STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

August 4, 2014

Copalis Rock Mutual Benefit Assoc
Attn: Chevy Chase
250 4th Avenue S Ste 200
Edmonds WA 98020

Re: Water Right Application No. G2-29357

Dear Mr. Chase:

Enclosed is a copy of the Department of Ecology's *Report of Examination*. This report contains our decision regarding your application.

Your application has been approved.

A permit will be issued consistent with the enclosed *Report of Examination* after the appeal period has expired, if no appeals have been filed.

You have a right to appeal this action to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this document. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this document:

- File your appeal and a copy of this document with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this document on Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel Rd SW Ste 301 Tumwater WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov . To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser .

If you have any questions, please contact Ecology at 360-407-6300.

Sincerely,

Michael J. Gallagher

Michael J. Gallagher
Section Manager
Water Resources Program

BY CERTIFIED MAIL: 7013 2630 0001 9408 7643

Enclosures: Report of Examination
Your Right To Be Heard

File NR G2-29357
WR Doc ID 2221049

DEPARTMENT OF
ECOLOGY
State of Washington

State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE
2/21/1996

WATER RIGHT NUMBER
G2-29357

MAILING ADDRESS
COPALIS ROCK MUTUAL BENEFIT ASSOCIATION
250 4TH AVE S STE 200
EDMONDS WA 98020

SITE ADDRESS (IF DIFFERENT)
COPALIS ROCK LANE
OCEAN CITY WASHINGTON

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
50	GPM	23

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Domestic multiple	0	50	GPM	16	7	01/01 - 12/31

REMARKS: This water right shares a point of withdrawal with water right certificate G2-01117C. This water right and G2-01117C authorize a total withdrawal rate of 50 gpm and a total annual quantity amount of 23 acre-feet.

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0	0	07301B	33

Source Limitations

SOURCE FACILITY/DEVICE	A|S	WITHDRAWAL OR DIVERSION RATE	ANNUAL QUANTITY (AF/YR)	PERIOD OF USE (mm/dd)
1 Well		50	23	01/01 - 12/31

A|S: A=Alternate; S=Standby/Reserve

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
GRAYS HARBOR	GROUNDWATER	N/A	21-QUEETS-QUINAULT

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	Q	LATITUDE	LONGITUDE
Existing Well 1	191209100000	AGF091	19N	12W	09	NE	47.154647	-124.182422

Datum: NAD83/WGS84

Place of Use (See Attached Map)

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Government Lot 1, Section 16, T. 19 N., R12 W.W.M, Government Lot 4, Section 9, T. 19 N., R 12 W.W.M., and NW¼ NE¼, Section 16, T. 19 N., R. 12 W.W.M Grays Harbor County. SW¼ SE¼ of Section 9, T. 19 N., R. 12 W.W.M. Less roads, Grays Harbor, Washington.

Proposed Works

An existing well, 90 feet deep and 8-inch in diameter with a 25 gallon per minute submersible pump serving a residential water system.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	In Use	January 1, 2024

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm or cfs)

Provisions

Annual and Instantaneous Quantities

This water right – G2-29357 – shares a point of withdrawal with water right certificate G2-01117C. The total withdrawal rate and total annual quantity authorized by water right G2-29357 and G2-01117C are limited to 50 gallons per minute and 23 acre-feet per year respectively from all sources.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an

existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

Measurements, Monitoring, Metering and Reporting
An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Water Level Measurements
In order to maintain a sustainable supply of water, pumping must be managed so that static water levels do not progressively decline from year to year. Static water level is defined as the water level in a well when no pumping is occurring and the water level has fully recovered from previous pumping. Static water levels shall be measured and recorded monthly, using a consistent methodology. Data for the previous year shall be submitted by January 31 to the Department of Ecology.

Static water level data shall be submitted in digital format and shall include the following elements:

Unique Well ID Number
Measurement date and time
Measurement method (air line, electric tape, pressure transducer, etc.)
Measurement accuracy (to nearest foot, tenth of foot, etc.)
Description of the measuring point (top of casing, sounding tube, etc.)
Measuring point elevation above or below land surface to the nearest 0.1 foot
Land surface elevation at the well head to the nearest foot.
Static water level below measuring point to the nearest 0.1 foot.

Chloride Monitoring
By January 31st of each year, the following information shall be submitted in writing to the Department of Ecology.

April and September measurements from the subject well of:

Chloride and conductivity (the chemical analysis shall be performed by a state-accredited laboratory)

Depth to static water level (with pump off long enough to allow for stabilization)

The chloride/conductivity sampling and the static water level measurement shall be conducted concurrently.

This data collection will assist the applicant and Ecology in determining if actions are necessary to prevent an increasing trend in chloride concentrations (an indicator of seawater intrusion). Preventative actions may include – reducing the instantaneous pumping rate, reducing the annual volume pumped, scheduling pumping to coincide with low tides, raising the pump intake, and/or limiting the number of service connections.

Department of Health Requirements
Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

Easement and Right-of-Way
The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Water Use Efficiency
The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

Municipal Water Supplier
Based on current connection and population served conditions, Copalis Rock is not a municipal water supplier under RCW 90.03.015. When the Copalis Rock water system meets the definition of municipal water supplier consistent with RCW 90.03.560, the purpose of use will automatically change from multiple domestic supply to municipal supply as a matter of law.

Proof of Appropriation
The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. Upon completion of a water appropriation and putting the water to beneficial use, in order to receive a final water right certificate, the permit holder must secure the services of a certified water right examiner who has been tested and certified by Ecology. The examiner shall carry out a final examination of the project to verify its completion and to determine and document for the permit holder and the department the amount of water that has been appropriated for beneficial use, the location of diversion or withdrawal and conveyance facilities, the actual place of use, and satisfaction of provisions. The department shall specify the format and required content of the reports and may provide a form for that purpose. The certificate will reflect the extent of the project perfected within the limitations of the permit.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Findings of Facts

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. G2-29357 subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

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Pollution Control Hearings Board 1111 Israel RD SW Ste 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Signed at Olympia, Washington, this 4th day of August 2014.

Michael J. Gallagher

Michael J. Gallagher, Section Manager

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INVESTIGATOR'S REPORT
Application for Water Right -- Copalis Rock Mutual Benefit Association
Water Right Control Number G2-29357
Susan Clark, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G2-29357.

On February 21, 1996 the Copalis Rock Mutual Benefit Association (Copalis Rock) filed Application G2-29357 requesting to increase its annual quantity amount by 16 acre-feet (ac-ft) for domestic supply. Under the request, the system's instantaneous withdrawal rate would remain the same at 50 gallons per minute (gpm). To serve anticipated increased demands from both new homes and the conversion of existing vacation homes to full-time residences, Copalis Rock is anticipating constructing an additional water source (well) in the future.

The Copalis Rock water system is located off of State Route 109, in Grays Harbor County, within the Queets-Quinault Water Resource Inventory Area.

This report describes the proposed project, discusses the hydrogeology of the area, investigates potential impairments and evaluates water availability issues raised by the project.

Table 1 Summary of Requested Water Right

Applicant Name:	Copalis Rock Mutual Benefit Association
Date of Application:	2/21/1996
Place of Use	Government Lot 1, Section 16, T. 19 N., R12 W.W.M, Government Lot 4, Section 9, T. 19 N., R 12 W.W.M., and NW¼ NE¼, Section 16, T. 19 N., R. 12 W.W.M. Grays Harbor County. SW¼ SE¼ of Section 9, T. 19 N., R. 12 W.W.M. Less roads, Grays Harbor, Washington.

County	Waterbody	Tributary To	WRIA
Grays Harbor	Groundwater	N/A	21-Queets-Quinault

Purpose	Rate	Unit	Annual Quantity Ac-ft/yr	Annual Quantity Ac-ft/yr	Begin Season	End Season
	Non-additive		**Additive**	**Non-additive**		
Domestic multiple	50	GPM	16	7	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	Quarter	Latitude	Longitude
Well 1	191209100000	AGF091	19N	12W	09	NE	47.154647	-124.182422
Proposed Well			19N	12W	09			

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum: NAD83/WGS84.

Legal Requirements for Approval of Appropriation of Water

Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the *Daily World* of Grays Harbor County on March 5 and March 12, 2013. No protests were filed against this application.

Consultation with the Department of Fish and Wildlife

The Department must give notice to the Department of Fish and Wildlife (WDFW) of applications to divert, withdraw or store water. Ecology received written comments dated May 23, 2014 from WDFW regarding this water right application. Steve Boessow of WDFW indicated that WDFW does not oppose the issuance of this water right application based upon impacts to fish and/or wildlife and the habitat they rely on pursuant to Chapter 77.57.020 RCW. WDFW does not oppose the application because impacts to instream flows in Boone Creek appear to be at or near intertidal. Additionally, the lowermost tributary to Boone Creek has not been documented to have fish.

State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

(a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
(b) It is a groundwater right application for more than 2,250 gallons per minute;
(c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
(d) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
(e) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

INVESTIGATION

My review of this application included, but was not limited to, research and review of the following:

- Department of Ecology's Water Rights Tracking System database and Well Log Image System.
- Water system information from the Department of Health's Sentry database.
- Memorandum dated April 29, 2014 by Ecology staff Matthew K. Rakow, LG.

- Small Water System Management Program for Copalis Rock Water System, dated September 14, 2011, prepared by Northwest Water Systems, Inc.
- Engineering Report for Copalis Rock Water System, dated October 22, 2007, prepared by Northwest Water Systems, Inc.
- Field notes and observations from a site visit on April 10, 2014 with J. Miles Batchelder of Copalis Rock Mutual Benefit Association water system and Matthew Rakow and Susan Clark of Ecology in attendance.
- Email communications with C. Chevy Chase, Copalis Rock Mutual Benefit Association and Todd Krause, Northwest Water Systems.
- Grays Harbor County Online Parcel Database.
- Water Resources Program Policy 2030, 2003 Municipal Water Law Interpretive and Policy Statement, Washington State Department of Ecology, Revised May 7, 2012.
- Correspondence from the Department of Fish and Wildlife, Steve Boessow, dated May 23, 2014.

Project Location

The Copalis Rock water system is a small community water system located in Grays Harbor County, approximately 4 miles south of Pacific Beach serving a gated community located on the west side of State Route 109, adjacent to the Pacific Ocean. The area surrounding Copalis Rock primarily consists of large tracts of forested vacant land, RV parks, hotels and resorts and part-time beach-side residential communities. Elevations within the water system service area are from approximately 20 feet near the beach to 178 feet at the system's reservoir.

Other Rights Appurtenant to the Place of Use

The Copalis Rock water system holds one water right certificate which authorizes water use as detailed below.

Table 2 Water Rights Held by Copalis Rock Mutual Benefit Association

Certificate Number	Name	Priority Date	Source	Purpose of Use	Rate (QI)	Annual Quantity
G2-01117C	Copalis Rock Water Association	July 7, 1968	Three Wells within NE ¼ Section 9, T19N, R12 W.W.M	Community Domestic Supply	50 gallons per minute	7 acre-feet

Water use records for the Copalis Rock water system (see section "Actual Water Use" for details) indicate that the system has used the annual quantity amount authorized by G2-01117C. The Copalis Rock water system source well – Well 1 – is equipped with a 25 gallon per minute submersible pump which currently limits the system's ability to obtain the withdrawal rate authorized by G2-01117C.

Well and Water System Information

The groundwater well serving Copalis Rock Mutual Benefit Association is situated at the intersection of State Route 109 and the main access road to parcel 191209100000 located approximately 3.5 miles north of Copalis Beach. The well lies within an easement on the parcel. The parcel is undeveloped with

the exception of State Route 109 and a few logging roads. Various portions of the parcel have been logged in different stages over the last decades. The general area around the well site is dominated by a small drainage network for an unnamed stream.

The Copalis Rock water system is served by one 8-inch diameter well drilled at a depth of 90 feet, tagged with Unique Well Identification Number AGF091 and equipped with a 25 gallon-per-minute submersible pump. The well discharges into a 2.5 inch diameter 0.6 mile transmission main located in an easement along State Route 109 terminating at a newly installed 5,000 gallon plastic above ground reservoir. The water system also includes 1,480 linear feet of pressure distribution main; 3,290 linear feet of gravity distribution line; a booster pump and related booster and well pump controls. The topography of the service area allows the lots on the west and southwest side of the service area to be supplied by a gravity line from the storage tank. The lots on the north and northeast corner are supplied with a pressure main connected to the booster pump station. Two additional 5,000 gallon plastic above ground reservoirs are expected to be added to the Copalis Rock water system next to the existing reservoir in the future as required by demands (J. Miles Batchelder, April 10, 2014).

A source meter is installed on the well and all active connections are metered.

The Copalis Rock water system distribution lines were replaced in 2010 due to significant leaks occurring throughout the system.

A small unnamed creek flows through the north half of parcel 191209100000 and is a tributary to Boone Creek. The creek flows northwest until it joins Boone Creek approximately 500 feet to the east of the mouth of Boone Creek. Boone Creek discharges into the Pacific Ocean approximately one-half mile north of the well site. No known studies have been published regarding this creek.

Water System Description

The Copalis Rock water system (DOH ID# 07301B) is an existing Group A transient non-community public water system approved by the Washington State Department of Health (DOH) to serve 33 connections. Initially constructed in the 1960s, the water system currently serves a total of 27 active connections including:

- Two full-time single family residences,
- 21 part-time single family residences, and
- Four non-residential connections for recreational use.

Additionally, five undeveloped lots have a legal right to use the water system as the result of the purchase of a water share. The amount of full-time residences served by the Copalis Rock water system has fluctuated from the current two full-time residences to up to four full-time residences.

The Copalis Rock water service area currently consists of 40 lots, 33 of which currently have formal connections rights to the water system obtained through the purchase of a water share. According to the system growth analysis contained in its Small Water System Management Program, September 2011, the water system could be asked to provide water service to up to 60 full connections at full system build-out.

Actual Water Use

This water right application was submitted at a time when the Copalis Rock water system was experiencing significant system leakage.

The distribution line replacement project completed in 2010 resulted in an improved system leakage rate which is reflected in the below listed annual historic water use figures.

- 2008 7.2 acre-feet
- 2009 8.81 acre-feet
- 2010 6.33 acre-feet
- 2011 4.24 acre-feet
- 2012 2.75 acre-feet
- 2013 2.37 acre-feet

Development History

The application for the Copalis Rock water system Water Right G2-01117 was originally filed by Charles Y. Close and was intended to provide water to serve two permanent dwellings and five summer cabins. In March 1977, C.Y and Margaret Close conveyed the water system then known as Cape Copalis/Copalis Rock Community water system to the Copalis Rock Water Association of Copalis Beach. The Department of Health Sentry database indicates that the Copalis Rock water system became effective on June 1, 1981. During the development of the water system now known as the Copalis Rock water system, three water right permit construction extensions and one place of use change were authorized by Ecology.

According to Grays Harbor County tax records, construction of the homes now served by the Copalis Rock water system occurred as follows:

- 14 homes were constructed from 1960 through 1974
    - *Begin Project/Final Completion period under Permit No. 9010 as assigned to Charles Y Close*
- 1 home was constructed from 1975 through 1976
    - *Period of time following the defined final project completion period contained in Permit No. 9010*
- 3 homes were constructed from 1977 through 1981
    - *Water system ownership transition period following the defined final project completion period under Permit No. 9010*
- 5 homes were constructed from 1982 to June 2014
    - *Copalis Rock Mutual Water Association operating under Water Right Certificate G2-01117C*

Projected Water System Demands

While the current annual withdrawal rate of 7 acre-feet established for Copalis Rock as authorized in water right G2-0117C is more than adequate to serve the community under current conditions (two full-time single family residences, 21 part-time residences and four non-residential connections for recreational use) based upon historic water use as described above, the current annual withdrawal rate does not allow for full system build-out (defined in the water right application as 57 full-time connections). This application requests to increase the annual withdrawal quantity to 23 acre-feet,

which amounts to an average of 350 gallons per day per residence at projected full system build-out. Using 350 gallons per day per residence, the following annual quantities would be required to serve the Copalis Rock water system under the below defined connection scenarios.

- Existing 23 residences at full-time occupancy: 9.01 acre-feet
- Existing 27 active connections at full-time occupancy: 10.32 acre-feet
- Existing 33 purchased water shares at full-time occupancy: 12.93 acre-feet
- Existing 40 parcels located within service area at full-time occupancy: 15.68 acre-feet
- Full system build-out of 57 lots at full-time occupancy: 22.35 acre-feet
- Full system build-out of 60 lots at full-time occupancy: 23.52 acre-feet

Municipal Water Purveyor Status

In 2003, the Washington State Legislature amended Washington water law to provide clarity on the nature of water rights issued for municipal supply purposes and to provide flexibility to municipal water suppliers in exercising their water rights. The Municipal Water Law defines the terms "municipal water supplier" and "municipal water supply purposes", defines when a water right place of use can be the same as a municipal water suppliers' service area and establishes that municipal water rights are not limited to the stated number of connections, but to the number of connections approved in a water system plan, among other matters. To carry out the 2003 Municipal Water Law, Ecology developed Policy 2030 – 2003 Municipal Water Law Interpretive and Policy Statement.

In order to be consistent with Policy 2030 and the definition of municipal water supplier, a water system must either serve 15 residential connections (with residential connections defined as year-round for more than 180 days), or if a water system provides service to temporary domiciles for non-residents, then the water system must provide water service to a non-residential population of, on average, 25 people for 60 or more days a year.

Copalis Rock serves a total of 27 active connections which includes two full-time residences, 21 part-time residences and five connections for recreational use. According to the Copalis Rock Water Facilities Inventory Form dated February 21, 2014, Copalis Rock serves a part-time residential population of 50 people for 8 days during June, July and August and a temporary population of 24 people for 8 days during May, June, July, August and September.

Although the Copalis Rock system has demonstrated consistent growth in connections, based on current connection and population served conditions, Copalis Rock is not a municipal water supplier under RCW 90.03.015. Consistent with RCW 90.03.560, at the point in time the Copalis Rock water system meets the definition of municipal water supplier, the purpose of use will automatically change from multiple domestic supply to municipal supply as a matter of law.

General Area Surficial Geology

The entire area encompassing the Copalis Rock water system is underlain by Pleistocene-aged alpine glacial outwash deposits from a younger stage of a pre-Wisconsinan glaciation. This geologic formation predominately consists of sandstone and basalt originating from the core of the Olympic Mountains. Extensively weathered portions of this formation show a characteristic red-orange rind. Older glacial geologic formations located in the area include older pre-Wisconsinan alpine drift and alpine glacial outwash (Logan, 2003).

Hydrogeology

Copalis Rock Source Well

The source well for the Copalis Rock water system was drilled 8-inch casing to a depth of 90 feet below ground on August 21, 1967. A static water level was measured at 22 feet below ground surface (bgs) after drilling was completed. A 15-foot long plastic well screen was installed from 69 to 84 feet bgs. Table 3 provides an interpretation of the driller's well log.

Table 3: Driller's Well Log Interpretation

From (ft)	To (ft)	Material
0	20	Clay, gravel, red sand
20	50	Brown fine sand with silt
50	65	Brown very fine sand with occasional pebbles and silt
65	90	Brown very fine sand, thin clay beds, water bearing

Groundwater consultants Robinson, Roberts & Associates were contracted to conduct a hydrogeologic evaluation of the well. They determined through a sieve analysis that 0.006 inch sand comprises of the majority of the water bearing formation. This is on the lower limit of acceptable permeability of material to construct a well in. The report indicates that a well test was conducted after the installation of a well screen and casing. The well was pumped for 48 minutes at 10 gpm and had drawdown of 18 feet. Thus the well has a specific capacity of 0.55 gpm/foot of drawdown. Their opinion was that given the water level recovery data recorded immediately after the well test and a formation grain size of 0.006 inches, a specific capacity of 0.55 gpm/foot of drawdown is the best that could be expected for this well. It was recommended that the well pumping rate be set at 20 gpm. They concluded that the well was completed in a formation suitable for a low yield residential well, but not suitable for supplying water to 50 or more connections. Due to this analysis, Copalis Rock is contemplating the drilling of an additional well in the future as required by growth in system demands from the addition of new homes on the water system and the conversion of existing vacation homes to full-time residences.

Vicinity Well Logs

Four water well are located in township section nine with the Copalis Rock source well and their driller's logs are present in the Department's well log database. Table 4 provides pertinent data included on the driller's logs.

Table 4. Neighboring Well Information

Well Owner	Iron Springs Land Company	Olive Little	Olive Little	Stan Block
Water Right #	G2-*08921C †	G2-26062C	G2-26062C	Exempt
Well Tag I.D.	Decommissioned in 2000	ABR891	ABS611	AKW340
Completion Date	7-20-1969	9-14-1974	2-19-1980	3-24-2004
Well Depth (ft)	161	202	169	360
Diameter (in)	8	6	6	6
SWL	134	125	75	20
Screened Interval (ft bgs)	134-143 and 156-159	137-150	Open Hole	43-63
Bailer Test (gpm)	n/a	35	30	1
Drawdown (ft)	n/a	0	20	38
Test Duration (hours)	n/a	2	1	4
Qtr Qtr	NE NW	NE NW	NE NW	NW SW

† Research for this examination has shown that this right should have been relinquished upon the issuance of water right certificate G2-26063C in 1981.

The well logs for the two Olive Little wells and the Iron Springs Land Company well located west-northwest report abundant clay of varying colors to depths of 200 feet below ground with lenses of silt, sand, and gravel. The Olive Little wells encountered a gravel formation with coarse sand at approximately 145 and 168 feet bgs beneath the thick sequences of clay. The gravel formation produced around 30 gpm of water in a bailer tests in both wells. The Iron Springs Land Company well encountered a similar gravel material at a shallower depth of 69 feet bgs and produced 10 gpm of water. However, the Stan Block well to the southwest was drilled nearer to the coast to a final depth of 420 feet and was only able to produce one gpm from a gravel layer situated 43 to 63 feet bgs.

The significance here is that there is a great deal of spatial variability of geologic materials within the alpine glacial outwash deposits and underlying stratigraphic units. The abundance of silt and clay in these formations dramatically decreases the mobility of water locally and can affect the ability of a well to withdraw sustainable amounts of water needed for domestic supplies. This spatial variability makes it extremely difficult to predict the lateral and vertical location of water bearing zones that can yield sufficient quantities. This is evident as the Close well hydrogeologic report from Robinson and Roberts reports that Mr. Close had previously drilled four unsuccessful water wells within the original Copalis Rock housing development.

Impairment Considerations

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection. A water right application may not be approved if it would:

- Interrupt or interfere with the availability of water to an adequately constructed groundwater withdrawal facility of an existing right. An adequately constructed groundwater withdrawal facility is one that (a) is constructed in compliance with well construction requirements and (b) fully penetrates the saturated zone of an aquifer or withdraws water from a reasonable and feasible pumping lift.
- Interrupt or interfere with the availability of water at the authorized point of diversion of a surface water right. A surface water right conditioned with instream flows may be impaired if a proposed use or change would cause the flow of the stream to fall to or below the instream flow more frequently or for a longer duration than was previously the case.
- Interrupt or interfere with the flow of water allocated by rule, water rights, or court decree to instream flows.
- Degrade the water quality of the source to the point that the water is unsuitable for beneficial use by existing users (e.g., via sea water intrusion).

Potential Impacts to Existing Water Users

WAC 173-150-060 specifies that only impacts to "qualifying withdrawal facilities" fit the legal definition of impairment. This definition means wells can be affected as long they are not impaired. Qualifying withdrawal facilities are wells completed in the same aquifer as the new point of withdrawal. The well must span the aquifer's entire saturated thickness and the pump elevation must allow variation in seasonal water levels.

In addition to the water rights discussed later in this report, according to Ecology's Well Log database there is one permit-exempt domestic well located approximately 0.5 miles to the southwest of the Copalis Rock well. This exempt well is tagged with Unique Well Identification Number AKW340, is 360 feet deep and was drilled in 2004. A well log exists for this well.

The Department of Health's Sentry database shows that there is also a small Group B public water system known as Finisterre Services utilizing an exempt well located within the NW ¼ of the NE ¼ of Section 16, approximately ¼ mile south of the Copalis Rock service area. The Finisterre Services well is 210 feet deep and serves 8 connections. There is no well report on file for this well.

The source well for Copalis Rock has been in use since the late 1960's and there have been no complaints from area users regarding impacted water sources. The new water right application seeks to increase the annual quantity of water available for beneficial use and does not propose to increase the instantaneous pumping rate of the existing source well. Therefore, pumping additional annual quantities is not likely to impact existing users in the area.

The Department of Ecology's Water Rights Tracking System indicates two neighboring active groundwater rights within approximately one half mile of the Copalis Rock well. Table 5 presents basic information for these existing water rights.

Table 5. Existing Water Rights within 0.5 Miles of Copalis Rock Source Well

Certificate #	Name	Priority Date	Twp	Rng	Sec	Qi (gpm)	Qa (ac-ft/yr)	Use
G2-26062C	Olive Little	12/18/1981	19 N	12 W	9	150	27	DM
G2-26063C	Olive Little	12/18/1981	19 N	12 W	4	100	6.7	DM

The Iron Springs Park water system holds one water right under certificate G2-26062C. The original applicant for this water right was Olive Little. Water right certificate G2-26062C authorizes the use of 150 gallons per minute and 27 acre-feet per year for community domestic supply. The water system's two wells are located approximately 0.25 miles northwest of the Copalis Rock well. Well 1 is 200 feet deep, has a listed capacity of 70 gallons per minute, and is tagged with Unique Well Identification Number ABR891. Well 2 is 169 feet deep, has a listed capacity of 75 gallons per minute, and is tagged with Unique Well Identification Number ABS611 (WA DOH, Sentry). Well logs exist for both wells.

The Iron Springs Resort water system holds one water right under certificate G2-26063C. The original applicant for this water right was also Olive Little. Water right certificate G2-26063C authorizes the use of 100 gallons per minute and 6.7 acre-feet per year for community domestic supply. The water system withdraws water from Well 1 located approximately 0.25 miles northwest of the Copalis Rock well. Well 1 is reported to be 170 feet deep, has a listed capacity of 40 gallons per minute, and is tagged with Unique Well Identification Number AGF039. A second inactive well (Well 2) located approximately 0.3 miles northwest of the Copalis Rock well is listed as an emergency/back-up source of water. Well 2 is reported to be 107 feet deep and is tagged with Unique Well Identification Number AGF040 (WA DOH, Sentry). There are no well reports on file for these wells.

In addition to the water rights listed above, Ecology's Water Rights Tracking System indicates there are a total of 3 registered claims in Section 4, T. 19N, R 12 W.W.M; 3 registered claims in Section 9, T. 19N, R 12 W.W.M, and; 2 registered claims in Section 16, T. 19N, R 12 W.W.M.

The risk of impairment to existing water rights is considered to be low due to the following reasons: the geologic conditions at the points of withdrawal for the two existing water rights are considerably

different than those at the Copalis Rock source well, the Copalis Rock source well is much shallower than wells in the surrounding area, and the Copalis Rock source well has a relatively small pumping rate.

Impacts to Surface Water

The source well for Copalis Rock is located within 20 feet of a small unnamed creek. Given the geologic materials observed while drilling the well, the depth of the well, and the pumping rate of the well, hydraulic capture between the well and creek is considered low. However, any increase in pumping rate from the existing well or an additional point of withdrawal within the immediate area of the existing well would most likely incur a higher degree of hydraulic capture.

Potential for Seawater Intrusion

The area between Copalis Beach and Pacific Beach historically has not encountered problems with seawater intrusion. According to Dion and Sumioka (1984), chloride samples taken in Grays Harbor County in 1968 and 1978 did not exceed 100 mg/L with the exception of one sample. Chloride concentrations near the site ranged between 6.9 and 66 mg/L chloride between four water well collection sites. It is concluded that chloride concentrations in groundwater have not changed significantly since those samples were collected because there has been little development in the area. Moreover, the vast majority of wells in the area are for single domestic use or small water systems. There are no large municipal wells, industrial centers, or agricultural operations that require large quantities of water located in the immediate area. Chloride monitoring has been included as a requirement of this water right as a preventive measure against the future risk of seawater intrusion.

Water Availability

For water to be available for appropriation, it must be both physically and legally available.

Physical availability

For water to be physically available for appropriation there must be ground or surface water present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. High quality drinking water has been continuously available from the Copalis Rock well since the 1960s with no known instances of water availability concerns from customers.

Legal availability

To determine whether water to be legally available for appropriation, the following factors are considered:

- Regional water management plans – which may specifically close certain water bodies to further appropriation.
- Existing rights – which may already appropriate physically available water.
- Fisheries and other instream uses (e.g., recreation and navigation). Instream needs, including instream and base flows set by regulation. Water is not available for out of stream uses where further reducing the flow level of surface water would be detrimental to existing fishery resources.
- The Department may deny an application for a new appropriation in a drainage where adjudicated rights exceed the average low flow supply, even if the prior rights are not presently being exercised. Water would not become available for appropriation until existing rights are relinquished for non-use by state proceedings.

The Copalis Rock Mutual Benefit Association water system is located within the Queets-Quinault Water Resource Inventory Area (WRIA 21). At this time, a regional water management plan has not been developed for WRIA 21.

Beneficial use of water from the Copalis Rock well will not affect other surface water bodies in the WRIA. There are no instream flow rules for WRIA 21 and all surface water bodies in the surrounding area discharge into marine water. Therefore, there is no concern for hydraulic capture for other surface water bodies in the WRIA.

No known wells withdrawing water from the shallow aquifer are located within one-half mile of the existing Copalis Rock well.

Water is physically and legally available from the source, as requested.

Beneficial Use

The proposed use of water is defined in statute as a beneficial use (RCW 90.54.020(1)).

Public Interest Considerations

Investigation of Alternatives

The Copalis Rock Mutual Benefit Association water system is an existing Group A transient non-community public water system providing water to an existing community. Approval of this water right allows this system to continue serving the community with a safe and reliable water supply.

Fisheries and In-stream Flow Considerations

Washington Department of Fish and Wildlife (WDFW) provided that the following species of fish could potentially be affected by this water right application: coho and Cutthroat Trout. Steve Boessow of WDFW indicated that WDFW does not oppose the issuance of this water right application based upon impacts to fish and/or wildlife and the habitat they rely on pursuant to Chapter 77.57.020 RCW. WDFW does not oppose this application because impacts to instream flows in Boone Creek appear to be at or near intertidal. Additionally, the lowermost tributary to Boone Creek has not been documented to have fish.

Consideration of Protests and Comments

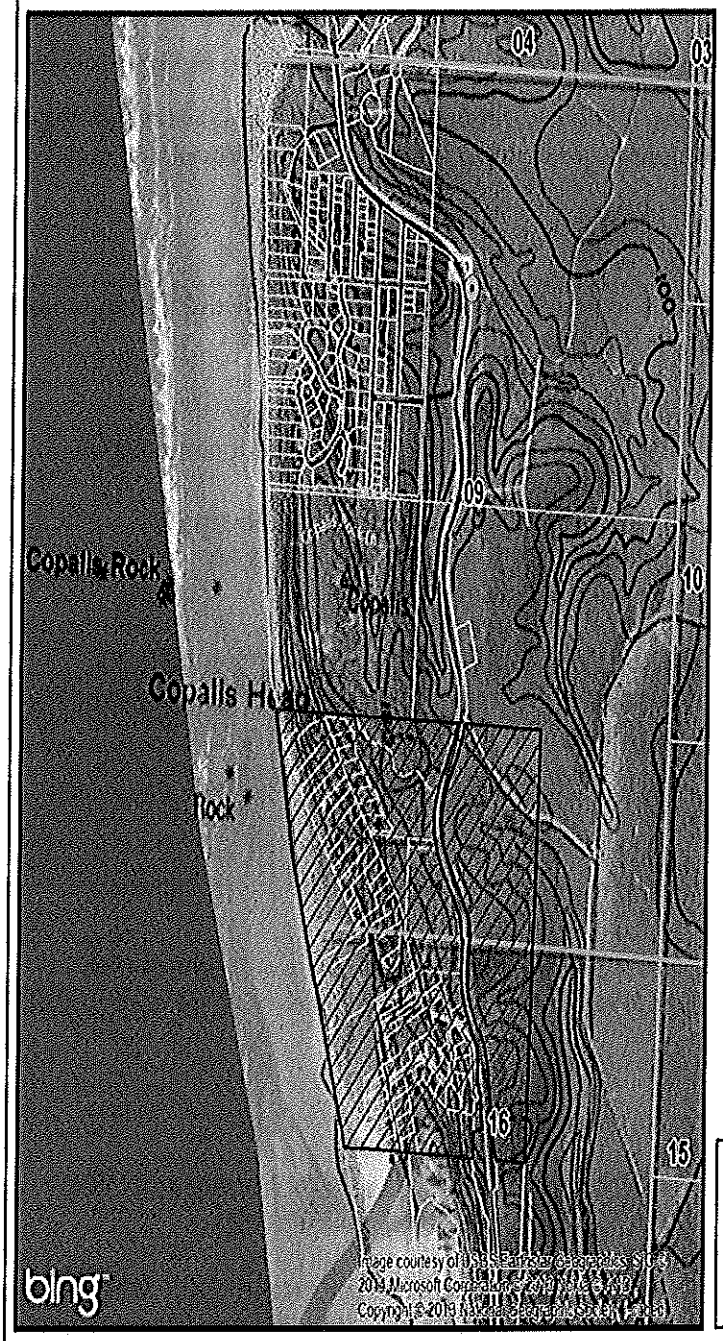
No protests were filed against this application.

Approval of this application will not be detrimental to the public interest.

Conclusions

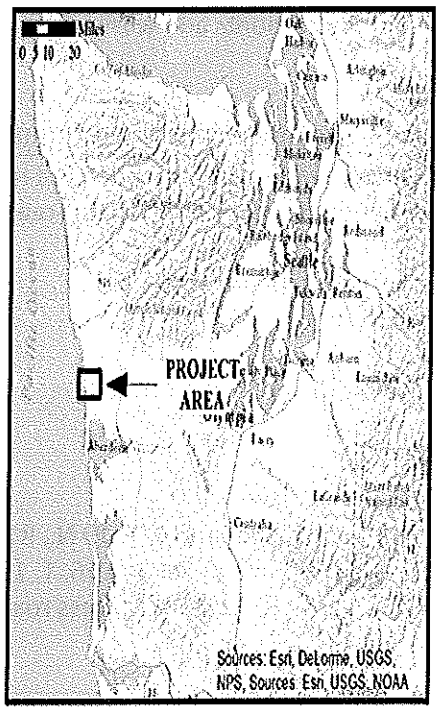
I find that:

- Water is available for appropriation for the Copalis Rock Mutual Benefit Association in the amount requested.
- The use of water for domestic supply is a beneficial use.



Basemaps - bing Maps, ESRI US topo maps

Copalis Rocks Mutual Benefits Association Water Right Application
G2-29357
Sec. 9/16 T. 19N, R. 12 WWM
WRIA 21 - Grays Harbor County



Basemap - ESRI Terrain

Legend

- POINT OF WITHDRAWAL (POW)
- PLACE OF USE (POU)
- SECTION LINES
- GRAYS HARBOR CO. PARCELS

Comments:

The Washington State Department of Ecology does not warrant, guarantee, or make any representations regarding the use of, or results from the use of the data in terms of correctness, accuracy, reliability, or otherwise.

Map Created 4-23-2014

DEPARTMENT OF ECOLOGY State of Washington

0 500 1,000 2,000 3,000 Feet

ATTACHMENT 1

- Existing rights will not be impaired as a result of approving this application.
- Approving this appropriation is not detrimental to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

Maximum instantaneous rate:	50 gallons per minute (non-additive)
Annual quantity:	16 acre-feet additive and 7 acre-feet non-additive
Purpose:	Domestic multiple
Point of Withdrawal:	Existing well located in the NE¼, Section 9, Township 19 North, Range 12 W.W.M.
Season of use:	Year-round, as needed

Place of use:
Government Lot 1, Section 16, T. 19 N., R12 W.W.M, Government Lot 4, Section 9, T. 19 N., R 12 W.W.M., and NW ¼ NE ¼, Section 16, T. 19 N., R. 12 W.W.M. Grays Harbor County. SW ¼ SE ¼ of Section 9, T. 19 N., R. 12 W.W.M. Less roads, Grays Harbor, Washington.

Susan Clark — August 4, 2014
Susan Clark — *Date*

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Selected References

Dion, N.P., and Sumioka, S.S., 1984, Seawater Intrusion into Coastal Aquifers in Washington, 1978, Washington Department of Ecology Water Supply Bulletin 56, 13 p., 14 plates.

Logan, R. L., 2003, Geologic map of the Copalis Beach 1:100,000 Quadrangle, Washington: Washington Division of Geology and Earth Resources Open File Report 2003-1-6, 1 sheet, scale 1:100,000.

Robinson, Roberts & Associates, INC. 1967. Letter to Mr. Charles Y. Close, August 31, 1967, 4 p., 1 fig.