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**Re-issued<sup>1</sup>**  
**Lake Whatcom Resort**  
**Mitigated Determination of Non-significance (MDNS)**  
**SEPA 2008-00039**

**File:** SEP2008-00039

**Project Description:** Renovations to the existing non-conforming Lake Whatcom Resort, including reducing the number of RV pads from 130 to 83, replacement of seven existing cabins, installation of a new septic system, upgrade of potable water storage tank, and repair of existing shoreline. All aspects of the project are permitted under Whatcom County permits CUP2008-00006, SHC2007-0004 and SHR2007-00008.

**Proponent:** Lake Whatcom Resort Partnership, Rick Faber

**Location:** APN # 370420440088, located at 990 Lake Whatcom Blvd.

**Lead Agency:** Whatcom County PDS

**Zoning:** R(5) - Rural    **Comp Plan:** Rural

**Facts and Findings:**

Whatcom County Planning and Development Services (PDS) issued a Determination of Non-Significance (DNS) on February 11<sup>th</sup>, 2009 for the proposal as described above. Following the issuance of the DNS, Whatcom County PDS received comments regarding the project proposal and the lack of mitigating conditions. Whatcom County PDS officially withdrew the original DNS on March 5<sup>th</sup>, 2009 to reassess mitigation needs and to do additional investigation into potential environmental impacts, including cumulative impacts.

Based on the **Lake Whatcom Watershed Total Phosphorus and Bacteria Total Maximum Daily Loads (TMDL) Volume 1. Water Quality Study Findings**, Washington State Department of Ecology Publication No. 08-03-024, November 2008, phosphorus loading is the main cause of Lake Whatcom's documented low-oxygen level problem. Although phosphorus occurs naturally, development increases phosphorus entering the lake in stormwater. Roofs, driveways, loss of tree canopy, exposed soil, and lawns interrupt the absorption and filtration provided by forest and soils, instead allowing phosphorus-laden stormwater to enter the lake. This phosphorus transferred from runoff and other means, feeds algae growth, which depletes dissolved oxygen that fish and other beneficial aquatic life need to survive. When dissolved oxygen levels are low, phosphorus is released from lake sediment and re-enters the water, continuing the cycle. The dissolved oxygen levels is a main contributing factor in Lake Whatcom being listed as a Category 5 water on Ecology's 303(d) list of impaired water bodies.

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<sup>1</sup> This is a re-issued MDNS to address all of the comments submitted based on the February 11<sup>th</sup>, 2009 issuance of an MDNS on the same proposal. The original MDNS was officially withdrawn on March 5<sup>th</sup>, 2009.

The following conclusions were drawn as a result of the above referenced TMDL Water Quality Study:

### **Dissolved oxygen and total phosphorus**

- Lake Whatcom is a highly complex system in which dissolved oxygen levels decrease as nutrient (phosphorus) loads increase over time.
- Watershed and lake models were developed, calibrated, and reviewed by qualified experts. These models are deemed adequate for the development of a TMDL for dissolved oxygen in Lake Whatcom.
- Modeling of pre-development watershed conditions provides a baseline for watershed phosphorus loading and lake dissolved oxygen. This baseline is used for evaluation of compliance with the Washington State water quality standards.
- Modeling of Lake Whatcom with the CE-QUAL-W2 model, and its watershed with the HSPF model, shows that land use changes from full development of the watershed without controls on phosphorus loading, would cause increased phosphorus loading to the lake, which in turn would degrade oxygen in the lake.
- The lake's loading capacity for phosphorus was determined and correlated to reductions in developed acreage from the 2003 Base condition and from the Full-Buildout condition. The loading capacity was found to be 14.15 kg/day (annual average) of phosphorus when reduced from the Base scenario or from the Full-Buildout scenario. The loading capacity is equivalent to 524 developed acres that generate total phosphorus loading at 2003 levels when reduced from the Base scenario, and 563 developed acres when reduced from the Full-Buildout scenario. The loading capacity represents an 85.5% reduction of developed acres from Base conditions, and a 94.6% reduction of developed acres from Full-Buildout.

### **Bacteria**

- Eleven streams and drains that are tributaries to Lake Whatcom were found to not meet Washington State standards for fecal coliform bacterial contamination during monitoring surveys for this TMDL.
- The statistical rollback method has identified geometric mean bacteria targets that ranged from 4 to 50 cfu/100 mL in the dry season, and from 3 to 42 cfu/100mL in the wet season, corresponding to meeting the 90th percentile exceedance criterion of 100 cfu/100 mL.
- A Beales ratio estimator formula was used to calculate annual fecal coliform loads for allocations based on bacteria loading.
- Bacteria reduction targets from 2003 levels for the 11 tributaries ranged from a 0% to a 92% reduction in the dry season, and from a 37% to a 96% reduction in the wet season.

The conclusions above, drawn from the TMDL Water Quality Study, provide relevant scientific studies and evidence that existing land uses are contributing to a violation of the water quality standards in the South Bay basin of the Lake Whatcom watershed and that there are at-risk systems that will be very sensitive to more impact, no matter how small. According the TMDL Water Quality Study, since all tributaries fail to meet standards, no allocation for future growth is provided. Therefore, additional sources would only be accommodated through additional reductions in existing sources. Because there is no load allocation available for addition growth, Whatcom County has determined that without adequate mitigating

conditions that the proposal would have a significant environmental impact. However, with adequate mitigation, impacts associated with this development, as outlined in this MDNS, would be consistent with the TMDL and address water quality exceedences in the watershed.

The following information will address the comments that have been submitted, discuss existing regulations in place, and indicate any mitigating conditions that the proposal will be required to meet to ensure that no significant adverse environmental impacts will occur:

#### Zoning and Shoreline Management Program

In consideration of the recent Lake Whatcom TMDL Water Quality Study Findings and some of the comments given by City of Bellingham (COB) and Washington State Department of Ecology (DOE), Whatcom County PDS agrees that the project proposal warrants mitigating conditions through SEPA that can not be implemented through existing Whatcom County Code (WCC).

It is important to note that no new bulkheads are being proposed on the subject property. In fact, approximately 650-lineal feet of rubber truck tire and wooden bulkhead will be removed as a result of the proposal and the shoreline will be restored with a combination of sand/gravels, vegetative plantings and large woody debris. The development activity associated with this particular portion of the property has been conditioned that the work be implemented during the winter months when the level of Lake Whatcom is artificially lowered by the City of Bellingham. Execution of this type of activity is best done during the winter months on Lake Whatcom so that BMPs can actually be effective. Whatcom County required bonding for this work to occur during the official wet season as an additional assurance that BMPs are installed and maintained throughout the construction process to minimize runoff to Lake Whatcom.

In high energy environments, bulkheads can indeed cause beach scour and increased erosion potential to adjacent properties and phosphorus load. The proposed shoreline restoration will eliminate the effects the current bulkheads may have. In addition, the limited areas of concrete bulkheads that the applicant wishes to maintain (and is legally entitled to do so pursuant to WCC), are located within the existing marina area protected from wind and wave action with existing boom logs. Although it is certainly the preference of staff to have all of the existing bulkheads removed, it is not perceived that the remaining bulkheads represent a substantial erosion threat based on their current location and configuration.

The removal of the existing rubber truck tire bulkhead and the associated shoreline restoration activities will enhance water quality through improved function of the land/water interface. Obviously, removing foreign materials containing hydrocarbons and trace metals from a drinking water source is one instant benefit. Removal of the bulkhead and enhancement of the riparian area with the addition of native plantings will decrease scour from wind and wave action and remove an artificial disconnection between the upland and Lake Whatcom which enhances water quality, quantity and habitat functions.

The proposed clearing on the subject property within shoreline jurisdiction is the minimum amount necessary to accommodate the approved development. The

amount of clearing was reduced through the review of the shoreline permits. Those unavoidable clearing impacts are fully mitigated within the Impact Assessment and Mitigation Plan completed by Northwest Ecological Services, LLC (NES) dated February 2008. No understory vegetation is present at the Wildwood site within areas of existing or proposed development. The site has been maintained in a "park-like" setting since its development in the early 1940s.

A condition that ultimately retains additional existing tree canopy is preferred and likely warranted through the recent TMDL Water Quality Study. Efforts were made throughout the review of the permits to encourage a site design that would eliminate or greatly reduce the number of trees to be removed; however to do so would entail flexibility within WCC in terms of the relocation of non-conforming structures and developments. For example, moving the sites out of SMP jurisdiction required new roadways throughout the site per County Development Standards with full emergency turnarounds etc. These requirements, although implemented from a life and safety standpoint, do not correspond well with impact minimization and tree retention. The alternative of letting the existing lawful development to operate represents an even greater hazard to the water quality of Lake Whatcom.

An Impact Assessment and Mitigation Plan for critical areas was developed by NES. The NES report addressed avoidance and impact minimization and provided a comprehensive list of impacts from the proposed development and ample mitigation measures. For example, the plan includes the enhancement of 9,580-square feet of wetland area, 3,600 square feet of wetland rehabilitation and 12,500 square feet of buffer enhancement, which fully replaces lost functions and values and/or offsets the unavoidable adverse impacts of the proposed project.

In addition, the project removes 43 existing campsites away from the shoreline of Lake Whatcom. New developments are set back a minimum of 100-feet from the lake. The project involves the removal of several unlawful mooring buoys located near existing wetlands, which will reduce boating traffic near sensitive areas of the shoreline. The project also involves the removal of all the covered moorage associated with the existing marina to allow light penetration for aquatic habitat. Coupled with the removal of 650 lineal feet of rubber tire and wood bulkhead, the above mitigation measures should result in a net gain in environmental benefit over the existing condition while fully off-setting any adverse impacts of the proposed project.

As suggested by COB, Whatcom County is in agreement that a mitigated condition be added to the SEPA determination to incorporate signage to inform the public on the ban of carbureted two-stroke motors; it should be noted that Whatcom County has adopted Ordinance Number 2004-042, which phased out the use of carbureted two-stroke engines on Lake Whatcom beginning in 2009. The marina development is a water dependent and preferred use of the shoreline by the state Shoreline Management Act (SMA). This development allows access to the shoreline to a substantial number of people and is consistent with the overall goals and objectives of the SMA and SMP.

Based on the discussion above the following SEPA conditions shall be included in the SEPA Determination:

1. The property owner shall clearly post rules relating to boating regulations on Lake Whatcom on all moorage and boat launch facilities at Lake Whatcom Resort. The signage should clearly identify the required speed limits as well as the penalties associated with violations and the strict ban of two-stroke motors. The signs should also provide information relating to the fact that Lake Whatcom is the primary source of drinking water for the City of Bellingham and surrounding unincorporated areas of the County. An informational sign shall be posted that summarizes the benefits of removing the tire wall and re-establishing a native shoreline system in its place. The required signage shall not be posted on the site until the signs have been reviewed and approved by the Whatcom County Shorelines Administrator.

### **Water Resource Protection Overlay and Water Resource Special Management Areas:**

This project proposes to remove approximately 35% of the existing tree canopy for development which is permitted by WCC. However, tree canopy is understood to be vital to natural hydrological systems. Currently, approximately 36% of the site is already devoid of tree canopy cover. The removal of 35% of the total canopy could cause considerable disruption to the hydrology of the site and would lead to approximately 50% of the site being devoid of tree canopy. The TMDL Water Quality Study lists tree canopy retention as an important factor in maintaining natural hydrologic patterns.

However, the natural hydrology of the site (pre-European settlement), the existing hydrology of the site, and the proposals' impacts to hydrology are not clearly known. An engineered hydrologic report of the site would be beneficial to gain baseline information on the site hydrology, and how the new development would affect hydrologic patterns.

Because there will be many different building permits for the various construction activities proposed as part of this project, it would be beneficial to ensure that a Certified Erosion and Sedimentation Control Lead (CESCL) is on site during all construction activities. A CESCL on site shall design, oversee the installation of, maintain, and monitor the effectiveness of Erosion and Sedimentation Control Best Management Practices (ESC BMP's) and ensure that the standards of the 2005 DOE Stormwater Manual are adhered to. This will allow the County and the contractor to interface in a timely manner when installing and maintaining BMP's to eliminate any illicit discharges to Lake Whatcom or any of the other water resources on site.

With the issuance of the TMDL Water Quality Study Findings study, there is a potential for cumulative impacts of the proposed project that may have a probable significant adverse environmental impact. Therefore, the following SEPA conditions shall be included in the SEPA Determination:

1. The Canopy Coverage Adjustment and Impact Analysis performed by Tom Robertson and dated 2/16/09, lists areas of potentially hazardous trees due to undernourishment or a state of decay. A professional assessment of potential hazard trees shall be required which shows which trees are subject to disease or decay. This report shall also identify trees which will be rendered structurally unsound by the construction of the pervious

pavement road. Only the trees which are considered an imminent threat health and safety, or are identified by the certified arborist to be removed for the construction of the pervious pavement road, shall be removed. Additional trees, within the stormwater treatments and re-arranged camp sites may be removed if the engineered stormwater site plan, as required per MDNS condition #2, indicates that trees and/or tree canopy can be removed without affecting the hydrology of the site, including transport of phosphorus to the lake.

2. An engineered stormwater site plan shall be provided, for review and approval, which determines site specific controls to limit stormwater runoff and phosphorous transport from the total site which closely mimics forested conditions or indicates an overall reduction from the existing developed conditions. Stormwater controls shall include the use of all known and reasonable technology available and appropriate for the site, based on studies for the site and approved by Whatcom County PDS. The plan shall at a minimum provide soils reports, groundwater studies, and hydrologic analyses. The hydrologic analyses shall take into account tree canopy and the affect on site hydrology and potential transport of phosphorus to the lake.
3. A Department of Ecology Certified Erosion and Sedimentation Control Lead (CESCL) shall be on site at all times during land disturbance associated with construction. The CESCL must be identified prior to construction and shall be present at the pre-construction meeting. The CESCL shall design, oversee installation, certify adequate BMP installation, and conduct monitoring throughout the life of the BMP measures,

### **Stormwater and Engineering**

*Whatcom County Development Standards* (WCDS) applies to the proposed project. WCDS paragraph 219.B.2 3rd unnumbered paragraph states: "Runoff treatment BMPs [Best Management Practices] shall be selected, designed, and maintained according to the latest edition of the *Stormwater Management Manual for the Puget Sound Basin Washington State Department of Ecology*". The latest edition of that manual (now titled the "Washington State Department of Ecology Stormwater Management Manual for Western Washington") in Volume I at paragraph 2.5.6 (on page 2-27) requires "...construction of stormwater treatment facilities" for "Projects in which the total of effective, pollution-generating impervious surface (PGIS) is 5,000 square feet or more in a threshold discharge area of the project...".

The subject project, as currently proposed, will create 9,471 SF of new PGIS (as noted on subject project drawing Sheet AO.1), which exceeds the 5,000 SF threshold noted above. Per *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraph 2.5.6 (on page 2-29), the subject project, as currently proposed, must therefore incorporate stormwater treatment facilities "...selected in accordance with the process identified in Chapter 4 of Volume I, designed in accordance with the design criteria in Volume V, and maintained in accordance with the maintenance schedule in Volume V.", noting further that "Direct discharge of untreated stormwater from pollution-generating impervious surfaces to ground water is prohibited, except for the discharge achieved by infiltration or dispersion of runoff from residential sites through use of On-site Stormwater Management BMPs."

WCDS paragraph 219.B 3rd unnumbered paragraph states: "Stormwater BMPs are required as part of all development activity. BMPs which are specified in the *Washington State Department of Ecology Technical Manual*, and those set forth in this section have been pre-approved for use by the Design Engineer.". *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraph 2.5.5 (on page 2-26) states: "Projects shall employ On-site Stormwater Management BMPs to infiltrate, disperse, and retain stormwater runoff onsite to the maximum extent feasible without causing flooding or erosion impacts. Roof Downspout Control BMPs, functionally equivalent to those described in Chapter 3 of Volume III, and Dispersion and Soil Quality BMPs, functionally equivalent to those in Chapter 5 of Volume V, shall be required to reduce the hydrologic disruption of developed sites."

Given the direct adjacency of the proposed project site to Lake Whatcom, direct discharge of non-pollution generating impervious surface (NPGIS) stormwater (e.g., sidewalks and most roofs) via closed conduit or pipe (vs infiltration and/or dispersion facilities) is possible and acceptable per *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I Appendix I-E. Additionally, WCDS paragraph 219.D states: "Stormwater conveyance systems shall be required to convey the peak design storm flow."

Based on the findings above, compliance with Whatcom County Regulations and Development Standards, as well as the 2005 *Washington State Department of Ecology Stormwater Management Manual for Western Washington*, would adequately mitigate most impacts.

However, in regards to the issuance of the TMDL Water Quality Study Findings study, there is a potential for significant adverse environmental impacts to occur when taking the proposed project into consideration. Therefore, the following SEPA conditions shall be included in the SEPA Determination:

1. Provide stormwater treatment facilities in accordance with the current *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraph 2.5.6 for all new, plus any replaced, "effective, pollution-generating, impervious surfaces" (as defined by the current *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I Glossary) under subject project scope of work if the total of new, plus any replaced, effective, pollution-generating, impervious surfaces under the final County-approved project scope of work equals or exceeds 5,000 square feet.
2. Provide stormwater disposal and/or flow control facilities in accordance with *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraphs 2.5.5 and 2.5.7 for all new, plus any replaced, impervious surfaces under subject project scope of work.

## Conclusion:

The lead agency for this proposal has determined that with the following proper mitigation, no significant adverse environmental impacts would likely occur;

1. The property owner shall clearly post rules relating to boating regulations on Lake Whatcom on all moorage and boat launch facilities at Wildwood Resort. The signage shall clearly identify the ban on carbureted two-stroke motors, the required speed limits, as well as the penalties associated with violations. The signs shall also provide information relating to the fact that Lake Whatcom is the primary source of drinking water for the City of Bellingham and surrounding areas and inform the public on the environmental benefits of removing the tire wall from the shoreline and replacing such with a natural shoreline system. The required signage shall not be posted on the site until the signs have been reviewed and approved by the Whatcom County Shorelines Administrator.
2. The Canopy Coverage Adjustment and Impact Analysis performed by Tom Robertson and dated 2/16/09, lists areas of potentially hazardous trees due to undernourishment or a state of decay. A professional assessment of potential hazard trees shall be required which shows which trees are subject to disease or decay. This report shall also identify trees which will be rendered structurally unsound by the construction of the pervious pavement road. Only the trees which are considered an imminent threat health and safety, or are identified by the certified arborist to be removed for the construction of the pervious pavement road, shall be removed. Additional trees, within the stormwater treatments and re-arranged camp sites may be removed if the engineered stormwater site plan, as required per MDNS condition #3, indicates that trees and/or tree canopy can be removed without affecting the hydrology of the site, including transport of phosphorus to the lake.
3. An engineered stormwater site plan shall be provided, for review and approval, which determines site specific controls to limit stormwater runoff and phosphorous transport from the total site. Stormwater controls shall include the use of all known and reasonable technology available and appropriate for the site, based on studies for the site and approved by Whatcom County PDS. The plan shall at a minimum provide soils reports, groundwater studies, and hydrologic analyses. The hydrologic analyses shall take into account tree canopy and the affect on site hydrology and potential transport of phosphorus to the lake.
4. A Department of Ecology Certified Erosion and Sedimentation Control Lead (CESCL) shall be on site at all times during land disturbance associated with construction. The CESCL must be identified prior to construction and shall be present at the pre-construction meeting. The CESCL shall design, oversee installation, certify adequate BMP installation, and conduct monitoring throughout the life of the BMP measures,
5. Provide stormwater treatment facilities in accordance with *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraph 2.5.6 for all new, plus any replaced,



"effective, pollution-generating, impervious surfaces" (as defined by *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I Glossary) under subject project scope of work if the total of new, plus any replaced, effective, pollution-generating, impervious surfaces under the final County-approved project scope of work equals or exceeds 5,000 square feet.

6. Provide stormwater disposal and/or flow control facilities in accordance with *Washington State Department of Ecology Stormwater Management Manual for Western Washington* Volume I paragraphs 2.5.5 and 2.5.7 for all new, plus any replaced, impervious surfaces under subject project scope of work.

Pursuant to RCW 43.21C.030(2)(c), an environmental impact statement (EIS) is not required. This decision was made following review of a completed SEPA environmental checklist and other information on file with the lead agency. This information is available to the public on request.

There is no comment period for this MDNS.

- Pursuant to WAC 197-11-340(2), the lead agency will not act on this proposal for 14 days from the date of issuance indicated below. Comments must be received by July 16, 2009 and should be sent to:

**Responsible Official:** Tyler Schroeder

**Title:** Current Planning Supervisor

**Telephone:** 360.676.6907

**Address:** 5280 Northwest Drive  
Bellingham, WA 98226

**Date of Issuance:** July 21, 2009

**Signature:** \_\_\_\_\_  


An aggrieved agency or person may appeal this determination to the Whatcom County Hearing Examiner. Application for appeal must be filed on a form provided by and submitted to the Whatcom County Current Planning Division located at 5280 July 27, 2009.

You should be prepared to make a specific factual objection. Contact Whatcom County Current Planning for information about the procedures for SEPA appeals.

