the golf course and the trail. The winds will also increase the noise levels.

Residents in the Olympic Terrace region can hear and see blasting from the more remote MSQ — Dave Armitage, Bruce Schmitz, and Dot Schmitz have reported it and documented some of it to the Voice. These effects are also from the Southern end of the Golf Course.

Walkers on the Timberton trail, an easement but also an amenity, can clearly hear noise from the MSQ. As shown in Section 3, all amenities must be included in the SEPA review including those in the easement. The trees in this area are quite mature and PR had the right to log them—a right we have always understood. Nevertheless, the noise after logging will be much worse.

### **Conclusion**

IMQ has misunderstood the land use implications created by a Master Planned Resort, wherein amenities are as important as residential properties. The EIS should analyze and resolve these persistent misunderstandings in the IMQ studies of land use where environmental criteria impact the MPR in areas close to the NSQ. The EIS analyses need to consider how both mature tree and clear-cut conditions affect the issues.

## 16 AESTHETICS AND VISUAL IMPACT

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### RIDGELINE LOSS

IMQ's Center Pointe Consultants, Inc. (CPC) provided a study of the visual impact of the New Shine Quarry ([Ref. A, Vol. 2, Sec. 8](#)).

#### **Location and Description of Site**

CPC had great difficulty evaluating the site because of heavily wooded areas. However, many of the wooded areas are on PR land. CPC do not visualize these areas after they have been clear-cut—which is Pope Resources' strategy for all timber cuts. Just because the trees are mature makes logging more attractive in the future.

CPC made their site visit on October 6, which is before the loss of foliage has occurred. CPC could have made their on-site visit in mid-winter when views are most open and the quarry impacts most obvious. Though timber trees are mostly conifers, many of the local trees are deciduous.

#### **IMQ's Study of Ridgeline Loss**

The study views the quarry from four different locations in the South Bay area on Mt. Lena Lane, Mt. Constance Way, on the Golf Course 4,800 feet from the NSQ, and again on the golf course 5,500 feet from the NSQ. They took sophisticated but indirect measurements:

*"The actual locations of sites chosen shown in the photographs were determined by combining the GPS measurements and "Lidar" data. Lidar data measures elevations of objects on the ground from space satellites, and was used to determine elevations of the proposed site, direction of housing surrounding the site, and the Olympic Mountains. Comparing this Lidar data with objects seen within the photographs permitted us to determine the direction of each of the photographs taken from the four viewpoints and shown in Figures 3 through 6. Objects within the photographs were aligned with similar objects or geologic features found within the Lidar information in order to obtain direction and location of the proposed quarry within the photographs."*

#### **PLVC Assessment of Ridgeline Loss**

The PLVC applied the Examiner's rulings ([Ref. 6, p. 11, finding #16, paragraph 3](#)) and [Ref. 6, p. 12-13, conclusion #4](#)) that SEPA must apply to the MPR and its amenities. We believe this means all properties in the MPR and all its amenities as argued in Section 4. We use a simple and more understandable approach that directly shows the impact of removing the ridgeline.

The height of the ridgeline ([Ref. A, Vol. 2, Sec. 1](#)) is approximately 340 feet and the height of the planned northern quarry termination is approximately 260 ft. This yields a difference of approximately 80 feet of elevation. The MPR is approximately 1,870 feet ([Ref. 25](#)) from the quarry. The angle subtended from an observer in the MPR is therefore 0.043 radians or about 2.45 degrees.

2½ degrees does not sound like very much. However, human perception is the essence of aesthetics and our brains interpret the horizontal view as far more important than any other elevation. Let us take for example Mount Baker that we see with great pleasure from Port Ludlow.

Mount Baker is 10,778 feet high and about 75 miles away. However, it loses about 3,700 feet due to the curvature of the earth and so appears about 7,100 feet high. The angle subtended by Mount Baker to an observer on the shoreline in Port Ludlow is 0.178 radians or about 1.0 degree.

We would regard quarrying away Mount Baker as an act of intolerable vandalism. Yet from the MPR the existing NSQ ridgeline's height above IMQ's planned height appears 2½ times greater than Mount Baker.

### **Photographic Analysis**

CPC selected four viewpoints. Of these, only points 1 and 2 are truly relevant. Point 3 is in heavy trees on the Golf Course, which even with logging would only have a temporary and minimal sight to the ridgeline. Point 4 is irrelevant because there is a knoll hiding the ridgeline and seems to have been included to justify the effort of finding out that they are irrelevant.

At points 1 and 2, they took the photographs at ground level, which minimizes quarry view impacts. Two-story homes have quite different views from the second story over nearby plantings. CPC took these photographs in an area that PLA (PL's successor Developer) will expand towards the quarry. They do not address the new houses in the Developer's plan that will have a more open and closer view of the quarry.

Viewpoint 1 is 7,400 ft from the proposed quarry and viewpoint 2 is 6,600 feet from the quarry. These are far distant from the closest MPR's point to the quarry at 1,870 feet ([Ref. 25](#)).

### **Conclusion**

CPC's study of ridgeline loss concludes that

*"no significant visual impact would, or could occur from the mining operation."* ([Ref. A, Vol. 2, Sec. 8, p.2](#)).

This conclusion goes too far. The brief analysis above shows CPC based their conclusion on only two relevant viewpoints. There are more affected view areas in the MPR. It appears that CPC's study is incomplete and is insupportable. Since half the viewpoints were not relevant, it appears that the study attempted to find no significant impact rather than an unbiased assessment of the issue. A more balanced analysis should be part of the Environmental Impact Statement.

### **AESTHETICS OF QUARRY TRUCK TRAFFIC**

IMQ's traffic studies do not address the aesthetics of truck traffic, focusing instead on numbers of trucks and road capacity.

Beauty lies in the eye of the beholder. To a quarry owner or employee the trucks may indeed look beautiful; to the rest of us they are ugly, noisy, smelly, dangerous, ponderous behemoths. Logging trucks are not to everyone's taste but they are part of the Northwest's culture and romance. Quarry trucks have no romance, no cultural statement, and no redeeming qualities.

PR marketed Port Ludlow as a serene, natural environment with amenities for active retirees. Its branding was "A Village in the Woods by the Bay". Idyllic, except that PR never mentioned starting its 142-acre commercial quarry.

Quarry activities and trucking are the antithesis of a Master Planned Resort's purpose and function; certainly not the aesthetics promised in the marketing of a "Village in the Woods by the Bay". A video clip of quarry trucks shows the reality of quarry truck aesthetics ([Ref. 38](#)).

### **Conclusion**

Quarry trucks and PR's Master Planned Resort are aesthetic anathema. This EIS should address and resolve the issue, not ignore it as done by the IMQ studies.

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## 17 CUMULATIVE IMPACTS

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### CUMULATIVE QUARRY WATER POLLUTION

IMQ's SEPA studies and the information presented in this report raise red flags:

1. The studies omit any credible [information](#) on the chemical and physical analysis of either the MSQ or the NSQ dust and effluent pollutants. The reasonable assumptions are that no analyses exist, that PR and IMQ withheld the information, or that the studies carelessly ignored the topic. Whatever the reason, we should have the information to make an informed evaluation of the issue and we do not have it.
2. There are substantial Coho populations in the Shine Creek tributaries *except* in the tributary from the MSQ ([Ref.37](#)).
3. The MSQ tributary continues west of the MSQ, under SR-104, and south to other quarry areas ([Ref.36](#)).

This circumstantial evidence strongly suggests that these quarries have a cumulative pollution impact on fish life in the Shine watershed. The NSQ will add a major additional quarry activity and potentially yet another potential source of pollution to the Shine watershed.

### **Conclusion**

The cumulative effect of this quarry pollution appears to be deadly to fish. Addition of the NSQ load will increase the likelihood that cumulative levels will flow downstream to become critical in other segments of the Shine Creek.

The EIS should include an analysis of the cumulative effects of the quarries along the Shine watershed at and up stream of the MSQ and NSQ. Once this information is available and if it is found to support the current circumstantial evidence, the EIS should investigate what possibilities exist for resolution of this cumulative environmental impact.

### CUMULATIVE QUARRIES AND ROAD NOISE

IMQ's SEPA studies and the information in this report again raise red flags about cumulative effects:

1. In the evaluation of IMQ's Noise study, we noted that AMEC had failed entirely to realize that Port Ludlow is a [Master Planned Resort](#) and all that this implies.
2. AMEC omitted cumulative SR-104 noise from their study. Yet this noise, enhanced by loss of the high ridgeline, will remain forever after IMQ has exhausted the quarry.
3. The cumulative effect of two quarries was omitted from IMQ's submissions, which did not look seriously at the cumulative effect of NSQ and MSQ operating concurrently.
4. AMEC considered only immediate future noise; their study failed to consider the implications of cumulative long- term traffic and especially more very large trucks and engine brakes
5. IMQ did not consider some of special effects that noise has on elderly people. The cumulative noise may make these effects more critical.

### **Conclusion**

Cumulative effects considered in the EIS should include

1. the MSQ quarry and its impending breakthrough of its last high ridgeline
2. SR-104 road noise
3. increasing levels of road and truck noise over time

4. special status of an MPR and its amenities with their closer proximity to the NSQ
5. requirement of the March 14, 2008 ruling
6. special effects of noise on some elderly people

The EIS should include an analysis of these cumulative effects of noise sources and levels. Once this information is available, the EIS should investigate what possibilities exist for resolution of this cumulative environmental impact.

### CUMULATIVE DUST AIR POLLUTION

IMQ's application does not address the issue of air quality and dust. However, Port Ludlow aging population with their pulmonary issues such as chronic bronchitis, silicosis, asbestosis, and emphysema performs the same service as canaries in a coalmine:

*"Canaries were once regularly used in coal mining as an early warning system. Toxic gases such as carbon monoxide and methane in the mine would kill the bird before affecting the miners. Because canaries tend to sing much of the time, they provided both a visual and audible cue in this respect." [Wikipedia](#)*

Our "canaries" are telling us that the dust pollution levels in Port Ludlow are getting worse over the last decade or two, despite overall national levels that have improved through the federal clean air acts of 1967, 1979, 1977, and 1990.

The effect of an increase in air pollution is to cause acute exacerbations of the diseases. Since they are the **fourth leading cause of death** in the U.S., they are a matter of serious concern.

At the start of 2004, the Shine Quarry (predecessor to the Mason Shine Quarry) was permitted for 20 acres. If the NSQ gets its final permit by the end of 2010, the total MSQ plus NSQ area will be 182 acres. In other words, the quarry has grown from 20 to 182 acres in 7 years. This yields a compound annual growth rate of 37 percent. In the business world, this is an astounding rate of growth. It is cause for concern that increasing pollution get too far ahead of the slower reaction for remedy.

On top of this are the quarries to the South of SR-104. Though different in nature, their potential for dust pollution of the air is comparable. All of these quarries lie south of Port Ludlow and their pollution will be cumulative with the frequent southerly winds of the summer.

The problem with analyzing localized air pollution is that it varies greatly over short time intervals and is dependent on variable wind conditions. Nevertheless, there are people who study it professionally. They may not give a precise answer, but they can give an informed opinion—which is a lot better than not addressing the issue at all, which is the current status.

### **Conclusion**

The EIS should include a study of cumulative airborne pollution. The results will offer the best available information about the problem. The EIS should then investigate what possibilities exist for resolution of this cumulative environmental impact.

### CUMULATIVE QUARRY TRAFFIC

Let us assume for this cumulative traffic discussion that mitigation efforts to resolve traffic through Port Ludlow reach a satisfactory conclusion. This leaves the issues of truck traffic on SR-104 as the key traffic issue. The point where all the action takes place is where Rocktogo Road crosses SR-104, which is where the following factors create cumulative effects:

1. The [earlier discussion](#) of IMQ's TSI study showed that the averaging methods used by TI lead to major underestimates of traffic problems.
2. Further, the TSI study dealt only with [present traffic levels](#) *"For the purposes of this analysis it is assumed that vehicle volumes will remain at existing levels."*
3. The study ignored traffic effects of the existing and fully operational MSQ. It is unreasonable to suppose that the existing MSQ is incapable of competing with NSQ, so both must be included in the traffic analysis. They both use north Rocktogo Road to enter and exit SR-104.
4. On Rocktogo Road from the south, there are three of four other quarry companies entering and leaving SR-104—Fred Hill Quarry, Shine Hub Operations, Miles Sand & Gravel, and Wahl Lake. An alternate route project via a Pit2Pier conveyor and barge passage under the Hood Canal Bridge remains active but in doubt, not least because of co-usage with nuclear submarines that also pass under the bridge.
5. Marine traffic has right-of-way of the Hood Canal Bridge—bridge openings are unpredictable and usually result in delays of 30 to 45 minutes, often stalling traffic on SR-104 for several miles in each direction.
6. Most quarry materials from these Jefferson County quarries go to Kitsap County across the Hood Canal Bridge, since the major building projects at this time are in Kitsap County, with very modest sales in Jefferson County and in Clallam County, which has its own quarries.
7. SR-104 is the economical and fast road link from the northern Olympic Peninsula to the rest of the world—routes along highway 101 are feasible but tortuous. Consequently, quarry trucks represent only a fraction of its total traffic. This traffic is increasing rapidly and will cause SR-104 to be classified as overloaded in a few years.
8. Grades on SR-104 are significant so acceleration of heavy vehicles entering from Rocktogo Road is slow.

IMQ's study addressed only item 1 on this list in any detail. The other cumulative effects are significant and compelling, but unaddressed.

### **Conclusion**

Before adding NSQ trucks to compound the traffic problems on SR-104, the EIS should investigate the cumulative impacts into the foreseeable future as normal growth patterns reemerge—the NSQ has a 40-year projected life. This will inevitably involve the Washington State Department of Transportation and their projections and plans for handling increasing traffic on SR-104. It should include the safety of all forms of traffic at the Rocktogo junction and also include as necessary the Highway 19 intersection, which is a longer but possible route for NSQ and MSQ trucks.

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## 18 RESTORATION

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IMQ's SEPA submittal includes a section titled "Mining Operations and Reclamation Narrative 2/25/10" ([Ref. B Vol. 1, Sec. 3](#)). Extracts from the text follow:

***"A narrative describing how the site will be mined and reclaimed"***

*Proposed mining will be phased over the life of the project (~40 years) so that only relatively small areas ( $\pm 20$  acres) of the approximately 142-acre mine lease area are disturbed by mining activities at any given time. Typical phasing will involve removal of merchantable timber, removal and stockpiling of topsoil and subsoil, and removal of underlying rock (basalt).*

*After final mine elevations have been reached, stockpiled subsoil and topsoil will be replaced and recontoured to restore early successional mixed evergreen and deciduous forest cover types like those that are now present on the site. As described in Volume 3 of this application, wetlands will be restored following successive phases of mining, using an adaptive management approach (see also Conceptual Mitigation Plan and Impacts Analysis, Volume 3.2), and ongoing stormwater management will be provided by stormwater management ponds.*

*Though site topography will change as a result of quarrying activities, direct impacts to drainage patterns and hydrology and forested habitat types will be temporary. Drainage patterns, hydrology, and habitats will be restored through recontouring and habitat restoration required by mine reclamation plans. See also Expanded SEPA Checklist, Volume 2 of this application.*

This seems like a sensible approach and it may well be. However, there is a lot that the narrative does not clearly address. For example:

1. Mr. Burnett told the Port Ludlow community that IMQ would form a subsidiary that would not have much capital ([Ref. 5 pp 103-109](#)). Therefore, except for a bond from the new subsidiary, there is nothing to guarantee restoration.
2. IMQ could sell its subsidiary company to others late in the life of the project relinquishing all responsibility for final restoration. Mining companies as a class have been notorious for doing this and leaving a mess for cleanup with public money.
3. Bonds should be the answer, but they can expire if the guarantor does not trust a new owner, not renewed according to schedule, or underfund due to inflation.

The best and most certain way to ensure restoration is adequate is never to let the operator accumulate a large restoration obligation. This can only be achieved by continuous restoration as the project proceeds. It is more expensive than postponing restoration and an operator will generally resist its imposition. The operator has to reach final grade promptly in each restoration area so the restoration work can commence. Rough roads are required to avoid damaging previously restored areas. Dust must be controlled so plants can grow. After 40 years, the initial mining areas will have mature trees and related wetlands should have recovered fully. A benefit to the operator is that the bond does not have to be as large. This type of constraint was not imposed on the MSQ—see photo ([Ref. 2](#)); the NSQ is 3½ times larger.

### **Conclusion**

Details of a properly phased and enforced reclamation sequence should be included in the EIS and coordinated with the Department of Natural Resources. The bond and restoration responsibility should remain with IMQ and not be a transferrable liability.

## 19 REFERENCES

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### REFERENCES NOT ATTACHED (JEFFERSON COUNTY HAS EASY ACCESS TO ITS OWN COPIES):

- A. [New Shine Quarry Stormwater Management Permit Application February 25, 2010](#)
- B. [Washington Administrative Code \(WAC\)](#)
- C. [SEPA Citizens Guide to Review and Commenting May 17, 2004](#)
- D. [SEPA Online Handbook](#)
- E. [Revised Code of Washington \(RCW\)](#)
- F. [Jefferson County and Pope Resources MPR Development Agreement May 8, 2000](#)

### REFERENCES ATTACHED (EXCEPT © COPYRIGHT AND OTHERS THAT ARE INTERNET ACCESSIBLE BUT NOT RE-PRINTABLE):

- 1. [Port Ludlow Town Plan by Naramore Bain Architects June 15, 1967](#)
- 2. [Aerial View of Mason Shine Quarry](#)
- 3. [JeffCo DCD MLA10-72 NSQ SEPA Determination of Significance and EIS 22-Mar-2010](#)
- 4. [Master Planned Resorts "Washington Style" @ Copyright © 2003 by MRSC](#)
- 5. [Draft Transcript of Pope/IMQ Port Ludlow Presentation October 14, 2009](#)
- 6. [Examiner's Decision Granting Pope/IMQ Legal Nonconforming Rights April 9, 2008](#)
- 7. [Jefferson Superior Court Order Affirming Pope/IMQ Nonconforming Rights November 19, 2008](#)
- 8. [Pope and Talbot Development Merger into Pope Resources February 15, 1985](#)
- 9. [Pope Declaration of Intention to Mine Since the 1970s May 21, 2007](#)
- 10. [Property Report Filed by Pope and Talbot Signed August 5, 1974](#)
- 11. [Confirmation Jefferson County Road #10 is Oak Bay Rd March 17, 1971](#)
- 12. [Mason Shine Quarry Permit and Lease January 27, 1997](#)
- 13. [Jefferson County Assessor's Taxable Value of Port Ludlow Property August 5, 2008](#)
- 14. [Granite Falls Bypass Hearing August 22, 2007](#)
- 15. [Quarries, city clash over plans for detour © Peyton Whitely/Seattle Times February 5, 2003](#)
- 16. [Quarry Proposal Raises Fears Of Truck Traffic, Environmental Damage Seattle Times March 22, 1994](#)
- 17. [Pope Sale of Port Ludlow Development Assets to PLA-HCV Notice August 10, 2001](#)
- 18. [Sale of Assets Business Advisor © 2001 Mary Hanson](#)
- 19. [Examiners Appeal Hearing Transcript re Pope-IMQ Nonconforming Rights March 14, 2008](#)
- 20. [Property Report Filed by Pope and Talbot Effective July 20, 1976](#)
- 21. [Property Report Filed by Pope and Talbot Signed April 26, 1978](#)
- 22. [Extracts from Jefferson County Comprehensive Plan September 3, 2008](#)

23. [Pope/IMQ Quarry Plan Showing MPR by L. Nobles February 26, 2009](#)
24. [Pope/IMQ Quarry Profile by L. Nobles February 26, 2009](#)
25. [Permit Mats Mats Quarry Barge-Ramp Base-Plate Replacement September 2, 2009](#)
26. [Salesperson Checklist Pope and Talbot Property Report April 25, 1978](#)
27. [Low Frequency Noise and Annoyance by HG Leventhall, © Noise and Health, 2004](#)
28. [Audio Visuals \(via Internet\) of Pope/IMQ Community Meetings in Port Ludlow 2008-2009](#)
29. [Bender Report Aquifer Recharge and Tala Point Development Impacts December 23, 2008](#)
30. [Port Ludlow Golf Course Audubon International Certified Bird Sanctuary \(via Internet\)](#)
31. [Type I Land-Use Permit Shine Quarry Expansion from 20 to 40 Acres June 23, 2004](#)
32. [Crossing Paths: Golf Courses Provide Wildlife Habitat WDFW Summer 2008 \(via Internet\)](#)
33. [SMP Shoreline Map Squamish Harbor to Mats Mats February, 2009](#)
34. [Small, K A, et al "Road Work: A New Highway Pricing and Investment Policy", © Brookings Institution, 1989](#)
35. [Auditory Ossicles](#)
36. [WDFW Shine Creek Watershed Map and Removed Barrier April 20, 2010](#)
37. [WDFW Shine Creek Watershed Map with Coho Distribution April 20, 2010](#)
38. [Video Clip \(via Internet\) of Quarry Trucks Shows the Reality of Quarry Truck Aesthetics April 20, 2010](#)

## 20 ACRONYMS

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DCD: Jefferson County Department of Community Development  
DNS: determination of non-significance  
DNR: Washington State Department of Natural Resources  
DS: determination of significance  
EIS: environmental impact statement  
ESHB 1724: Engrossed Substitute House Bill 1724 (Enacted in 1995)  
GMA: Growth Management Act  
IMQ: Iron Mountain Quarry, Inc  
JeffCo: Jefferson County  
LMC: Ludlow Maintenance Commission, Inc  
MDNS: mitigated determination of non-significance  
MPR: Master Planned Resort  
MRLO: Mineral Resource Lands Overlay  
MSQ: Mason Shine Quarry  
NAT: notice of action (taken)  
NEPA: National Environmental Policy Act  
NOA: notice of application (under the Local Project Review Act)  
NSQ: New Shine Quarry  
P&T: Pope and Talbot, Inc  
PDF: Portable Document Format  
PLA: Port Ludlow Associates  
PLVC: Port Ludlow Village Council, Inc  
PR: Pope Resources, Inc  
RCW: Revised Code of Washington  
SBCA: South Bay Community Association, Inc  
SEPA: the State Environmental Policy Act  
WAC: Washington Administrative Code  
WDFW: Washington Department of Fish & Wildlife