PUBLIC HEALTH DIVISION
Drinking Water Services
Kate Brown, Governor

Oregon Health Authority

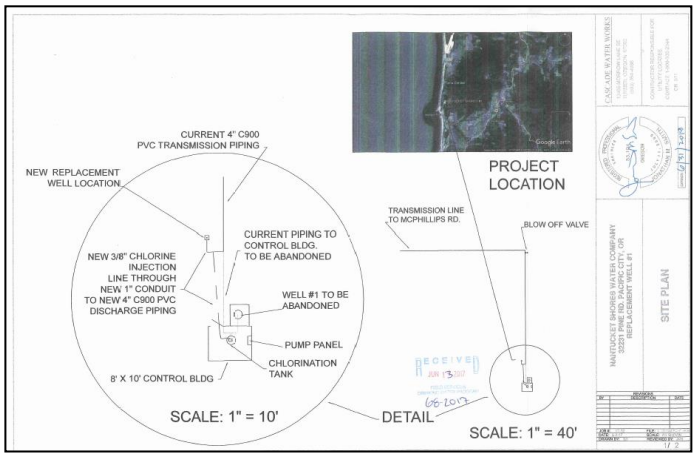
800 NE Oregon Street, Ste 640
Portland, OR 97232
Phone: (971) 673-0405
Fax: (971) 673-0694
www.healthoregon.org/DWP

March 12, 2021

Jonathan Smith, PE
Cascade Water Works, Inc.
13469 Morrow Lane SE
Turner, OR 97392

Re: **Nantucket Shores (PWS ID #95088)**
2017 Well #2 (SRC-AB) – TILL52714, L123440
Conditional Approval (PR #68-2017)

Dear Mr. Smith:



On June 13, 2017, our office received a site plan, well drilling specifications and a plan review fee of $825 on behalf of Nantucket Shores (PWS ID#95088). On August 24, 2017, Carrie Gentry in our office issued a Site Plan Approval for the new well. Per the Site Plan Approval letter, the project included drilling a well to a projected depth of approximately 236 feet. The water system has an easement and there are no setback issues within 100' of the well.

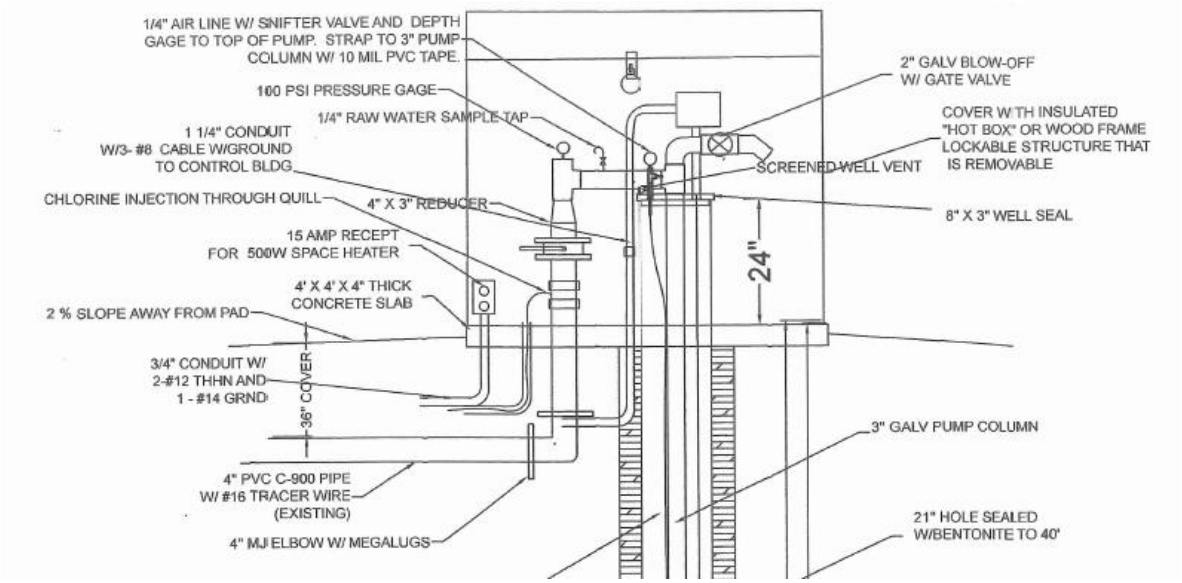
In reviewing the wells in this area, it appears that the new well was drilled 6/14/2017 as indicated in well log ID# TILL52715 and tagged with #L123440. In reviewing the water rights history, it appears a water rights transfer was completed in 2018 under application #T12689 resulting in a new water right #G18131, allowing up to 0.29 cfs (130 gpm) from each of up to two wells (points of diversion) for "quasi-municipal use".

2018 Water Right Permit G1831 (T12689) – priority date 3/30/1995	gpm	Cfs
Water Right (per diversion)	130	0.29
Total Water Right (2 diversions)	260	0.58

Please confirm these findings and, if confirmed, please refer to the conditions needed to be met and instructions on the following pages in order for Final Approval of the well to be granted.

Conditions: In order for the new 2017 well to be approved for use, the following test results and information will need to be submitted.

1. A single set of raw (untreated) water quality data including coliform bacteria, IOCs (including nitrate, nitrite and arsenic), SOCs, VOCs, and radionuclides (gross alpha, radium 226/228 and uranium) are submitted. These are to be taken from the new well's raw water sample tap at the wellhead. Your existing lab (Waterlab) should be able to assist you with this sampling.
2. Plans are submitted that show the above-ground wellhead structure detail including the well house, concrete slab, drainage, pump-to-waste piping, flowmeter (totalizer and/or rate of flow), and plans, specifications, and/or photos showing the wellhead and how it is connected to the water system. The original submittal is shown in the image below:



3. Documentation showing the 100-ft radius of control around the well (e.g., recorded easement, etc.) and absence (via map) or exclusion (via easement) of on-site septic systems and other hazards within 100-ft of the well.
4. A copy of the well log for Well #1 (SRC-AA) or photo showing the well tag number (L#####) affixed to well #1.

For specific rule requirements regarding wells, see OAR 333-061-0050(2)(a)

Instructions to receive Final Approval:

1. Provide written correspondence or documentation demonstrating how each of the conditions above have been met.
2. Complete and submit the Project Final Approval Request form on-line at the link below: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/project-update-form.pdf
3. The form and documentation of conditions having been met may be e-mailed to me at evan.e.hofeld@dhsoha.state.or.us

Following the receipt of Final Approval:

1. The new well may be placed into service.
2. The following sampling is needed once the well is placed into service:
    - Complete two 6-month demonstration rounds (e.g. 7/1/20 – 12/31/20, 1/1/21 – 06/30/21, etc.) of lead and copper tap sampling at 10 sites. This is required due to the installation of the new well. Future monitoring will depend upon the results of this demonstration monitoring.
    - At least one more set of radiological samples will need to be taken after the treatment process. Radiological sampling includes gross alpha, radium 226/228, and uranium.
    - Sampling for VOCs, SOCs and IOCs will depend upon the results of the initial raw water sampling.

Geologist well evaluation results:

The well log (TILL 52714) was submitted to our geologist, Tom Pattee, who provided the results of his evaluation to me on February 16, 2021. As shown on page 8 of this letter, Mr. Pattee found that the well was adequately constructed and sealed such that the well's construction minimized impacts from nearby land use practices, however, the unconfined aquifer the well draws water from, is sensitive to nearby land use practices. Mr. Pattee noted that the presence of a well log for SRC-AA Well #1 has not been confirmed, therefore, a reduction in sampling cannot be approved.

Any correspondence should reference Plan Review #68-2017 and can be emailed to me at evan.e.hofeld@state.or.us or mailed to:

Attn: Evan Hofeld
OHA-Oregon Drinking Water Program
PO BOX 14450
Portland, OR 97293-0450

Thank you for your cooperation and if you have any questions, please feel free to call me at 971-200-0288.

Sincerely,

Evan Hofeld, Regional Engineer
OHA - Drinking Water Services

cc: Barbara Giddings, President - Nantucket Shores Homeowner's Association
Jason Green, Executive Director, Oregon Association of Water Utilities
jgreen@oawu.net
Annette Pampush, Tillamook Co Environmental Health
apampush@co.tillamook.or.us
Cascadewaterworks@hotmail.com (Jonathan Smith)

TILL 52714

Amended

Page 1 of 1

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

9/10/2017

WELL I.D. LABEL# L 123440
START CARD # 1034506
ORIGINAL LOG #

(1) LAND OWNER Owner Well I.D.
First Name BARBARA Last Name GIDDINGS
Company
Address P.O. BOX 999
City PACIFIC CITY State OR Zip 97135

(2) TYPE OF WORK [X] New Well [ ] Deepening [ ] Conversion [ ] Alteration (complete 2a & 10) [ ] Abandonment (complete 5a)

(2a) PRE-ALTERATION

	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
Casing:									

	Material	From	To	Amt	sacks/lbs
Seal:					

(3) DRILL METHOD
[ ] Rotary Air [X] Rotary Mud [ ] Cable [ ] Auger [ ] Cable Mud
[ ] Reverse Rotary [ ] Other

(4) PROPOSED USE [ ] Domestic [ ] Irrigation [X] Community
[ ] Industrial/ Commericial [ ] Livestock [ ] Dewatering
[ ] Thermal [ ] Injection [ ] Other

(5) BORE HOLE CONSTRUCTION Special Standard [ ] (Attach copy)
Depth of Completed Well 237.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/lbs
21	0	237	Bentonite Chips	0	35	121	S
					Calculated	91.49	
					Calculated		

How was seal placed: Method [ ] A [ ] B [ ] C [ ] D [ ] E
[X] Other POURED
Backfill placed from ft. to ft. Material
Filter pack from 35 ft. to 237 ft. Material 3/8 PEA GR Size 10/20
Explosives used: [ ] Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE
Proposed Amount Actual Amount

(6) CASING/LINER

Casing	Liner	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
●	○	10	X	2	207	250	●	○	X	

Shoe [ ] Inside [ ] Outside [ ] Other Location of shoe(s)
Temp casing [ ] Yes Dia From + To

(7) PERFORATIONS/SCREENS
Perforations Method
Screens Type wire mesh Material stainless steel

Perf/ Screen	Casing/ Liner	Screen Dia	From	To	Scrn/slot width	Slot length	# of slots	Tele/ pipe size
Screen	Casing	10	207	237	.001	5		

(8) WELL TESTS: Minimum testing time is 1 hour
(●) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration (hr)
65	20	240	4

Temperature 54 °F Lab analysis [ ] Yes By
Water quality concerns? [ ] Yes (describe below) TDS amount 260 ppm

From	To	Description	Amount	Units

(9) LOCATION OF WELL (legal description)
County TILLAMOOK Twp 4.00 S N/S Range 11.00 W E/W WM
Sec 13 SE 1/4 of the SE 1/4 Tax Lot 100
Tax Map Number Lot
Lat ° ' " or DMS or DD
Long ° ' " or DMS or DD
( ) Street address of well (●) Nearest address
1000 TRAILS PROPERTY, PINE RD., PACIFIC CITY, OR

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Pre-Alteration				
Completed Well	6/15/2017			54

Flowing Artesian? [ ] Dry Hole? [ ]

WATER BEARING ZONES Depth water was first found 180.00

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
6/13/2017	180	237	60			54

(11) WELL LOG Ground Elevation

Material	From	To
Sand	0	237

RECEIVED BY OWRD
OCT 12 2017
SALEM, OR

Date Started 5/18/2017 Completed 6/14/2017

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
License Number Date
Signed

(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
License Number 1879 Date 9/10/2017
Signed MICHAEL J MERRITT (E-filed)
Contact Info (optional) Mike Merritt

ORIGINAL - WATER RESOURCES DEPARTMENT
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK. Form Version

STATE OF OREGON

COUNTY OF TILLAMOOK

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

NANTUCKET SHORES WATER COMPANY
PO BOX 994
PACIFIC CITY, OR 97135

This superseding permit is issued to correct a scrivener's error in the identification of the county, and to describe an amendment for a change in point of appropriation proposed under Permit Amendment Application T-12689 and approved by Special Order Vol. 109, Page 191, entered October 12, 2018, and to describe an extension of time for complete application of water approved December 6, 2007, and an assignment approved December 22, 1997. This permit supersedes Permit G-18114.

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-14021

SOURCE OF WATER: TWO WELLS IN NORTH COAST BASIN

PURPOSE OR USE: QUASI-MUNICIPAL USE

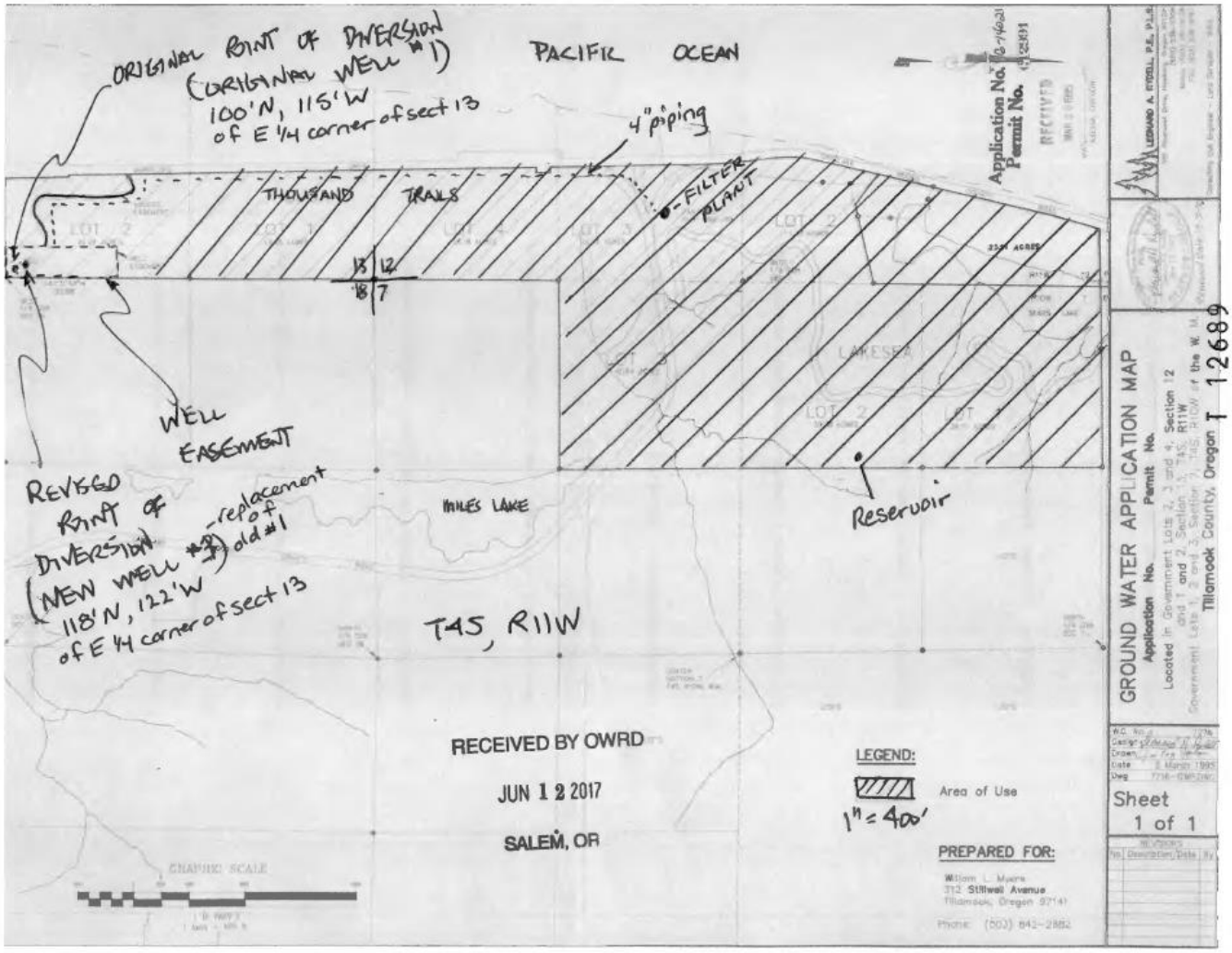
MAXIMUM RATE: 0.58 CUBIC FOOT PER SECOND (CFS), BEING 0.29 CFS FROM EACH WELL

PERIOD OF USE: YEAR ROUND

DATE OF PRIORITY: MARCH 30, 1995

POINTS OF DIVERSION ARE LOCATED AS FOLLOWS:

Twp	Rng	Mer	Sec	Q-Q	GLot	Measured Distances
4 S	11 W	WM	13	SE NE	2	WELL 2 - 690 FEET NORTH AND 115 FEET WEST FROM THE E1/4 CORNER OF SECTION 13
4 S	11 W	WM	13	SE NE	2	WELL 3 - 118 FEET NORTH AND 122 FEET WEST FROM THE E1/4 CORNER OF SECTION 13


ORIGINAL POINT OF DIVERSION (ORIGINAL WELL #1) 100'N, 115'W of E 1/4 corner of sect 13
PACIFIC OCEAN
4" piping
THOUSAND TRAILS
FILTER PLANT
WELL EASEMENT
REVISED POINT OF DIVERSION (NEW WELL #2 - replacement of old #1) 118'N, 122'W of E 1/4 corner of sect 13
MILES LAKE
Reservoir
T4S, R11W
RECEIVED BY OWRD
JUN 12 2017
SALEM, OR
LEGEND:
Area of Use
1" = 400'
PREPARED FOR:
William L. Myers
312 Stillwell Avenue
Tillamook, Oregon 97141
Phone: (503) 842-2882
GROUND WATER APPLICATION MAP
Application No.
Permit No.
Tillamook County, Oregon
T 12689
Sheet 1 of 1

Geologist Well Log Evaluation Results:

The well log (TILL 52714) was submitted to our geologist, Tom Pattee, who provided the results of his evaluation to me on February 16, 2021. As shown below, Mr. Pattee found that the well was adequately constructed and sealed such that the well's construction minimized impacts from nearby land use practices, however, the unconfined aquifer the well draws water from, is sensitive to nearby land use practices. Mr. Pattee noted that the presence of a well log for SRC-AA Well #1 has not been confirmed, therefore, a reduction in sampling cannot be approved.

As Built Well Construction Evaluation for Plan Review and/or Setback Waiver:

☒ Well/Spring meets current construction standards.

Comments: This well was constructed to a depth of 237 ft and is cased to a depth of 207 ft. A casing seal was constructed to a depth of 35 ft. Water enters the well through a 30 ft long well screen attached to the bottom of the casing. Sensitivity Analysis results suggest that well construction does not contribute to overall water supply sensitivity to nearby land use practices.

Nature of Aquifer Evaluation:

Aquifer Nature: ☐ Confined aquifer ☐ Semi-confined aquifer ☒ Unconfined aquifer

Comments: This well is constructed to draw water from the deeper portions of an unconfined sand aquifer. Although the well driller reported first water at a depth of 180 ft, it was also reported that sand was encountered from the surface to the bottom of the well. Therefore, it is assumed that potential water-bearing materials extend to the surface and that those materials near the surface may yield water a little slower than those near the bottom of the well. Sensitivity Analysis results suggest that the aquifer is highly sensitive to nearby land use practices.

Monitoring Reduction Determination Results:

☐ Qualifies for initial chemical monitoring reduction as part of existing Wellfield – one round of chemical testing is sufficient.
- ☐ Source is on existing entry point – future monitoring required at entry point.
- ☐ Source is on a separate entry point – future monitoring includes nitrate at all entry points & source monitoring at entry point designated by geologist in comments below.

☐ Qualifies for initial chemical monitoring reduction based on historical data from nearby public water supply well(s) sharing the same aquifer – one round of chemical testing is sufficient. Future monitoring required at entry point.

☐ Qualifies for Common Aquifer designation for DBP monitoring – additional DBP sample sites not required.

☒ Does not qualify for monitoring reduction.

☐ Other: _____

Comments: Existing SRC-AA, Well #1 is reported to be within 20 ft of this newer well. However, the construction of SRC-AA is unknown. Historically, WRD Well Log #TILL1200 has been associated with SRC-AA (see 2005 Sanitary Survey). However, this seems highly unlikely as TILL1200 is a well log for a 2-inch diameter monitoring well, not a water supply well. TILL1200 also describes the location of the associated monitoring well to be at or near 30000 Sand Lake Rd which is about 1.3 miles north of where SRC-AA, Well #1 is located. Since the depth and construction of SRC-AA, Well #1 is unknown, it can not be determined if sample results from SRC-AA will likely be representative of the new source. Therefore, an initial monitoring reduction is not recommended. If the total depth and location of screens/perforations were to be determined for SRC-AA, and the depths were similar to the new well, a monitoring reduction re-evaluation could be conducted.