

City of Rockaway Beach

Sourcewater Protection Plan Development

Advisory Committee (SPPDAC) Meeting Agenda



Date: Monday, June 17, 2024
Time: 8:30 – 10:30 A.M.
Location: Rockaway Beach City Hall, 276 Hwy 101 – 2nd Floor Conference Room

Join here to attend the meeting remotely:

<https://us06web.zoom.us/j/84399653724?pwd=Tji45JyzUlnbrq5AP5kwn7qQn7Qwvc.1>

Meeting ID: 843 9965 3724

Passcode: 087498

Dial by your location

253 215 8782 US (Tacoma)

How to Provide Public Comment:

- Written Comments – submit in person at meeting or online at <https://corb.us/advisory-committees/>
 - In Person – sign-up sheet and instructions will be located on the table inside the meeting room.
 - Virtually on Zoom – use the “raise hand” feature when the Chair announces it is time to do so.
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1. **CALL TO ORDER** – Sandra Johnson, Chair

2. **ROLL CALL**

3. **APPROVAL OF MINUTES**

4. **PUBLIC COMMENT**

5. **NEW BUSINESS**

a. **Review of Overarching and Current Objectives**

Suzanne de Szoeki, GSI Water Solutions, Inc., will provide a review of objectives.

b. **Identifying Risks**

Suzanne de Szoeki, GSI Water Solutions, Inc., will summarize the source water area risk tables, then invite committee questions. Committee members to review and provide comments on the tables.

i. **Preliminary Rockaway Beach Drinking Water Protection Plan (DWPP) Risks Table (Surface Water)**

ii. **Rockaway Beach DWPP Risks to Groundwater Table**

c. **Prioritizing Risks**

Suzanne de Szoeki, GSI Water Solutions, Inc., will provide an overview of the Risk Prioritization Examples. Committee members to review and provide comments.

d. Next Steps

6. ADJOURNMENT

City of Rockaway Beach

Sourcewater Protection Plan Development Advisory Committee (SPPDAC) Meeting Minutes



Date: Monday, April 29, 2024
Time: 2:00 P.M.

1. CALL TO ORDER – Charles McNeilly, Mayor
Mayor McNeilly called the meeting to order at 2:00 p.m.

2. ROLL CALL

Committee Members Present: Sandra Johnson, Jason Maxfield, Lydia Hess, Ron Cleman, Jay Udelhoven

Council Members Present: Alesia Franken, City Council Liaison, and Mayor Charles McNeilly

Staff Present: Luke Shepard, City Manager; and Melissa Thompson, City Recorder

Consultant Present: Suzanne de Szoeker, GSI Water Solutions, Inc.

3. APPROVAL OF ACTION MINUTES – None Scheduled

4. PUBLIC COMMENT

Bob Larson made comments on behalf of Nancy Webster, representing North Coast Communities for Watershed Protection (NCCWP), advocating for no more clear-cutting, pesticide use, or slash burning in Oregon drinking watersheds.

Phil Blanton commented that this was a crucial opportunity for community members who drink the water to have their voices heard and help determine how the watershed is managed.

Mary McGinnis, City Councilor, thanked the committee and commented on the opportunity to preserve the watershed for the next 20 years.

Kristin Koptiuch advocating for protecting the watershed using nature-centered environmental ethics.

Richard Felley advocated that Rockaway Beach restore the Jetty Creek watershed and rely solely on surface water.

Jordan Gulaskey commented on the Nehalem watershed and advocated for water for future generations, stating that clear cut watersheds collect up to fifty percent less water.

Goldea See advocated for keeping the watershed vital.

Daniel Howlett commented on the history of the Jetty Creek watershed and expressed concerns regarding clear-cutting, water rates, and septic tanks.

Nancy Webster submitted for the meeting record a letter and Jetty Creek Timeline, as well as the Secretary of State's Advisory Report on rural watersheds. Webster commented that she can smell septic during heavy rains in Nedonna Beach.

Nancy Lanyon inquired about maps included in the meeting packet and whether the area being considered included the entire map. Lanyon inquired about guidelines for watershed stewardship and encouraged establishment of a liaison with Oregon Health Authority.

5. NEW BUSINESS

a. Introductions

At the invitation of McNeilly, committee members introduced themselves and commented on their motivation to join the committee. Shepard introduced himself and thanked members for joining the committee.

b. Election of Committee Chair

Maxfield made a **motion**, seconded by Hess, to appoint Sandra Johnson as Chair of the Sourcewater Protection Plan Development Advisory Committee.

Maxfield commented that Johnson was well-qualified to serve as Chair. At the request of Udelhoven and McNeilly, Johnson confirmed her willingness to serve as Chair.

The **motion carried** unanimously.

c. What is a Drinking Water Protection Plan (DWPP)?

d. Why Develop the DWPP?

e. Components of the DWPP and Examples

f. DWPP Development Process

g. Advisory Committee Meeting Approach and Schedule Discussion

Suzanne de Szoeki, GSI Water Solutions, Inc., gave a presentation on agenda items "c" through "g". de Szoeki solicited input regarding preferences for the approach to meetings. There was discussion regarding preferences. There was discussion regarding the role of the committee and public input.

Maxfield made a **motion**, seconded by Udelhoven, to accept the format to receive information following the DWPP team meeting and reports.

The **motion carried** unanimously.

h. Upcoming Watershed Tour

Shepard explained there would be a watershed tour for the committee on May 21, 2024, from 8:00-11:00 a.m.

It was noted that the next committee meeting would be in June. There was further discussion regarding the roles and responsibilities of the committee, and development of the agenda.

Shepard confirmed that there would be an online form for submitting public comments.

6. ADJOURNMENT

Maxfield made a **motion**, seconded by Cleman to adjourn the meeting at 3:32 p.m.

The **motion carried** unanimously.

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Rockaway Beach DWPP Risks Table (Surface Water)

6/10/2024

Risks to Jetty Creek Drinking Water Source

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Natural Hazards	Highly Erodible Soils	80% of the stream miles (18.58 mi) within 500 feet of the stream in the source water area contain soils with high erosion potential (USWA, 2016). Highly erodible soils contribute sediment and potential contaminants at a higher rate to the water source, increasing turbidity and decreasing water quality.	<i>Look into sources of data. DEQ can look into providing more data.</i>	Updated Source Water Assessment (USWA), DEQ, 2016
Natural Hazards	Landslides	Landslide deposits (non-rock material) are mapped near the intake and in the mid-watershed (USWA, 2016). Landslides can increase turbidity in the water.	<i>Look into sources of data. ODF publishes high landslide hazard location data; we could look into this more. DEQ can look into providing more updated data, but could take a few months.</i> <i>What level of detail do we want our analysis to be for this risk? We can consider evaluating certain parts of the watershed more closely.</i> <i>A 2015 landslide closed the road; several small landslides have been observed.</i>	Updated Source Water Assessment (USWA), DEQ, 2016

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Natural Hazards	Drought and Low Streamflows	<p>Drought and low streamflows put the City at risk of water supply shortages and decreased drinking water quality. Low streamflows can increase water temperatures, which may introduce toxic algal blooms. Low flows have a higher concentration of contaminants. Climate change is projected to cause more frequent and severe droughts and low streamflows, which increases the impacts of other risks, such as high stream temperatures, sediment, pollution, dissolved oxygen, algae, and bacteria counts.</p>		<p>Tillamook County Natural Hazards Mitigation Plan (NHMP), 2023</p> <p>Climate change: Other DWPPs (Lincoln City, Toledo, Yachats, Corbett)</p>
Natural Hazards	Climate Change	<p>Climate change exacerbates existing risks to the drinking water source. It is projected to cause more frequent and severe droughts and low streamflows, which increases the impacts of other risks such as high stream temperatures, sediment, pollution, dissolved oxygen, algae, and bacteria counts. Increasing temperatures and droughts also increase the risk of wildfires in the watershed. Climate change is projected to increase winter precipitation in the form of rainfall and decrease snowpack, which can increase erosion and sediment transport to streams. Storms are also likely to increase in severity and frequency, increasing the risk of flooding and sediment transport to streams.</p>	<p><i>Team decided to incorporate climate into individual hazards, and make it a separate risk to stand out and reiterate the potential impacts.</i></p>	<p>Other DWPPs</p>

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Natural Hazards	Earthquake	The entire Oregon Coast is at risk of a severe Cascadia Subduction Zone earthquake. The effects of an earthquake could include destruction of water system infrastructure, landslides, and potential contamination of drinking water. Tsunamis following an earthquake would intensify these effects and have additional effects.		Tillamook County NHMP, 2023 Other DWPPs
Natural Hazards	Tsunami	Rockaway Beach is at a higher risk of a tsunami than Tillamook County as a whole (NHMP, 2023). The water treatment plant and public works building are exposed to tsunami (CSZ M9.0-med) and have a greater than 50% probability of moderate to complete damage from a CSZ earthquake (NHMP, 2023). A tsunami could destroy vital infrastructure and result in water supply shortages, potential saltwater intrusion, and other contamination of drinking water.		Tillamook County NHMP, 2023 Other DWPPs
Natural Hazards	Severe Storms	Severe storms increase the likelihood of high stream turbidity and flooding, which puts drinking water quality at risk. The region has experienced impactful severe storms in recent years. December 2015 storms caused significant riverine flooding east of Highway 101. A combination of sand-blocking outlets and high tides meeting large volumes of runoff from the higher ground caused road closures. January 2021 saw coastal flooding events, landslides, and debris flows in the area. Climate change is projected to increase winter precipitation through more severe storms, which can increase erosion and sediment transport to streams.		Tillamook County NHMP, 2023 Other DWPPs Climate change: Other DWPPs (Lincoln City, Toledo, Yachats, Corbett)

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Natural Hazards	Wildfire	<p>Wildfires remove vegetation and damage soils, which increases runoff and erosion and decreases soil water infiltration and retention. Firefighting chemicals could potentially impact water quality. Water used for fire suppression could be taken from the water supply.</p> <p>Increasing temperatures and droughts anticipated from climate change could increase the risk of wildfires.</p>	<p><i>Depending on the location, Jetty Creek water could be used for firefighting.</i></p> <p><i>The majority of wildfires on the coast are human caused (we could make a distinction in DWPP).</i></p> <p><i>Concern of PFAS (not typically used for fire suppression). Not required to inform the state when PFAS is used for fires, but 13 occurrences have been reported statewide since 2020.</i></p> <p><i>Wildfires in recent years were set off by extreme winds. Climate change could influence the causes of wildfires.</i></p>	<p>Tillamook County NHMP, 2023</p> <p>Other DWPPs</p> <p>Climate change: Other DWPPs (Lincoln City, Toledo, Yachats, Corbett)</p>
Natural Hazards	Volcanic ashfall	<p>Volcanic ashfall from a Cascade volcanic eruption is identified as a low risk to Lincoln County in the NHMP (2023) but could affect Rockaway Beach. The effects of volcanic ash would be significant for water quality and could damage water infrastructure (NHMP, 2023).</p>		<p>Tillamook County NHMP, 2023</p>

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Forestry Activities	Clearcut harvesting	<p>The source watershed is 100% private forested land with two landowners (USWA, 2016). The USWA (2016) identified clearcut harvesting with a rotation of under 35 years as a potential risk in the source water area. The USWA specified clearcuts southeast of the City's intake as a risk. Aerial imagery from 2000 to 2024 shows that nearly the entire drinking water source area has been clearcut within the ~25 year time period.</p> <p>Timber harvesting impacts the ecology and hydrology of watersheds, including the amount of runoff, stream temperatures, sediment transport, soil properties and moisture retention, and stream turbidity (other DWPPs). Factors such as elevation, slope steepness, and direction of slope can influence the impact of timber harvesting.</p>	<p><i>Should clearcuts be a separate risk from partial harvesting/thinning?</i></p> <p><i>Do we need to distinguish between clearcuts near water intakes versus higher in the watershed due to potentially different impacts?</i></p> <p><i>Are risks different for longer rotation cycles? Should we consider dividing out clearcutting risks by cycle length or other factors.</i></p>	<p>USWA, DEQ, 2016</p> <p>Segura, Catalina, et al. "Long-term effects of forest harvesting on summer low flow deficits in the Coast Range of Oregon." Journal of Hydrology, vol. 585, June 2020, p. 124749, https://doi.org/10.1016/j.jhydrol.2020.124749.</p> <p>Other DWPPS (Corbett, Lincoln City, Toledo, Yachats)</p>
Forestry Activities	Pesticides and Fertilizers	<p>Pesticides and fertilizers used in forestry may enter waterways and contaminate water quality. DEQ has reported detections of herbicide residue (sulfometuron-methyl) in Rockaway Beach's untreated drinking water (USWA, 2016).</p> <p>The method and timing of chemical applications influence the level of risk to drinking water. For example, applying on steep slopes in sparsely vegetated areas increases the risk of contaminating the creek. Aerial spraying is potentially a greater risk to water quality than other application methods. (other DWPPs)</p>		<p>USWA, DEQ, 2016</p> <p>Other DWPPS (Corbett, Lincoln City, Yachats, Toledo)</p>

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Forestry Activities	Access Roads	Building, maintenance, and usage of roads, particularly wet weather haul, may contribute to erosion and stream turbidity. Updated Oregon Forest Practices Act rules and best management practices can help reduce these impacts.		Other DWPPs
Forest Activities	Riparian Impacts	Timber harvesting activities could affect soils and vegetation along streams, resulting in increased erosion and stream turbidity. Reduced vegetation could lead to an increase in stream temperatures and potentially an increase in algae growth and bacteria counts. Updated Oregon Forest Practices Act rules increase riparian buffer zones based on stream classifications and add protections for non-fish-bearing streams.		Other DWPPs
Forestry Activities	Borrow Pit	A small, likely inactive (identified as inactive in the 2002 SWA) borrow pit east of the intake used for local logging roads is a potential risk to drinking water. Spills or leaks of waste or chemicals from mining operations could impact water quality (SWA, 2002).	<i>Lower risk due to being small and inactive (according to 2002 SWA. USWA does not specify if it is active.)</i>	Original Source Water Assessment, DEQ, SWA, 2002 (for additional notes about contaminant sources) USWA, DEQ, 2016
Municipal	Infrastructure leakage or failures	Municipal water system infrastructure, such as pipes, valves, storage tanks, and water treatment facility, is vulnerable to leaks and failures due to aging and wear and tear. Aging infrastructure may impact the City's ability to divert, store, and distribute water. Leaks can increase demand for water diversions, which may not be available during droughts.		Other DWPPs

Rockaway Beach DWPP Risks Table (Surface Water)

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Municipal	Vandalism	Vandalism or sabotage would include deliberate damage to water pipelines, the water treatment facility, and other components of water infrastructure. Vandalism could impact water quality or quantity. Cybersecurity is another concern for municipalities, as cyber attacks could affect the City's ability to operate its water system.		Other DWPPs
Land Use	Unauthorized camping	Camping is not allowed on the properties within the watershed, but it can be difficult to prevent people from accessing and camping on the land. Camping land uses that pose a risk to the source watershed include improper garbage and/or human/animal waste disposal, potential vehicular pollution, and fires.	<i>We could include these risks under the municipal category, or create a separate category (such as land use).</i>	DWPP Team members
	Recreation	Hiking, horseback riding, and possibly other recreational uses in the source water area pose potential risks to drinking water, such as erosion and pollutants from litter and/or animal waste.		DWPP Team members
	Fecal coliform TMDL		<i>Need to investigate the TMDL further (sources of contamination, location, etc.) Should it be its own risk?</i>	USWA, DEQ, 2016

Rockaway Beach DWPP Risks to Groundwater

6/10/2024

Risks to Groundwater Sources

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Municipal	Sewer lines	Sewer lines through residential areas pose a contamination risk to groundwater.		USWA, DEQ, 2016
Municipal	Septic systems	Above ground storage tanks and large capacity septic systems serving more than 20 people are potential sources of contamination. Septic systems, particularly aging ones, can leach contaminants into the groundwater.		USWA, DEQ, 2016
Municipal	Residential high-density housing	High-density housing with septic systems can result in a higher concentration of contaminants leaching into groundwater these areas.	Should this be a separate risk from the septic systems risk?	USWA, DEQ, 2016
Municipal	Aging infrastructure	Aging wells, pipelines, and other components of drinking water infrastructure put the ability of providing groundwater at risk.		Other DWPPs
Municipal	Phone line?	SFM (State Fire Marshall) - HSIS (Hazardous Material Information System) for WIRED TELECOMMUNICATIONS CARRIERS has one chemical reported on site that could impact water quality	Information is lacking about this risk. USWA doesn't identify the chemical that poses a risk.	USWA, DEQ, 2016

Risk Category	Risk	Description and Impacts	Comments/Questions	Information Sources
Transportation	Roads, highways, and railroads	Several transportation corridors as potential risks to groundwater sources: the Port of Tillamook Bay Railroad, Highway 101, and a few roads owned by BLM, ODOT, the City, and the County. Vehicles may deposit contaminants that can infiltrate into groundwater sources via stormwater runoff.		USWA, DEQ, 2016 Other DWPPs
Other	Stormwater	The USWA identified stormwater from Nedonna Wave PUD (Public or People's Utility District?) as a potential source of pollution in its Site Information System (SIS). Stormwater runoff is a risk to groundwater quality, as it has the potential to transport pollutants to the groundwater.	More information is needed about this specific risk.	USWA, DEQ, 2016
Natural hazards	Saltwater intrusion	OHA has issued at least three alerts of sodium detections in the City's groundwater (USWA, 2016). Sodium from seawater impacts water quality. In addition to introducing salt, seawater can transport other pollutants to groundwater. With sea level rise due to climate change, this risk is likely to increase.	Have more alerts been issued since 2016?	USWA, DEQ, 2016 Other DWPPs

*Note: This table does not include certain risks that are in the surface water table that also apply to groundwater sources. All of the natural hazard risks could also impact groundwater, as well as vandalism technically.

Risk Prioritization Examples

This document presents examples of ways to prioritize risks that could be used for prioritizing potential risks to Rockaway Beach’s drinking water supply and water quality.

Risk Matrices

Risk prioritization matrices are often used to classify risks based on their probability of occurrence and severity of their impact if they do occur.

This is a basic matrix for classifying risks into high, medium, and low categories.

		SEVERITY →		
		1	2	3
LIKELIHOOD ↓				
1		LOW - 1 -	LOW - 2 -	MEDIUM - 3 -
2		LOW - 2 -	MEDIUM - 4 -	HIGH - 6 -
3		MEDIUM - 3 -	HIGH - 6 -	HIGH - 9 -

A risk prioritization matrix can also be more detailed, with four or five levels of likelihood and severity of impact.

		Impact				
		Insignificant	Minor	Moderate	Serious	Catastrophic
Likelihood	Certain					
	Likely					
	Possible					
	Unlikely					
	Rare					

Using a 5x5 risk prioritization matrix, risks can be classified into high/medium/low priority, or into more detailed categories.

Likelihood (overall score)	Consequence (overall score)				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Severe (5)
Almost certain (5)	Medium (5)	Medium (10)	High (15)	High (20)	High (25)
Likely (4)	Low (4)	Medium (8)	Medium (12)	High (16)	High (20)
Possible (3)	Low (3)	Medium (6)	Medium (9)	Medium (12)	High (15)
Unlikely (2)	Low (2)	Low (4)	Medium (6)	Medium (8)	Medium (10)
Rare (1)	Low (1)	Low (2)	Low (3)	Low (4)	Medium (5)

The number of categories may be adjusted to align with the number of different management strategies that may be chosen.

Risk Management Model		Probability		
		Low	Medium	High
Impact	Severe/Critical	Substantial management required	Must monitor and manage risks	Extensive management crucial
	Moderate	May accept risks but monitor them	Management effort useful	Management effort required
	Limited/Minor	Accept risks	Accept risks but monitor them	Monitor and manage risks

Examples related to source water protection

The probability and impact of risks to drinking water sources can vary based on local conditions. Your input is critical in helping us understand how these risks may impact the City’s drinking water sources, and in identifying any additional risks that were not included in the Source Water Assessment.

This example comes from the Yachats Drinking Water Protection Plan.

Category	Risk Addressed	Risk Level ¹
Natural Disasters	Drought/low flows	High (5,5)
	Climate change	High (5,5)
	Wildfire	High (4,5)
	Earthquakes	High (4,5)
	Severe Weather Events	High (5,4)
	Tsunamis	High (2,5)
	Insect outbreak	Medium (2,4)
Forestry Management	Timber harvest	High (4,4)
	Forestry pesticides	High (4,4)
	Access roads	High (4,4)
Municipal, Commercial, and Residential (Urban and Rural) Property Management	Development	High (4,4)
	Property management	High (4,4)
	Aging municipal infrastructure	High (4,4)
	Landscape care	Medium (3,4)
	Saltwater Intrusion	Low (1,2)
	Sabotage or vandalism of municipal infrastructure	Low (1,1)

¹ Numbers in parentheses refer to the probability and consequence of each risk, with 1 being the lowest probability or consequence and 5 being the highest probability or consequence

The Yachats DWPP Team assessed the probability and consequence of each potential risk identified, which resulted in a ranking of high, medium, or low risk. Strategies were developed for addressing the risks, with special attention to the highest ranked risks.

Source Water Assessments provide specific information about potential contaminant sources in a watershed, but they do not describe general risks such as natural disasters. The Yachats DWPP Team identified and prioritized potential risks from natural disasters that could be addressed to make their water supply more resilient.