



Newport South Beach

Opportunities and Constraints Assessment



June 2021

Prepared for: Newport Urban Renewal Agency

Draft Report







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1. Purpose & Background

Nestled on the south side of the Yaquina Bay Bridge, Newport's South Beach provides a distinct mix of regional institutions, recreational facilities, neighborhoods, and retail businesses. The area has come a long way since 1983, when the City of Newport established an urban renewal district in the area to address the area's lack of transportation connections, urban infrastructure, and public amenities. Since then, the Agency has helped to complete the area's transportation network, fund the creation of a wastewater treatment plant, spur the development of the popular Oregon Coast Aquarium, and as of 2021, is in the process of making improvements to US 101 that will reconfigure key intersections to ease congestion. In addition to the Aquarium, the area features a mix of institutions, including the Hatfield Marine Science Center, OMSI's Camp Gray, Oregon Coast Community College, Newport Municipal Airport, and the Port of Newport's South Beach Marina and RV Park.

However, while the Agency has made progress in solidifying the area as a functional district within the city, several constraints remain:

- While Highway 101 runs through the area as the key transportation spine, South Beach's most charming attractions are hidden from view.
- South Beach's many bike paths provide an alternative to car transport, but the network feels patchy in places.
- South Beach lacks a strong sense of place and could use landscaping and public art installments more effectively.
- Invasive species are problem in South Beach, and current management is insufficient.
- Residents, visitors, and employees in the area point to a lack of retail services in the area, requiring them to cross the Yaquina Bay Bridge for any good or service they might need.
- Traffic congestion remains a concern, especially at 40th Street, which is poised to see growth as the Wilder residential area builds out.
- At the southern end of the district, a lack of sewer infrastructure limits development opportunities on industrial and commercial properties near the Newport Municipal Airport.

The Agency is at an inflection point: it has between \$5 million and \$9 million left of funding capacity that it must award by the end of 2025. Its goal is to do so in the most effective way possible that provides the greatest benefit to the tax base including area residents, visitors, and employees while also helping to remove development barriers on the remaining underutilized parcels in the area.

The purpose of this report is to serve as a background document that organizes key issues within South Beach alongside ideas for how to address the area's constraints. The document

also provides a decision-making framework that helps to prioritize limited remaining urban renewal funding from 2022 to 2025. This document is the first step in a larger process that will ultimately recommend a prioritized list of projects for Agency investments, based on stakeholder feedback and technical analysis.

Urban Renewal Plan Objectives

The objectives¹ of the South Beach Urban Renewal Plan (1983) are to:

- Preserve forest, water, wildlife, and other natural resources
- Identify sites for public uses such as the OSU Marine Science Center
- Complete a Port facilitated marine recreation area
- Encouraging marine oriented activities on the northern Shorelands
- Assure the development of complementary uses adjacent to the Airport
- Plan new sewer, water, and transportation capacity
- Allocate a major part of South Beach to heavy commercial and light industrial uses

The South Beach Urban Renewal Plan was created to reduce or eliminate blighted conditions in South Beach, including:

Sub-standard street improvements, rights of way and traffic signalization and management

Incomplete pedestrian/bicycle circulation systems and Tsunami evacuation routes

Inadequate water storage capacity and distribution lines

Under sized or absent sanitary sewer collection service lines

Incomplete winter storm water management systems

Inadequate neighborhood recreation facilities and open space

Source: South Beach Urban Renewal Plan Amendment 5

Project concepts for the final phase of Urban Renewal Investments must be consistent with these objectives.



Highway 101 through the area is set to see a significant upgrade in 2021. Most of the parcels that front this busy highway in South Beach are service businesses or vacant lots.

¹ Substantial Amendment Five to the South Beach Urban Renewal Plan 5 The Benkendorf Associates Corp September 2008, City of Newport, Oregon Urban Renewal Agency

2021 Investment Priorities

Since the urban renewal area has been around for close to 40 years, the refinement plan acknowledges the progress the Urban Renewal Agency has made in achieving its objectives as well as the changed conditions and user base in the area. The Urban Renewal Agency has established the following investment priorities for the 2021 refinement plan to establish a framework for how the Agency will prioritize project investments in the remaining life of the urban renewal area. They are based on conversations to date with stakeholders, the Staff Technical Advisory Committee (composed of key public works, planning, and management staff), and the Agency, and also reflect broader City priorities as part of the Newport Vision 2040.

- 1. Promote a sense of place for residents and visitors that reflects the South Beach identity.
- 2. Improve connectivity for bicyclists and pedestrians to South Beach destinations.
- 3. Attract new development that can meet the service and retail needs of South Beach residents.
- 4. Invest in overcoming market and development barriers on underutilized or vacant sites.
- 5. Reduce sewer, water, and transportation infrastructure barriers to enable job creation on industrial lands near the airport.
- 6. Invest in improvements that promote long-term community resiliency to address tsunami, flooding, and earthquake hazards.

Exhibit 1 compares the original plan's objectives with the Agency's investment priorities for 2021.



Aquarium Village offers an eclectic blend of makerspaces and businesses serving visitors such as gift shops and restaurants.

Exhibit 1. Urban Renewal Plan Objectives and 2021 Investment Priorities			
1983 Urban Renewal Plan Objective* Any URA investment must meet at least one of these objectives.	2021 Refinement Plan Investment Priorities Key priorities for Agency investments, based on current conditions and users of South Beach to meet the urban renewal plan objectives.		
1 D () () () () () ()			
1. Preserve forest, water, wildlife and other natural resources	 Objective met through land use planning process. 		
2. Identify sites for public uses such as the OSU Marine Science Center	Objective met		
 Complete a Port facilitated marine recreation area 	Objective met		
4. Encouraging marine oriented activities on the northern Shorelands	Objective met		
5. Assure the development of complementary uses adjacent to the Airport	 Improve connectivity for bicyclists and pedestrians to South Beach destinations. Reduce sewer, water, and transportation infrastructure barriers to enable job creation on 		
6. Plan new sewer, water, and transportation capacity	 Invest in improvements that promote long-term community resiliency to address tsunami, flooding, and earthquake hazards. 		
7. Allocate a major part of South Beach to heavy commercial and light industrial uses	 Promote a sense of place for residents and visitors that reflects the South Beach identity. Attract new development that can meet the service and retail needs of South Beach residents. Invest in overcoming market and development barriers on underutilized or vacant sites. 		

Exhibit 1 Urban Renewal Plan Objectives and 2021 Investment Priorities

Investment Areas

South Beach features two interconnected but distinct geographies which have different investment needs. In this report, we have divided the district into two investment areas:

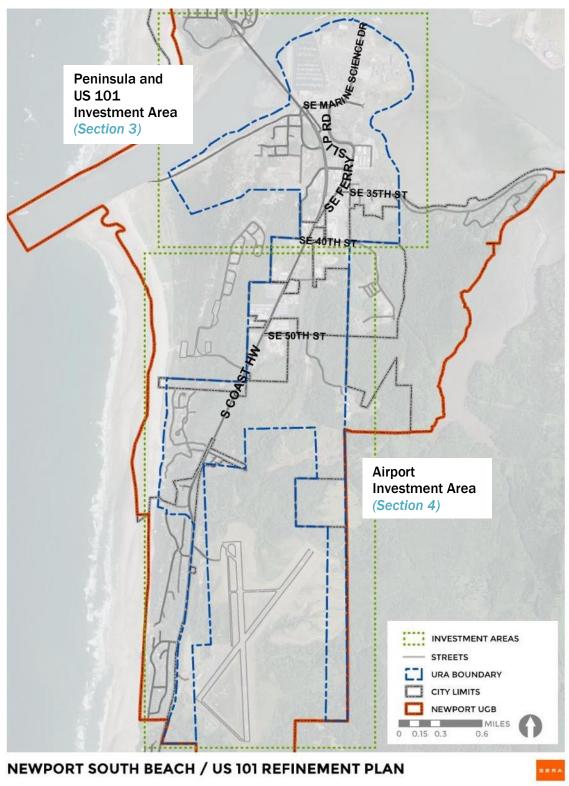
- The Peninsula / US 101 Investment Area is home to the area's major institutions, attracts visitors from around the United States and Beyond, and also is home to the area's retail establishments and hotels.
- The Airport Investment area includes the Municipal Airport, but it also publicly and privately owned land that is zoned for industrial development.

The City and Urban Renewal Agency are interested in helping South Beach to contribute to the overall vision for Newport: "In 2040, the Greater Newport Area is an enterprising, livable community that feels like home to residents and visitors alike. We have carefully planned for growth with well-maintained infrastructure, affordable housing for all income levels, robust public transportation, diverse shopping opportunities, and distinct, walkable districts and neighborhoods."

Source: Newport Vision 2040 https://www.newportoregon.gov/dept/cdd/doc uments/Vision2040/Vision2040_Brochure.pdf

Exhibit 2 provides an overview of the two investment areas.

Exhibit 2. Investment Areas



Approach and Methods

We used multiple methods to understand the current opportunities and constraints for revitalization and development in South Beach:

- Market Analysis: To understand who South Beach serves, we conducted market research using data gathered from ESRI Business Analyst, U.S. Census OnTheMap, CoStar, and South Beach State Park. Due to the size and location of South Beach, it is challenging to obtain data that accurately reflects current market conditions in the area, so we relied heavily on stakeholder outreach to fill in the gaps.
- Plan Review: We also researched local plans to ensure that our work was informed by, and coordinated with, these local plans which included the TGM Refinement Plan and the Sewer Master Plan among others.
- Stakeholder Outreach: We conducted interviews with a variety of stakeholders in Spring 2021. The interviewees represent local business and property owners, real estate brokers and developers, community members, and economic development professionals. These interviews helped us understand current market conditions in South Beach as well as community priorities and key opportunities and constraints for development and associated investments.

ECONorthwest and SERA Architects interviewed the following individuals and committees in April 2021. Additional interviews will take place with other stakeholders starting in July 2021.

Interviewee	Affiliation
Alan Wells	Commericial Real Estate Broker
Bret Fox	Developer
Bob Cowen	Hatfield Marine Science Center
Paula Miranda	Port of Newport
Ann Armstrong	OMSI's Camp Gray/Yaquina Bay Economic Foundation
Bonnie Serkin	Developer
Jeff Bertuleit	Bertuleit Donald J Trustee
Carrie Lewis	Oregon Coast Aquarium
Mark Watkins	Property Owner
Committees	Airport Committee
Committees	Public Arts Committee

Exhibit 3. Stakeholder Interview List

2. Who Does South Beach Serve?

This section summarizes key demographic, economic, and visitor trends in South Beach. It identifies sources of demand for future commercial development along the US 101 and serves as a basis for identifying which investments the urban renewal agency should make with its remaining funding capacity. It provides an overview of the current development conditions rather than an in-depth market analysis for the area.

This section relies primarily on data from ESRI Business Analyst as well as South Beach State Park visitor data, and U.S. Census On the Map data.

South Beach is home to a variety of landmarks and institutions with a diverse employment base. There are also a variety of residential neighborhoods in the area, including RV parks with a high rate of turnover and a population that peaks in the summer months. In addition, the area serves thousands of visitors each year at the Aquarium and its ancillary uses, the Hatfield Center for Marine Science, South Beach State Park, and water-serving uses at the marina, boat launch, and fishing pier.

Residents

South Beach is home to a relatively small share of Newport's overall permanent population, but many residents may not be captured in official data.²

In 2020, the estimated population in South Beach was 961, and is projected to grow by 7% to 1,031 people in 2025.³ Newport overall has a population of 10,396, which is projected to grow by 4% to 10,803 over the same 5-year period. The full population base of South Beach may not be captured in official population estimates, because many residents are temporary, with a permanent address elsewhere.

- South Beach's population is generally older than Newport's population, with a median age of 55 and compared to Newport's 45.
- The average household size in South Beach is smaller (2.04) than Newport (2.27). There are about 470 households in South Beach and 4,431 in Newport overall.

² Those that live in transitory locations, such as RV parks and campgrounds, are not captured in the data. However, the Census Bureau has increased their efforts to include this population, and the 2020 Census should provide a more accurate picture of this population.

³ ESRI population data and projections based on US Census data for South Beach (Census Block Group 9512.002) and Newport (Place)

Households in South Beach have a higher median income than Newport overall (\$80,093 vs. \$50,062). Nearly 17% of South Beach's population makes less than \$25,000, while about 36% make over \$100,000.

Student Housing

The Marine Studies Program at the Hatfield Marine Science Center is expanding its housing which will increase the number of residents that rely on alternative transportation options.

The Marine Hatfield Science Center, which currently has on-site housing for up to 100 students, instructors and researchers is expanding its housing to accommodate an additional 300 students off-site on a 5-acre property in the Wilder community which is outside of the tsunami inundation zone. As noted in stakeholder interviews, greater than half the student population lack cars and are reliant on carpools, public transit, and biking/walking. These students currently must cross the bridge to access many services, including groceries and restaurants, which requires planning and coordination. Stakeholders indicated that to ensure student safety it is important to provide services that students can access via multimodal methods, including places where students can walk or bike that are nearby and well lit.

Wilder

Wilder is a growing community in South Beach that is attracting a younger, workforceoriented population including families with children.

Wilder is a new neighborhood in South Beach that currently has forty houses as well as twentyeight apartments and a commercial building. This neighborhood is designed to be a sustainable, walkable neighborhood that is developed in phases, with each phase being developed as the need for new housing grows. Twenty-six new houses are expected to be built in Wilder this year. However, it will likely be decades for full buildout. Wilder is attracting a wide demographic to South Beach, including younger, workforce-oriented couples and families with children. While outside of the Urban Renewal Boundary, residents of Wilder will contribute to and benefit from South Beach services.

Workers

South Beach has a diverse employment base. As of 2018, the US Census reported about 773 employees in the South Beach area. The top industry in South Beach is Educational Services, which makes up 19% of total jobs, mainly at the Hatfield Marine Science Center and the Oregon Coast Community College. Arts, Entertainment, and Recreation is the second largest industry followed by Manufacturing, Public Administration and Accommodation and Food Services. Rogue Brewery has its world headquarters in Newport which includes a two-story brewpub, a distillery, barrel works and a tasting room. According to stakeholders, the brewery has an interest in expanding.

Exhibit 4. South Beach Employment by Industry, 2018

Source. United States Census On the Map, Census Block 9512.002

Sector/Industry	Jobs	% of Total Jobs
Educational Services	146	19%
Arts, Entertainment, and Recreation	98	13%
Manufacturing	94	12%
Public Administration	88	11%
Accommodation and Food Services	85	11%
Retail Trade	58	8%
Other Services (excluding Public Administration)	50	6%
Professional, Scientific, and Technical Services	44	6%
Wholesale Trade	27	3%
Real Estate and Rental and Leasing	22	3%
Construction	21	3%
Transportation and Warehousing	14	2%
Admin, Support, Waste Management and Remediation	14	2%
Health Care and Social Assistance	10	1%
Information	1	0.1%
Agriculture, Forestry, Fishing and Hunting	1	0.1%
Total	773	100%

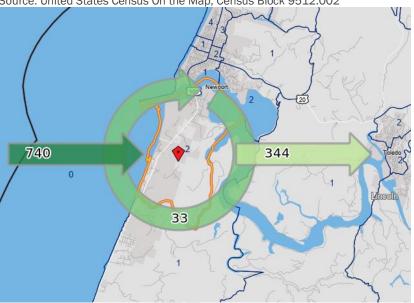
South Beach imports workers who may benefit from additional services proximate to their workplace. Most workers commute into South Beach from Newport and beyond. Given the stated expansion plans of several major employers, the number of regular daytime visitors is likely to increase. These workers may benefit from additional services proximate to their workplace.

Most workers in South Beach commute into the area for work.

740 people commute into South Beach for work, and 344 people living in South Beach commute out of the area for work. 33 people live and work in South Beach.

Exhibit 5. Commuting Flows, South Beach, 2018

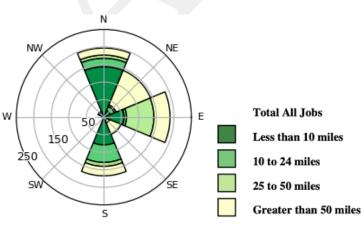
Source: United States Census On the Map, Census Block 9512.002



73% of workers who commute from the north travel less than 10 miles to work compared to 16% to the south.

Exhibit 6. Distance/Direction from Home for South Beach Workers, 2018

Source: United States Census On the Map, Census Block 9512.002



About 42% of people who work in South Beach travel 10 miles or less to get to work

About 30% of people travel over 50 miles to work in South Beach. Exhibit 7. Distance from Home for South Beach Workers, 2018 Source: U.S. Census Bureau, Census On the Map.

42%	13%	15%	30%
<10 mi	10-24 mi	25-50mi	>50 mi

Marine Science and Research Employment

- Hatfield Marine Science Center (HMSC) is Oregon State University's coastal campus and functions as an oceanographic research base for six state and federal agencies. According to stakeholder interviews, the center employs between 400-450 people although there are plans in place to expand the center which would increase the number of employees.
- National Oceanic and Atmospheric Administration (NOAA) is a U.S. government agency that studies the conditions of oceans, the atmosphere, and major waterways. Four primary NOAA-based research centers are located on the HMSC campus. According to stakeholder interviews there are approximately 100 scientists and staff working at these centers with an additional 75 on NOAA ships.
- The Oregon Coast Aquarium is a top tourist attraction and educational resource for the state committed to promoting ocean literacy, conservation, and animal rehabilitation. According to Carrie Lewis, Oregon Coast Aquarium president and CEO, the aquarium typically employs around 100 people, with closer to 130 in the summer months. As of Spring 2021, the aquarium employed around 50 people, but numbers are expected to return to normal in the future.

Students

South Beach is a center for educational services within Newport. The Oregon Coast Community College serves around 2,000 students and 45 faculty.⁴ Of those students, 20% are full-time, and 80% are part-time. In addition, the Hatfield Center for Marine Science houses more than 300 students and researchers.⁵

Visitors

South Beach has several attractions and events that draw visitors to the area. Understanding what brings visitors to South Beach can help the Urban Renewal Agency invest in projects that will improve visitor experience in the future.

South Beach State Park

South Beach State Park attracts visitors year-round, with the highest number of visitors in July and August. November is typically the slowest month for park visitation. Nearly 100,000 people visit the park on average in July. The State Park also contains about 314 year-round campsites⁶

⁴ Oregon Coast Community College Fast Facts, 2018. https://oregoncoast.edu/wpcontent/uploads/2018/04/FastFacts_040418c.pdf

⁵ Oregon Secretary of State Blue Book – Hatfield Center for Marine Science. https://sos.oregon.gov/bluebook/Pages/cultural/science-hatfield.aspx

⁶ Oregon State Parks website. Retrieved 5/05/2021

https://stateparks.oregon.gov/index.cfm?do=park.profile&parkId=149

and accommodates about 1,300 guests per night on weekends in the summer (June through September) and about 850 guests per night on weekdays.⁷

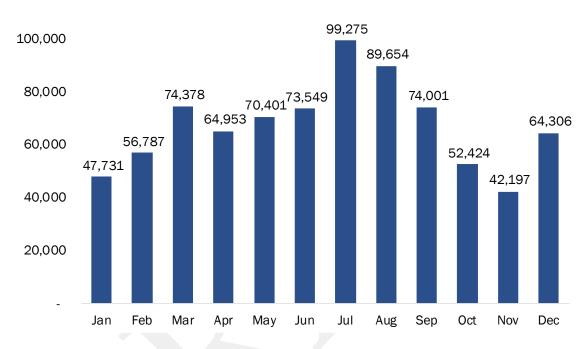


Exhibit 8. Average Monthly Visits to South Beach State Park, 2016 - 20198

Source: Oregon Parks and Recreation Department, visitation data

Port Facilities

120,000

The Port currently owns and operates a marina, boat launch, two RV parks, and a fish cleaning station. The RV parks contain 144 fully equipped campsites (many designed for large RVs) and 80 dry campsites. An interview with the Port indicated that many people stay the whole summer in the RV Park with the length of stay capped at six months. Many of those staying at the RV Park also have a boat and enjoy having the marina nearby which has approximately 522 slips. Much of the peninsula's western side is covered by parking lots which serve recreational uses associated with the marina and RV park. These lots are also used for community events including the annual Seafood and Wine festival which attracts about 20,000 visitors annually.9 Parking is challenging in the area and becomes an even bigger problem during Halibut season and during the Seafood and Wine festival with people parking in nearby lots or along the road.

⁷ Goettel & Associates inc. 2013. Newport Safe Area "Safe haven Hill" Benefit-Cost Analysis Report. – While these numbers are from 2013, this was the most consolidated readily available data we could find, and conditions have not changed significantly.

⁸ 2020 data was not included in the analysis due to COVID which caused variation in visitation patterns

⁹ https://www.coastexplorermagazine.com/features/newport-seafood-and-wine-festival-features-oregons-bounty

Oregon Coast Aquarium

The Oregon Coast Aquarium is a one of South Beach's top tourist attractions as well as an educational resource, drawing between 375,000 and 450,000 visitors annually, 40,000 of which are students.¹⁰ The aquarium has plans to make capital improvements including adding a children's play area as well as increasing vantage points to the estuary and creating an amphitheater near the nature trail. They also have a new admissions annex currently under construction, which will allow for expansion of their lobby, cafe and bistro, exhibits and galleries which could draw more visitors throughout the year. A future phase of improvements, currently slated for 2022, will include the construction of a wildlife rehabilitation center south of the existing aquarium facilities along Ferry Slip Rd.

OMSI's Camp Gray

OMSI's Coastal Discovery Center at Camp Gray is a 20-acre marine science camp located adjacent to South Beach State Park. The camp provides residential three- or five-day experiences March 1st through Halloween with programs for 2nd graders all the way up through high school. The camp accommodates 3,000 to 5,000 students (and chaperones) annually with its busiest months April through May where it reaches its capacity of 150 visitors per night. The camp currently uses about half of its 20-acre property and would like to expand both its visitor and staff housing in the future.

Hatfield Marine Science Center

The Hatfield Marine Science Center also operates a Visitor Center which includes exhibits, hands-on activities, and other opportunities to learn about marine animals and coastal issues. This Center attracts about 150,000 visitors annually.¹¹

¹⁰ Stakeholders provided the annual visitation numbers. The number of students was retrieved from the Aquarium's website on 5/10/2021 https://aquarium.org/about/

¹¹ Marine Science Center website. Retrieved on 05/12/2021 from https://seagrant.oregonstate.edu/visitor-center

3. Peninsula and US 101 Investment Area

This investment area is home to some of Newport's most visited institutional and recreational uses. The National Oceanic and Atmospheric Association (NOAA) located to the Peninsula in May 2011 and has made investments into the area including multi-use path improvements. It leases property from the Port of Portland and has the potential to expand onto more Port property. The Oregon Coast Aquarium was founded in 1992 and is currently undergoing capital improvements. The Hatfield Marine Science Center also has plans for expansion of its student base while the Port of Portland considers adding a permanent indoor/outdoor structure on the same land that the Seafood and Wine Festival takes place. Rogue, another staple on the Peninsula, leases land from the Port of Portland to operate a production facility and dine-in restaurant. Rogue is also interested in expanding on the site. Each of these plans for growth provide opportunities for South Beach, but also raise concerns about current capacity.

The Oregon Department of Transportation (ODOT) owns and maintains US 101 which runs through South Beach and is the main route in and out of the area. It is busy as the main road for tourists and trucks alike. The highway can become congested especially during the summer, and stakeholders noted numerous constraints turning left. Current work is underway to move a traffic signal to 35th to alleviate some congestion and provide a better route for trucks. Signalization at 40th is also a high priority. Overall US 101 is the gateway into Newport, but the road lacks wayfinding and welcoming signage to make it appealing to visitors.

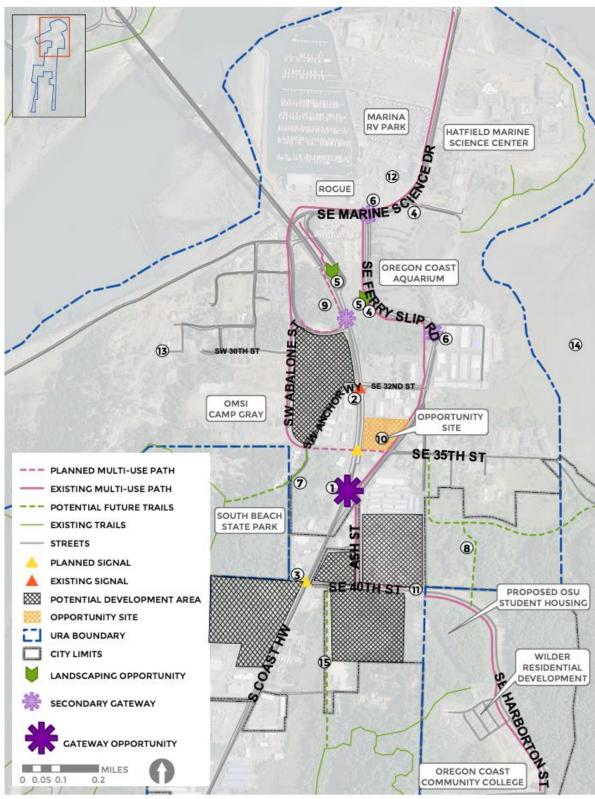
South Beach is going to continue to grow. Wilder has plans to expand with twenty-six houses being added this year. Camp Gray is also hoping to expand soon. This growth along with growth of key tourist attractions and employment centers means that there is great opportunity to invest in the area. In each of the following sections, we provide a summary of key opportunities and constraints discussed in the stakeholder interviews, along with observations from the consulting team.

Summary of Opportunities and Constraints

Exhibit 9 highlights key opportunities and constraints of the Peninsula and US 101 investment areas based on stakeholder interviews and consultant team observations.

Exhibit 9. US 101 / Peninsula Opportunities and Constraints

Source: SERA Architects, ECONorthwest



NEWPORT SOUTH BEACH / US 101 REFINEMENT PLAN

Site	Opportunity	Existing Conditions
1	South Beach Gateway Opportunity. The connection from US 101 to Ferry Slip Rd. will be closed off, providing space to create a gateway into South Beach. This may require property acquisition to accommodate the desired development program and gateway features.	
2	Traffic Signal Move. The traffic signal currently located at the intersection of US 101 and Anchor Way will be moved south to the intersection of U S 101 and 35th St. A new street crossing and multi-use path connection is also planned for this intersection.	
3	New Traffic Signal Installation. A new traffic signal is planned to be installed at the intersection of US 101 and 40th St to improve safety and ease of access to the Wilder development, Oregon Coast Community College, and the planned OSU student housing development.	
4	Aquarium Crossing Improvement Opportunity. There are several opportunities to improve safe access to the aquarium through pedestrian crossing improvements. Key opportunities include both entrances to the RV parking lot on Ferry Slip Rd. and the crossing to the north entrance of the aquarium off of Marine Science Dr.	
5	Landscaping and Pedestrian Amenity Improvement Opportunities. At the multi-use path trailhead along Ferry Slip Rd., there are opportunities to improve the landscaping, seating, waste receptacles, and other amenities like public art or interpretive signage.	SOUTH BLACH CHURCH Ba - 11a - 69 restaurations are
6	Aquarium Arrival Experience & Secondary Gateway Opportunity Both the north and south arrival points for the aquarium could be improved to clearly alert visitors they are arriving at the aquarium.	
7	Planned Trail Connection to South Beach State Park There is a planned trail connection between the South Beach multi-use path and the trail system at South Beach State Park which would improve the overall connectivity of the South Beach area.	

Site	Opportunity	Existing Conditions
8	Planned Trail Connection to Wilder Development/OCCC The planned trail connection between the existing trail network and the Wilder area would improve accessibility of Wilder and the overall connectivity of the South Beach area.	
9	Wayfinding Improvement & Secondary Gateway Opportunity To improve area wayfinding, the exit ramp from US 101 onto Abalone St. could be a secondary gateway with wayfinding signage that clearly directs visitors to key South Beach destinations after they exit the iconic Yaquina Bay Bridge. In addition, the southbound gateway sign could be on the north side of Safe Haven Hill right after the Yaquina Bay Bridge.	
10	Urban Renewal Agency Opportunity Site This site is owned by the South Beach Urban Renewal Agency and provides an opportunity for development that serves the residents and visitors of South Beach. In combination with adjacent parcels, the area could serve as a gateway to South Beach.	
11	Potential Multi-modal connection improvements to Wilder along 40 th St. Along the south side of 40th Street, there is a gap in the multimodal path on 40th St. that could be improved.	
12	Proposed Outdoor Event Space. On its current dry camping area at its Marina RV Park, the Port of Newport has proposed investment in a large covered outdoor space that could house the Food and Wine Festival and other events.	
13	Potential shared use path extension in Coho/Brandt Infrastructure Refinement Plan	
14	Redundant water pipeline at Idaho Point. The only water pipeline serving South Beach was installed in 1973, which presents a significant water system vulnerability if the	

- pipeline fails. As part of the 2008 Water System Master Plan, the City identified the need for 12" water pipeline to serve
 - South Beach.
- 15. Potential trail connection between 40th St. and Mike Miller Park

How can Agency investments promote a sense of place and visitor experience in South Beach?

Stakeholders identified opportunities to improve South Beach through an overhaul of the area's visual identity, signage consolidation, and multimodal improvements. Opportunities exist along U.S. 101, the Peninsula, and the overall study area to improve a sense of place and visitor experience in South Beach. Key challenges and opportunities are detailed below in Exhibit 10.

Key Challenges	Initial List of Potential Agency Investments based on Stakeholder Feedback	
Visibility of South Beach destinations from U.S. 101	• Consolidate wayfinding signage, which is often confusing, to create a cohesive navigation assistance and South Beach branding.	
_	 Catalyze redevelopment of City owned parcels and/or the US 101 Ferry Slip road closure to create a southern gateway. 	
Traffic flow through the peninsula is not straightforward	• Define Ferry Slip Rd. as a primary route through the Peninsula with a multi-use median, landscaping improvements, and additional/improved pedestrian crossings.	
	 Add to and clarify Aquarium wayfinding signage 	
Billboards detract from sense of place and dilute the impact of visual gateway elements	 Buyout billboards to remove visual clutter. 	
Destinations are compelling, but there is little district-level sense of place	• Enhance multi-use trail to develop an iconic and easily identifiable wayfinding element that serves as a connector between the different areas/districts within South Beach.	
	 Potential non-Agency actions: public art investments 	
Getting around as a pedestrian or cyclist can be challenging, with several unsafe crossings and a patchy path network	• Upgrade multi-use trail to improve circulation and safety for bicyclists/pedestrians and provide stronger wayfinding throughout South Beach. Integrating wayfinding signage and public art elements would help make this trail an iconic landmark.	
	 Potential non-Agency actions: public art investments 	
Finding parking, especially during events	 Potential non-Agency actions: Shared parking strategies, limited paid parking on peninsula lots 	
Limited activities for families/kids beyond the aquarium.	 Potential non-Agency actions: Promote a family-friendly environment by emphasizing family destinations with a focus on children's activities. 	
	• Designate a site for a new soccer field in South Beach. Newport residents have been requesting soccer fields and there are no flat areas in Newport north of the bridge.	
Limited options for food/dining, especially during peak periods.	 Attract casual dining or grab and go options to South Beach. 	

Exhibit 10. Key Challenges and O	pportunities for Public Sector Investment – Stakeholder Feedback

How can the City emphasize a sense of place?

Several design elements can help to establish a distinct sense of place, including architectural style, landscape and connection to unique ecological features. Reinforcing sub-areas through distinct design of buildings, pathways, gateways, and landscape can help visitors navigate from place to place, while unifying and well-connected pathways and gateways can help give a sense of arrival and interconnectedness to the area as a whole.

South Beach currently has multiple sub-areas with varying uses and character: the Peninsula with its working waterfront and major destinations like the Oregon Coast Aquarium, OSU Hatfield Science Center, and Rogue Brewery; OMSI Camp Grey and the tsunami refuge hill with its strong connection to the natural landscape; the Wilder development and Oregon Coast Community College (OCCC) which is set in a coastal forest setting; and the Newport Municipal Airport to the south.

Visitors access each of these sub-areas from US 101, an Oregon Department of Transportation (ODOT) facility, which is a primary auto and trucking route that connects coastal cities and towns in Washington, Oregon, and California. US 101 through South Beach is designed to move cars quickly and efficiently, and the adjacent properties along its length are largely one-story industrial structures surrounded by surface parking. Billboard advertisement are among the most visually prominent elements of the US 101 corridor and provide no sense of place or arrival. Currently, only standard roadway destination signage signals the approach to South Beach and its primary destinations.



US 101 northbound approaching the intersection with Ferry Slip Rd.



US 101 northbound approaching the intersection of SE 40th St., access to Wilder and the OCCC

While the design of US 101 itself remains within ODOT control and may be difficult to change, there are more immediate opportunities to improve adjacent properties and landscape elements in key locations and introduce new gateways to South Beach.

Opportunity Site at US 101/35th

The City-owned property at US 101 and SE 35th St. offers an opportunity to not only introduce needed uses/destinations in South Beach, but with its visually prominent location along US 101, it has the opportunity to become an iconic gateway and offer a sense of arrival for northbound travelers. The planned new signal and vehicular/multi-use path crossing at US 101 and SE 35th St will reinforce the importance of this site. Gateway opportunities could be further enhanced with acquisition of the parcels south of the current opportunity site, extending the redevelopment and gateway area from 35th south to Ferry Slip Rd.



City-owned opportunity site at US 101 and SE 35th St with new signal and street crossing

Gateways

Gateways are elements in the built environment that indicate entrance into a distinct and different area. They can take the form of unique buildings and development, landscape features, public art, signage, or literal gateway features. The opportunity site at US 101 and SE 35th St. offers a key opportunity for the introduction of a gateway in South Beach which could be enhanced with the acquisition of the southern parcels extending to Ferry Slip Rd., as well as the planned infill of the US 101/Ferry Slip Rd. connection which would eliminate the vehicular connection in that area.



Zipper Building - Portland, OR Distinct buildings can serve as gateway features and make the most of irregular lot shapes.



Gateway Sign - Hickory, NC Gateway signs can serve as a public art piece that incorporate the culture and identity of the community.



Downtown Wayfinding & Gateway Signage -Littleton, CO Signage at a variety of scales provides wayfinding for automobiles and pedestrians. Wayfinding signs coupled with public art can serve as a gateway.



Arched Gateway Sign – North Kansas City, MO Arched gateway signs are a prominent way to signal arrival to a town or district, with design elements that reflect the identity of the community.

Multi-Use Path Improvements

In addition to US 101, the other primary access and connectivity element is the existing multiuse path. In many areas, the path is distinct from the sidewalks and approximately 6' in width, allowing pedestrians and bicyclist use. There are a few locations where the pathway connections are needed, and other locations where improvements to the landscape and introduction of public art, and signage integration could enhance the path's wayfinding elements. With these improvements, the multi-use path could connect the South Beach destinations while becoming an iconic wayfinding element and South Beach landmark.



Left: Existing multi-use path along Ferry Slip Rd.; Right: Indianapolis Cultural Trail is a 3-mile trail connecting Downtown Indianapolis with integrated art and landscaping.

Prominent identifying elements like wayfinding signage and public art would improve the navigability of South Beach, leading people to key destinations. More passive wayfinding elements like landscaping improvements and a cohesive pallet of other amenities (benches, trash cans, water stations, etc.) create a sense of place and make the path a safe, inviting, and active way to travel through South Beach. Educational signage, public art, and other elements could be incorporated along the path to create a sense of mystery and encourage visitors to further explore the area.



Low-maintenance landscaping and purposefully places amenities like benches create a distinct path edge that is easy to identify from other connections, creating a subtle wayfinding system.



Thematic, educational signage along the multi-use path provides a wayfinding opportunity and reinforces the identity of the area. Art elements could be integrated into the path itself or alongside the path to punctuate significant locations and destinations.

Potential Opportunity: Removing Billboards

There are several large billboards at the gateway to the South Beach area that have the potential to detract from any gateway investment or wayfinding projects. Having large billboard signage at US 101 and 35th will significantly detract from attempts to utilize that site as a visible gateway to South Beach and Newport as a whole for northbound travelers. The presence of billboards on the site may also deter development prospects. Working with property owners to identify possible buyout opportunities is one idea that emerged from the opportunities and constraints analysis.



Large billboards at US 101 / 35th intersection in South Beach.



Before and after outdoor signs were removed from development in São Paulo, Brazil.



Billboard removal in Poland has made way for the integration of public art.

What commercial development concepts along the US 101 can best serve area residents, workers, and visitors?

South Beach lacks services for residents, workers, and visitors. Stakeholder interviews combined with market analysis reveal key service gaps that could be addressed on Agency-owned sites including grocery stores, gas stations, general retail, and restaurants.

Key Challenges

- Residents/workers need to cross the bridge for everything one key challenge identified by stakeholders was the limitation of having to cross the bridge to access services. This is a pain point for visitors and residents alike. One stakeholder noted that running an errand generally requires crossing the bridge which in the summer can mean 30 to 40 minutes added to a trip. Additionally, needing to cross the bridge for basic services presents a resiliency concern. If an earthquake or other event damages the bridge, people in South Beach could be unable to access basic needs.
- A lot of traffic, especially on weekends/summer days Traffic further limits mobility increasing the time it takes to commute or run errands. Limited ability to access options through walking/biking increases traffic congestion further. Additionally, limited parking, especially during events, leads to street parking and other challenges.
- No gas station in South Beach South Beach stakeholders noted the challenges of travelling across the bridge or south to Waldport for gas stations.
- No place to buy groceries South Beach Grocery, a mini market with limited food selection is currently the only grocery market in South Beach. Residents and visitors alike are forced to travel across the bridge to obtain groceries. This is especially challenging for those with limited access to cars which, as noted in section 2, includes 50% or more of the student population.
- Few places for casual dining or grab-and-go food options Residents and visitors have limited dining options. Current restaurant options are generally full service such as Rogue and may not be meeting the needs of those who need quicker options. Grab-and-go could appeal to boaters from the marina, RV park campers and general visitors who are looking for a quick meal on their way to/from the beach and other destinations as well residents. More casual dining such as a pizza parlor or taqueria may also be attractive to visitors and residents especially as the student population grows in the area.

Potential Development Concepts

Interviews and available data suggest unmet demand for additional retail.

Residents, employees, and visitors must leave South Beach for their retail needs and most basic services, including groceries and gasoline. A retail gap analysis (detailed in Appendix A) found that general merchandise stores, gas stations, health & personal care stores, clothing & clothing accessories stores, and grocery stores are retail areas that might be beneficial to develop in South Beach. Stakeholders interviews further narrowed down potential concepts to:

- A grocery store
- Gas station
- General merchandise store
- Casual restaurant (including grab and go)

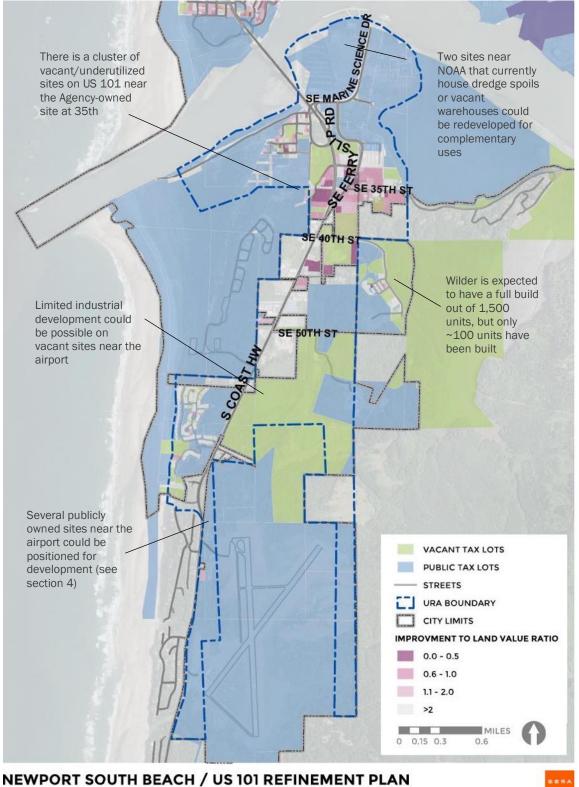
Where are opportunities for development in South Beach?

South Beach has several important potential opportunity sites for new development. All of the sites in the tsunami evacuation zone could be developed with commercial uses, while sites in the upland areas out of the evacuation zone (including near Wilder) could be developed with housing. Future demand drivers for the area include an increase in student housing, expansion plans for the Wilder residential area, and other sites that might draw new employers near the airport. The new residents and employees are going to drive a changing retail demand landscape.

Site underutilization can be illustrated by measuring a site's building improvements divided by its land value (per County assessor data) to get a ratio. If a building is assessed at \$10,000 but the land is assessed at \$100,000, the ratio would be 0.1, and the site would be considered underutilized.

One way to measure which sites might be ripe for an increased intensity of use is by looking at the ratio of a site improvements to its land value. Underutilized sites are focused on US 101 in the northern part of the URA. In addition, South Beach has a number of publicly owned sites which the City or other public sector partners could position as development catalysts for the area. These include the Agency-owned site at 35th Avenue and City-owned sites near the Municipal Airport. Exhibit 11 provides an overview of developed, underutilized, and vacant sites in South Beach.

Exhibit 11. Potential Development Opportunities



What are the opportunities and constraints for potential development concepts?

While commercial real estate data is lacking because there's not a lot of new development for many project types in Newport, stakeholders have indicated that there is interest in development in the South Beach area. Additionally, Newport generally has low vacancy rates because it's a destination location with very little new development, so space is constrained. While there is opportunity to rent smaller spaces for retail or office, large spaces are challenging to find. Stakeholders have indicated that there is limited industrial/quasi-industrial space available for rent. The opportunity site at US 101 and 35th is most suitable for retail and service-oriented concepts. The airport sites discussed in Section 4 are better suited for low intensity industrial uses.

Other challenges that span the development spectrum include high construction costs. This is due in part to limited suppliers (e.g., asphalt has only one supplier in the Valley) and limited builders. Stakeholders also indicated that the Newport lacks commercial real estate brokers.

	Demand	Current Supply	Operating Considerations
Grocery Store	 Students (limited mobility), residents, demand from the South something bigger than 7-11 - Green Zebra, Grocery Outlet 	 Closest full grocery stores are across the bridge Currently South Beach Grocery, a mini market, is the only grocery in South Beach 	 Challenges with bringing in merchandise due to freight route (winding and slow) and traffic (tourists). Labor and seasonality Store isolation - lack of nearby retailers Limited population growth Site too small for low grocery margin
Gas Station	 Visitors including the RV park, residents 	 Closest gas station is across the bridge or in Waldport 	 Is it the right use to provide a "welcome to South Beach"? Local stakeholders expressed a need for a gas station in South Beach but raised concerns about having it at this location.
General Merchandise	 Visitors, residents, boaters from the marina 	 No general merchandiser in South Beach; must travel across the bridge 	 Lack of anchor that attracts business Bringing in merchandise - challenges with freight route (winding and slow) and traffic (tourists) Labor and seasonality
Restaurants	 Focus on grab-and-go for beach/marina visitors and residents 	 Most restaurants in South Beach are full service such as Rogue 	 Lack of anchor that attracts business labor and seasonality

Exhibit 12. Demand, Supply, and Operating Considerations for Potential Uses along US 101 Commercial Corridor

What are key development considerations in the area?

Natural Hazards

Planning and development efforts in South Beach should consider the variety of natural and geologic hazards for which the area is at risk and factor in potential resiliency tools to help mitigate the impacts of those potential disasters. Key areas of concern for the South Beach area are seismic and flood resiliency. Various systems (electric, sanitary sewer, etc.) may be impacted by a tsunami or other seismic event. Upgrades these systems or new projects should take resiliency into consideration.

The Yaquina Bay Bridge is of particular concern – in the event of bridge damage due to a natural disaster, the residents of South Beach would be cut off from all the essential services and resources north of the bridge. Development of essential services (access to food, fuel, and/or healthcare) in South Beach would provide some fundamental resiliency to the area if the bridge is impassible. New development in South Beach should also consider proximity and accessibility of a tsunami refuge area from the development, as the majority of South Beach is in the tsunami inundation zone.

The City already has several resiliency initiatives, including a recently adopted Tsunami Hazard Overlay to improve resiliency of new development, a utility undergrounding project currently underway to remove potential for downed utility line hazards along US 101 and SE Ferry Slip Rd, and a Beach Access Resiliency Study. Additionally, the City and partners in the area have made investments including the Safe Haven Hill evacuation assembly area, the Oregon Coast Community College evacuation assembly area, and the vertical evaluation refuge at the Marine Studies Building at the Hatfield Marine Science Center.

Zoning

The Urban Renewal Boundary contains a variety of zoning classifications including commercial, industrial, residential, and public use. The 35th and 101 opportunity site is zoned as Light Industrial (I-1) which will allow a variety of commercial and industrial uses including office, retail sales and services, and light manufacturing. The potential development site (Investors XII) between SW Abalone Street and SW Anchor Way is zoned Tourist Commercial (C-2) and the potential site south of 40th is zoned Heavy Industrial (I-3). Potential airport development sites are zoned public use (P-1) with an overlay that allows commercial and industrial uses that complement airport operations. The land surrounding the industrial and commercial zones includes high and medium density residential (R-4, R-3, and R-2) as well as water dependent zones (W-1 and W2) and public use zones (P-2 and P-1).

The major zoning classifications are detailed below. Zoning maps of the entire study area which include ownership of parcels can be found in the Appendix. This is meant to provide an overview of current zoning and not an analysis of zoning potential. JET will be completing a zoning audit this summer. While it is known that the city's "swiss cheese" boundaries has led to

a lack of predictability for development and infrastructure provision, there may be additional zoning code barriers to development which will be explored in the code audit.

Development Site	ort Chapter 14 Zoning Ordin Zone	Zoning Description
Investors 12 Site	Tourist Commercial (C-2)	 Meant to provide for tourist needs as well as the entertainment needs of permanent residents
US 101 and 35th Site; Airport Sites	Light Industrial (I-1)	 Meant to provide for commercial and industrial uses that can be located near residential or commercial zones
Industrial Site South of 40th	Heavy Industrial (I-3)	 Intended to provide industrial uses that involve production and processing activities generating noise, vibration, dust, and fumes
	Retail and Service Commercial (C-1)	 Intended to supply personal services and goods to the average person
	Public Structures (P- 1) and Public Parks (P-2)	• Intended for public uses. P-1 allows all types of public buildings while P-2 is limited to parks, open space, trails and supporting facilities
Adjacent Uses	Medium Density Single-Family Residential (R-2)	 Intended to provide for low density, smaller lot size residential development and serve as a transitional area between the low-density residential district and higher density residential districts.
	Medium Density Multi-Family Residential (R-3)	• Intended for medium density multi-family residential development. It is planned for areas that can accommodate the development of apartments.
	High Density Multi- Family Residential (R-4)	 Intended to provide for high density multi-family residential and some limited commercial development.
	Water Dependent (W-1) and Water Related (W-2)	 Intended to protect areas of the Yaquina Bay Shorelands for water-dependent, water-related uses

Source: City of Newport Chapter 14 Zoning Ordinance

Transportation

Transportation remains a key consideration for planning in South Beach. While Newport is in the process of completing a new Transportation System Plan (TSP), the TSP is focused north of the bridge. South Beach is still relying on the 2010 Refinement Plan which was transportation focused. The urban renewal agency has invested in several projects to improve transportation connectivity in South Beach, especially along the peninsula. Current budgeted projects include:

- US 101 SE 32nd to SE 35th signal relocation and streetscape enhancement project
- SE Ferry Slip/US 101 utility undergrounding
- SE 50th and 62nd row acquisition
- SE Chestnut Trail easement
- US 101 Corridor Refinement Plan

Key issues that remain and were indicated throughout the engagement process or through observations by the consultant team include:

- **Signalization at South 40**th widening the intersection at US 101 and 40th to add channelization and install a traffic signal was noted in the 2012 TSP update and will be receiving an updated cost estimate in 2021.
- Multimodal access while there are many multimodal pathways, sidewalks, and bike lanes in the area, South Beach lacks a cohesive, signed multimodal network. This makes it difficult for pedestrians and people on bikes to move through the area to key destinations. Exhibit 25 shows the transportation network in South Beach, with a focus on existing and planned multimodal paths.
- Congestion during peak periods like summer weekends and during festivals, the area can experience gridlock, including access to and across the Yaquina Bay bridge and accessing key points along the peninsula. Parking is also an issue, and many motorists circle the area looking for the sparse parking options. A water ferry that operates throughout the summer may be an option alleviate traffic and parking concerns along the Peninsula.
- Bridge resiliency The iconic Yaquina Bay Bridge is a lifeline for South Beach to goods and services. In the event of an earthquake the bridge may fail, leaving South Beach residents without vital access to the goods and services they need.

4. Airport Investment Area

The city-run Newport Municipal Airport provides many benefits to the city and the county overall, including providing services to recreational and corporate pilots, accommodating air ambulance flights that provide a critical link to trauma facilities in more distant cities, and serving as a critical coastal resource for emergency response in the event of a major earthquake and tsunami event.

Because the airport currently requires a subsidy, the City is interested in making the airport more financially self-sustaining by providing opportunities for industrial development. This would help improve current public perception of the airport while generating economic benefits for the area.

To allow development on the site, the City recently rezoned the airport from a park to industrial zoning designation. Additionally, the City has made investments in water infrastructure to the site, which addressed previous issues with fire safety. The City also has a long-term plan to extend sewer to the site as noted in the Sewer Master Plan's 20-year buildout scenarios (Future Developments 17-20). The key questions this section addresses are: **Is there a reason to use Urban Renewal funds to do this now? Is this the best use for the remaining Urban Renewal funds?**

Summary of Opportunities and Constraints

Exhibit 14 provides an overview of key opportunities and constraints in the Airport Investment Area.

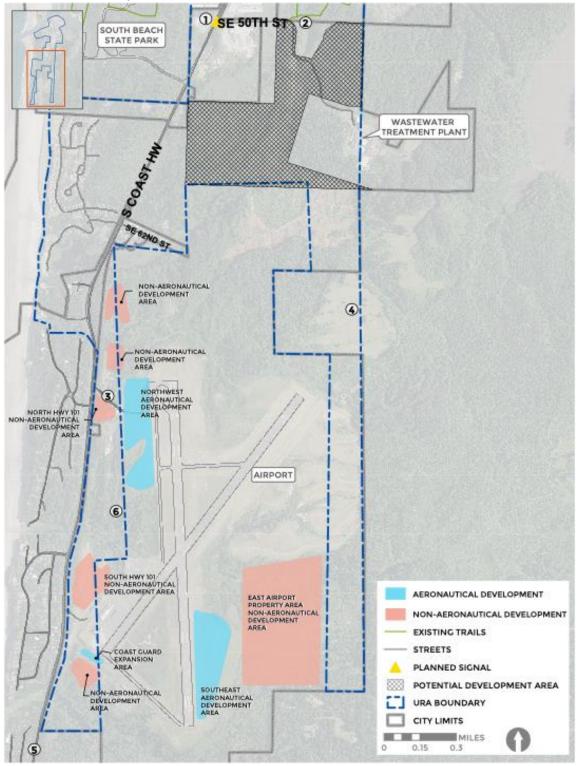


Exhibit 14. Summary of Opportunities and Constraints

NEWPORT SOUTH BEACH / US 101 REFINEMENT PLAN

Exhibit 15. Opportunities and Constraints Map Key

1 Proposed signal at 50th

- 2 Current sewer main stops at 50th
- 3 Increase potable water capacity at airport to serve the area above minimum fire flow limits
- 4 Potential access to east airport properties from 50th
- 5 Potential access to east airport properties from 98th
- 6 Investments in sewer infrastructure needed to support additional development

What are the developable parcels in this area?

There are nine developable parcels located on the airport site, all of which are located within city limits. While the parcels are largely located outside of the Urban Renewal boundary, the sewer line itself would be within the boundary which means that urban renewal dollars can be used to extend sewer service to the site. Any investment into the area must meet the goals of the urban renewal agency. The city is interested in making these sites appealing for private development rather than developing themselves. The 2017 Airport Master Plan describes the sites as follows:

- North Highway 101 Non-Aeronautical Development Area (4.8 acres) With additional planning and coordination this site could be extended farther north along Highway 101 to create additional opportunities for non- aeronautical development.
- South Highway 101 Non-Aeronautical Development Area (10.8 acres) This site is relatively flat and with the relocation of the access road could serve as either an aeronautical expansion area or non-aeronautical development area.
- Northwest Aeronautical Development Area (13.5 acres) The site is relatively flat and provides direct access to the airfield. There is also existing access off of Highway 101. This area formerly included the first FBO and early airport hangars.
- **Southeast Aeronautical Development Area** (14.1 acres) Obtaining access to this site could be difficult and will require additional planning and coordination locally.
- East Airport Property Area Non-Aeronautical Development Area (71 acres) Due to access constraints and topography, this area is ideally suited to be a Non-Aeronautical Development Area consisting of approximately 71 acres available for future development.
- Non-Aeronautical Development Area (4.3 acres) This is the southernmost site and is limited to non-aeronautical uses.
- **Coast Guard Expansion Area** (1 acre) aeronautical land adjacent to existing Coast Guard Facilities was reserved for future Coast Guard expansion.
- Non-Aeronautical Development Area (1.3 acres) Located on the northern portion of the site between airport access and U.S. 101
- Non-Aeronautical Development Area (5.1 acres) Located on the northern portion of the site between airport access and U.S. 101

Possible uses for the sites along with barriers and potential investment scenarios are detailed below.

What are the barriers to development?

The airport site has some key barriers to development including limited infrastructure (no sewer, road access), developer uncertainty and negative public perception

Key Barriers

- Dealing with effluent Currently the sewer main stops at 50th and there is not sewer access to the airport. This limits the types of industries that can function on the site. Stakeholders noted the need to generate enough demand which might require including adjacent neighborhoods in the sewer extension.
- Availability of water for fire suppression There is enough potable water for development uses but flows are only sufficient to meet minimum requirements. Fire suppression is a concern.
- Site accessibility Numerous stakeholders noted the challenges of turning left on US 101. This limits the ability to access the airport site. Additionally, many of the vacant airport properties that are being considered for development have limited or no road access.
- **Developer uncertainty** Developers are uncertain about the city's plans for the site and whether they will be able to build what they want if they invest in property. There is also market uncertainty in understanding what is practical and useful near the airport.
- **Public perception** Stakeholders indicated that the public perceives the airport as a burden "get the airport self-sustaining." It may be challenging to invest in the area if the public does not see the benefits of this investment.

What are the possible uses for development at the Airport?

Some of the industrial uses that have been considered for build out on the airport site require sewer while others do not. The range of possible uses as discussed in stakeholder interviews as well as estimates of their impact on water demand are included in Exhibit 16. Additionally, parceling out the sites could further help end users envision the full potential of uses that could take place on the site.

Development ConceptsWater Demand?Airport hangar (t-hangars, residential hangars)LowFlex warehouse (could include cold storage)MediumIndustrial condominiumsMediumPrefabricated home factoryLowHuman compostingUnknownGlampingLowGolfLow	Source: ECONorthwest and community stakeholders	
Flex warehouse (could include cold storage)MediumIndustrial condominiumsMediumPrefabricated home factoryLowHuman compostingUnknownGlampingLow	Development Concepts	Water Demand?
Industrial condominiumsMediumPrefabricated home factoryLowHuman compostingUnknownGlampingLow	Airport hangar (t-hangars, residential hangars)	Low
Prefabricated home factoryLowHuman compostingUnknownGlampingLow	Flex warehouse (could include cold storage)	Medium
Human compostingUnknownGlampingLow	Industrial condominiums	Medium
Glamping Low	Prefabricated home factory	Low
	Human composting	Unknown
Golf Low	Glamping	Low
	Golf	Low

Exhibi	t 16. C	Devel	opn	nent	Conc	epts	G	athered	During	Engagement	t
~											

As documented in the 2017 Airport Master Plan, current effluent demand at the airport site is 1,000 gallons per day (gpd) broken across four separate septic systems (Fixed Base Operator, FedEx building, U.S. Coast Guard building, Airport Rescue and Firefighting building). The 2018 Brown and Caldwell Wastewater Master Plan assumed 0.5 acres of light industrial and five acres of commercial development over the next 20 years equaling an additional 6,000 gpd of effluent. The City considers this number high and projects that, combined with existing demand, the flow will increase to about 4,000 gpd within the 20-year planning period, based on the assumptions in Exhibit 17.

Exhibit 17. Airport Site Buildout Assumptions Over the Next 20 Years Source: City of Newport

Buildout Assumptions	Effluent demand generated (gallons per day)
Animal Shelter relocated to the southernmost 4.3-acre, non- aeronautical development area (animal waste would not be directed to the wastewater system)	350 gpd
Flex light industrial warehouse space developed on four acres. The city is negotiating a lease for 10.8 acres on the South Highway 101 non-aeronautical development area, of which seven acres are usable and four would develop in the planning period.	1,700 gpd
No development on remaining non-aeronautical sites between airport access and U.S. 101	N/A
No development on the 71 acres east of the airport that does not possess vehicle access	N/A
24,000 square feet of additional aeronautical development over the next twenty years	960 gpd

What investments are needed to open up development at the airport?

What are the options for these investments?

As described in a technical memo from Murraysmith (Appendix D. Sewer Connection Alternatives), the City of Newport is considering multiple approaches to improve the sewer infrastructure in the South Beach / U.S. 101 Highway Corridor to expand sanitary sewer service for five non-aeronautical development areas at the Newport Airport. The current layout of the City's sanitary sewer system in this area is patchwork in nature with the proposed development areas unlinked to the wastewater conveyance and treatment facilities located to the north.

Murraysmith conducted an alternatives analysis for sanitary sewer infrastructure improvements to serve the non-aeronautical development areas identified by the city. The alternatives and estimated costs are provided below. For a more detailed description of the alternatives including design criteria as well advantages and disadvantages of each alternative see Appendix D. Sewer Connection Alternatives.

Alternative	Estimated Capital Cost
Expand Airport Septic System (LOSS)	\$594,000
Sewer Extension 1: Gravity to Southshore Pump Station and New Force Main Inlet Pump Station	\$5,091,000
Sewer Extension 2: Pump Station at Surfland and New Force Main	\$7,597,000 (\$1,297,000 capital cost as projected by Murraysmith and \$6.3 million for Surfland Sewer Extension project as proposed by Brown and Caldwell in the 2018 Sanitary Sewer Master Plan)
Onsite Treatment WWTP (Package Plant w/Land Application)	\$1,960,000

Exhibit 18. Sewer Infrastructure Alternatives and Capital Costs¹² Source, Murraysmith, Assumes 40% contingency.

In addition to cost and to adequately compare each of the sewer infrastructure alternatives, Murraysmith developed analysis criteria by which to evaluate each option.

¹² Notes: Cost includes material costs and installation, mobilization (12%), general conditions (8%) contractor O&P (12%), contingency (40%), and ELA (Engineering, Legal, and Administration) (25%); Estimates are for planning purposes only; AACEI Class 5 estimate ranges from -30% to +50%

- **Timeline** Design and construction timelines have the potential to affect development plans for the airport property, other planned construction projects, etc. Timeline may be a major factor depending on the urgency of the project.
- Regulatory Hurdles Some alternatives require regulatory approval which may require
 additional effort to obtain in comparison to other alternatives. This can affect the project
 schedule, costs, and feasibility of the project. This is especially relevant for this project
 when considering onsite systems that will be permitted independently of the City's
 existing wastewater treatment plant.
- **Expandability (Growth)** Developing a wastewater plan with future growth of the community in mind could mitigate future cost impacts. Options with on-site disposal of effluent maintain capacity within the existing wastewater treatment plant (WWTP) and may be expandable for future growth.
- **Ease of Operation and Maintenance** The upkeep of a wastewater facility is imperative for its future performance. On-site facilities require much more maintenance and oversight and personnel training that should be taken into consideration.
- Private Property Impacts (Easements) Construction along the roadway will require land acquisition, which would likely have impacts on both the cost and the timeline of the project.

Per the analysis by Murraysmith, expanding the current airport septic system ranked the highest on the non-monetary criteria with the lowest estimated capital costs and would likely be the most favorable option. The Sewer Extension 1 option scored low on the non-monetary criteria and has the second highest estimated capital cost. Sewer Extension 2 scored the least favorably on the non-monetary criteria and has the highest estimated cost since it assumes the City will first complete a \$6.3 million expansion of the sewer system to Surfland which is unlikely to occur before 2025. Lastly, the Onsite Treatment scored moderately on the non-monetary criteria with capital costs just under two million. A summary of the analysis criteria results is in Exhibit 19 (highest score of " $\blacklozenge \blacklozenge \blacklozenge$ " is most favorable).

The Urban Renewal Agency is most concerned with timing and cost as all urban renewal funds must be awarded by 2025 and there are limited funds to distribute. Additionally, some of these options are dependent on the completion of other infrastructure investments and/or require easements which could further impact timing and cost. Ultimately, this analysis provides options for the city to consider, along with some potential criteria, as it determines the desirability of expanding sewer infrastructure with its remaining urban renewal funds.

Exhibit 19. Evaluation of Alternatives Source. Murraysmith

Source. Murraysmith							
Alternative	Ability to Implement by 2025	Low Capital Costs	Few Regulatory Hurdles	Potential for Expansion	Ease of Operation and Maintenance	Minimize Private Property Impacts	Overall
Expand Airport Septic System (LOSS)	Timeline may be impacted by permitting, but there are limited construction delays.	5 pump stations; 8,000 gal septic tank; dosing system; absorption field	Permitting req for land application. May be able to utilize existing permit. Soils studies and groundwater investigation	Septic system may be expanded to increase capacity at lower capital cost compared to other alternatives.	Requires regular maintenance and solids removal. Can follow operations and maintenance schedule of existing facility.	No additional property acquisition needed	High
Favorability	* *	***	♦ ♦	* * *	* *	* * *	***
Sewer Extension 1: Gravity to Southshore Pump Station	May be constructed at any time but may have an extended design schedule.	6,750 ft 6-in gravity sewer/6,450 ft 5-in force main; package pump stations where gravity infeasible	No significant permitting requirements	Utilizes capacity of existing WWTP. Adds redundancy to existing system, increasing capacity of conveyance	Limited near-term O&M needs. (Assumes pump maintenance part of Southshore pump station O&M).	Additional ROW purchase required along US-101.	Low
Favorability	* *	•	* * *	•	* * *	•	•
Sewer Extension 2: Gravity to Surfland Pump Station	Contingent on finishing Surfland sewer expansion which is unlikely to occur before 2025	1,350 ft 6-in gravity sewer; package pump stations where gravity infeasible; contingent on Surfland sewer extension	No significant permitting requirements	Utilizes capacity of existing WWTP	Limited near-term O&M needs. (Assumes pump maintenance part of Surfland sewer extension project).	Minimal ROW acquisition required	Low
Favorability	•	♦	* * *	•	***	•	•
Onsite Treatment WWTP (Package Plant w/Land Application)	This alternative's timeline may be impacted by delays associated with permitting	5 pump stations; packaged treatment plant, land application system	Permitting required for land application of treated effluent. May be able to utilize existing permit.	May be expanded to increase capacity.	Requires regular O&M. Access to airfield is required. Requires new training and maintenance protocol.	No additional property acquisition needed	Moderate
Favorability	**	**	* *	**	•	***	* *

5. What Funding Is Available to Support Revitalization?

TIF Dollars

Established in 1983, the South Beach Urban Renewal Plan has an original maximum indebtedness of \$38,750,000. Key recent milestones include:

- 2009: The URA was extended at a reduced size for the purpose of upgrading the infrastructure and acquiring land to support economic development. With public input, a new project list was developed with the 2009 extension, to be funded with revenue bonds over three six-year phases.
- 2018: The Urban Renewal Agency completed a substantial amendment of this plan to move the deadline for awarding projects from December 31, 2020 to December 31, 2025. This amendment extends the date after which no bonded indebtedness can be issued with respect to the Plan.

When considering how to spend money on project priorities in the Urban Renewal Area, the Agency will need to consider:

- Level of Funding: The Agency makes its last debt payment in FY 2024/25 and cannot obligate new projects after 2025. By the end of FY 2023/24, the Agency should have around \$4.25 million.¹³ However, the urban renewal area will still be accruing increment for two additional years after FY 2023/24. If the Agency were to secure a short-term bank loan to leverage those final two years of increment before 2025, then the Agency would have an additional \$4 to \$5 million in funding¹⁴ that would be available for projects in the Area. To understand how project costs align with potential revenues, the Agency can get updated TIF projects through its consultant, Tiberius Solutions.
- **Timing:** The Agency must make all project investment decisions before the end of 2025, per the 2018 substantial amendment.
- Adherence to Guiding Principles: Part of the Refinement Plan process is to develop a set of guiding principles to help the Agency align its investments with priorities in the Area in a manner that is consistent with the project parameters of the South Beach Urban Renewal Plan.

¹³ Remaining URA Increment – Working Document, 2021.

¹⁴ These funding estimates show tax increment generated in the Urban Renewal Area only, and do not account for delinquent taxes, rents/leases, and interest on investments, which would be additional available revenue.

Known Projects and Costs

Exhibit 20 provides an overview of projects that the Urban Renewal Agency has already identified to be funded in the final project phase (through 2025).

Project	Cost Estimate	Notes
US 101/	\$1,750,000 (2012)	2021 cost estimate is lower since it assumes no
40 th	\$1,538,827 (2021)	new US 101 through lanes. Previous estimate
Signalization		assumed two new through lanes, one south bound
		and one north bound. There is the potential for
		partnerships with private property owners.
Install	\$2,800,000 (2012)	Murraysmith will be providing an updated cost
redundant		estimate in 2021. Agency can likely leverage
Yaquina Bay		partner funding to fund this project.
Water		
Pipeline		
Crossing		
Extend	\$3,000,000 (2012)	Murraysmith has provided updated costs for
sewer	*for 2021 cost estimates see	potential sewer infrastructure options which are
service to	Exhibit 18	less than the 2012 estimate, allowing for
Newport		investments in other projects.
Municipal		
Airport		

Potential Partnership Funding

The following is an initial list of potential partnership funding that the Agency could explore to match its investments in priority projects.

- **Federal**: The Agency should explore grant funding for projects where it could leverage its own money for federal dollars, and where it could do so before 2025.
 - FEMA Grants, for projects that align with hazard mitigation and resiliency goals
 - Economic Development Agency Public Works Program, to fund large infrastructure projects in areas that could use an economic boost to support jobs and diversification, making Water Avenue improvements possible candidates for funding.
 - American Rescue Plan (ARPA). The City of Newport will be receiving federal funding through ARPA, and the potential Infrastructure Plan might also have some funding that could help to advance priorities in South Beach.
- State Funding Sources:
 - ODOT, including the Community Paths Grant, Congestion Mitigation and Air Quality Fund, All Road Transportation Safety Program, Multimodal Active Transportation Fund multimodal, Statewide Transportation Improvement Program

grants. All of these grants have timing considerations that the Agency would need to account for.

- Oregon Parks and Recreation Foundation Fund Grant
- Land and Water Conservation Fund
- Oregon Department of Fish and Wildlife Conservation and Recreation Fund
- Private or Foundation Support:
 - Grants (Meyer Memorial Trust, AARP Community Challenge Grant, Collins Foundation, International Mountain Biking Association, PeopleForBikes, PGE Better Together Resilient Communities Grant Program)
 - Advertising/Naming Rights/Sponsorships
 - Crowdfunding

6. Conclusion

Implications for Public Action and Investment

South Beach is well-positioned for growth but needs targeted investments to reach its potential.

While South Beach area is already a major destination for visitors and employees, it is underserved for retail and other daily needs and lacks a cohesive identity. Investments in placemaking, wayfinding and mobility will help improve quality of life for residents as well as visitor experience.

The area's transportation infrastructure is an impediment to successful growth.

The area is growing, adding both residents and employers that will increase demand. Without interventions, the transportation constraint on US 101 in both directions across the bridge will become more severe as more visitors, employees, and residents come to the area.

Investments in sewer infrastructure at industrial properties near the airport may be needed to help to catalyze new land for industrial or other commercial developments.

The Urban Renewal Agency's land holdings can help to catalyze new development.

Agency-owned properties provide an important opportunity to push the market to provide the kind of retails and other services that the area needs to thrive, decrease pressure on US 101 for local transportation, and that the market might not provide on its own.

The Agency will need to be nimble to make all of its investments by 2025

There is not enough money to address all possible improvements, so the Agency should aim to leverage funding from regional, state, and federal partners as grant dollars might be available. If the Agency is to execute on its priority investments by 2025, it will need to be strategic about the choices it makes and be poised to act quickly.

Initial Framework for Public Action

- Who:
 - Lead: Urban Renewal Agency
 - Partners: Bringing new private investment into the community is a key goal of this Action Plan, requiring the coordinated efforts of many partners. Successful implementation will require time and energy from many partners within the City. Some of the projects necessary to spur development and improve conditions in the South Beach URA will not be led by the Agency, but by other partners.

- Where: Agency investments will span two investment areas:
 - The Peninsula and US 101 Investment Area
 - The Airport Investment Area
- Why/How:
 - Through the course of this project, ECONorthwest will work with the agency to develop a set of evaluation criteria by which the Agency can prioritize its investments. Those could include:
 - *Timing*: Can the Agency award the project by 2025? Per the urban renewal plan, projects are expected to be awarded no later than December 31, 2025 and completed in a timely manner.
 - Aligns with Existing Urban Renewal Plan Objectives
 - Preserve forest, water, wildlife and other natural resources
 - · Identify sites for public uses such as the OSU Marine Science Center
 - · Complete a Port facilitated marine recreation area
 - Encouraging marine oriented activities on the northern Shorelands
 - · Assure the development of complementary uses adjacent to the Airport
 - Plan new sewer, water, and transportation capacity
 - Allocate a major part of South Beach to heavy commercial and light industrial uses
 - *Meet 2021 Priorities for this Urban Renewal Area*: Does the project advance at least three of the Agency's priorities for South Beach?
 - Promote a sense of place for residents and visitors that reflects the South Beach identity.
 - Improve connectivity for bicyclists and pedestrians to South Beach destinations.
 - Attract new development that can meet the service and retail needs of South Beach residents.
 - Invest in overcoming market and development barriers on underutilized or vacant sites.
 - Reduce sewer, water, and transportation infrastructure barriers to enable job creation on industrial lands near the airport.
 - Invest in improvements that promote long-term community resiliency to address tsunami, flooding, and earthquake hazards.

Next Steps

Over the summer of 2021, ECONorthwest will document a list of actions that are emerging through stakeholder conversations, and then work with the Agency to prioritize them using weighted criteria. We will likely develop a set of evaluation criteria based off the guiding principles and use the public / stakeholder involvement process to help us weight the importance of different projects.

In addition, we will be completing the following analyses:

- A zoning audit completed by JET Planning, which will explore how the area's current zoning regulations might impact future development activity.
- A vision and feasibility study for the Agency-owned opportunity site at US 101 / 35th Street. This analysis will explore a set of alternative development options for the site, as well as whether the Agency acquire other properties for development to make this area function better,
- Updated financial projections to align agency investments with forecasted TIF generation (completed by Tiberius Solutions).

Appendix A. Stakeholder Outreach

The following table compares key priorities identified in the 2010 TGM Plan to what our team has heard from

	Key Transportation Priorities from 2010 TGM Refinement Plan	Key Placemaking and Development Opportunities in 2021
Aquarium	 district-wide sidewalks and pathways improved wayfinding and signage 	 continue multi-use path improvements and connectivity with a particular focus on ADA considerations improved connections from parking to Aquarium visual improvements - entrance to the peninsula, benches and trash areas, vantage points to estuary improved wayfinding, signage, and branding family friendly environment support grocery and restaurants in South Beach support family friendly uses/destinations in South Beach EV charging stations
Hatfield Center	Improved bike and pedestrian connections to and throughout the peninsula.	 support grocery and restaurants in South Beach improved multimodal connections throughout the peninsula (including safety considerations like lighting) improved wayfinding, signage, and branding
Rogue	 Maintain the efficiency of their operations Traffic-related safety on the peninsula, particularly truck and pedestrian interactions near the tourist boat dock 	 improved wayfinding and signage expansion of Rogue improved parking
Port of Newport	 Ensure a parking supply that can meet the needs of its users Improve bike and pedestrian circulation on the peninsula, to allow for tourists/RV owners to get around without a car. Water taxi to provide a connection between the peninsula and destinations across the bay. 	 Ensure a parking supply that can meet the need of its users Events support grocery and gas station small areas for development improved parking signage
South Beach State Park	 Improve bicycle/pedestrian connectivity between the State Park and destinations on the peninsula. Improve wayfinding signage. 	• N/a

Exhibit 21. Ke	v Priorities fo	or US 101	and Peninsula	Stakeholders
	y FIIUIIIES IC	1 02 TOT	and remissing	Slakenouuers

	Key Transportation Priorities from 2010 TGM Refinement Plan	Key Placemaking and Development Opportunities in 2021
Public Arts Committee	• N/a	 Billboard removal is a high priority More continuity in development Create a unique identity for South Beach Cohesive arts program tied into the landscape and existing assets in the area
OMSI Camp Gray	• N/a	 Support grocery and gas station Consider tsunami hazards when planning; consider adding additional capacity for evacuation an improving the resiliency of the Yaquina Bay Bridge Improved sidewalk connectivity to the beach and accessibility for people with a focus on ADA considerations

Appendix B. Retail Analysis

This appendix summarizes information on consumer preferences and spending in the Primary Market area of South Beach (Census Block 9512.002) and the Secondary Market area which was determined by using approximate 15-minute drive times north of Yaquina River and 30-minute drive times south of the river.¹⁵ We used two reports from ESRI Business Analyst to complete this analysis, the Retail Marketplace Profile and the Retail Market Potential Report described in more detail below.

Retail Gaps

Residents, employees, and visitors must leave South Beach for their retail needs and most basic services, including groceries and gasoline.

Understanding South Beach's "retail gap," or how much money residents spend outside of the study area, can provide insight into the types of new businesses that South Beach could support.

- A **positive retail gap** shows that local sales are lower than demand and represents an area of potential for the city
- A **negative retail gap** shows areas that exceed local demand and meet the needs of people from outside South Beach

South Beach's Retail Trade gap is nearly \$1 million, meaning South Beach residents spend \$1 million outside of South Beach to meet their needs. The industries with the largest retail leakage include general merchandise stores, gas stations, and health & personal care stores, clothing & clothing accessories stores, and grocery stores. Food & drink, on the other hand, has a surplus of \$1.7 million meaning that people are travelling to South Beach to obtain these services. Specialty food stores which include meat markets, fish and seafood markets as well as confectionary, nut and baked goods stores among other specialty items, are also considered to have a surplus. The South Beach Fish Market is an example of a specialty food store. These retail gaps align with findings from stakeholder interviews specifically the need for a grocery store and gas station in South Beach.

¹⁵ We included locations in the Secondary Market area that could be accessed in an approximate 15-minute drive time north of Yaquina River and 30-minute drive time south of Yaquina River. This is based on stakeholder input and observation that people will be less likely to travel north over the bridge for services. However, people from as far south as Yachats may find value in services in South Beach.

Exhibit 1. Summary of Retail Gap and Leakage Factor, Primary Market Area, 2017

Source. ESRI Business	Analyst Retail	Marketplace	Profile Report. ¹⁶	

Retail Category	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Number of Businesses	Implications for Retail Opportunities in South Beach
Motor Vehicle & Parts Dealers	\$3,585,878	\$8,846,277	-\$5,260,399	4	Retail Sales exceed local
Food Services & Drinking Places	\$1,299,766	\$3,013,497	-\$1,713,731	6	demand, capturing sales
Specialty Food Stores	\$160,274	\$1,241,578	-\$1,081,304	3	by customers living
Miscellaneous Store Retailers	\$781,165	\$976,521	-\$195,356	5	outside South Beach
Beer, Wine & Liquor Stores	\$117,613	\$0	\$117,613	0	
Bldg Materials, Garden Equip. & Supply Stores	\$1,205,540	\$1,056,728	\$148,812	2	
Nonstore Retailers	\$219,187	\$49,631	\$169,556	1	
Electronics & Appliance Stores	\$426,129	\$158,599	\$267,530	1	Local demand is greater
Sporting Goods, Hobby, Book & Music Stores	\$456,864	\$86,471	\$370,393	1	than existing stores can
Furniture & Home Furnishings Stores	\$405,993	\$0	\$405,993	0	meet, creating retail
Grocery Stores	\$2,168,463	\$1,736,538	\$431,925	2	opportunities in South
Clothing & Clothing Accessories Stores	\$579,966	\$0	\$579,966	0	Beach
Health & Personal Care Stores	\$993,414	\$0	\$993,414	0	
Gasoline Stations	\$1,633,570	\$0	\$1,633,570	0	
General Merchandise Stores	\$2,402,052	\$0	\$2,402,052	0	
Total Expenditures	\$16,435,874	\$17,165,840	-\$729,966	25	
Retail Trade	\$15,136,108	\$14,152,343	\$983,765	19	
Food and Drink	\$1,299,766	\$3,013,497	-\$1,713,731	6	

Consumer Preferences

South Beach residents prefer to buy American products and value quality over price.

Another method for understanding South Beach's retail demand is by evaluating consumer preferences. Residents of South Beach are more likely to shop at convenience stores than those in the secondary market area and the US overall (Exhibit 2).¹⁷ This is unsurprising as residents must leave South Beach to meet their retail needs, including groceries. South Beach residents are also more likely to dine at a restaurant and more likely to note that buying American is important, that quality is more important than price, and that price is more important than brand. When considering future commercial development along US 101, considering consumer preferences is important. A preference for American made and quality over price may indicate that a smaller retail shop versus a large chain may fare better in the area.

¹⁶ This analysis is based on ESRI Business Analyst's Retail Marketplace Profile, which relies on 2017 consumer spending data and 2020 demographic information. This discrepancy in years can lead to some inconsistencies which are best addressed through stakeholder outreach. Retail gaps are calculated by subtracting "retail sales" from "consumer expenditures" and can be negative or positive.

¹⁷ ESRI Business Analyst summarizes data collected in a national household survey (2020) and uses its demographic information to forecast potential. Consumer behaviors that have a Market Potential Index (MPI) of over 100 are higher than the US average.

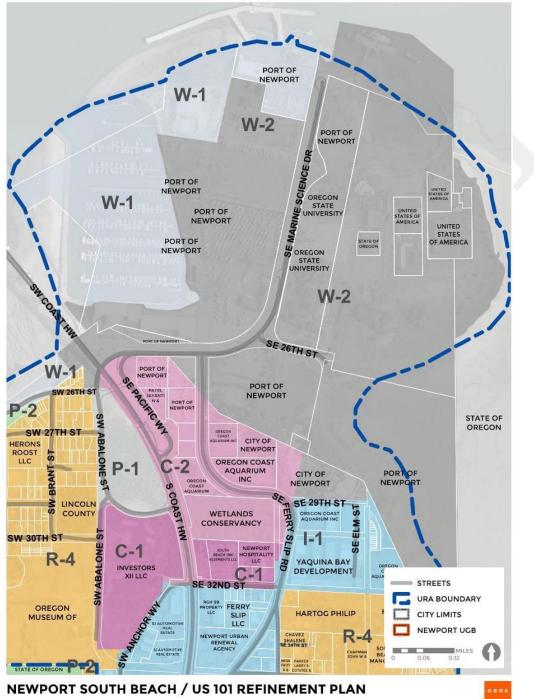
Exhibit 2. Selected Retail Market Potential, Primary and Secondary Market Areas, 2020 Source. ESRI Business Analyst Retail Market Potential Report

	Primary Market Area			Secondary Market Area		
Product/Consumer Behavior	Expected Number of Adults or HHs	Percent of Adults/HHs	MPI	Expected Number of Adults or HHs	Percent of Adults/HHs	MPI
Convenience Stores (Adults)						
Bought gas at convenience store in last 30 days	371	46.7%	125	9,199	43.0%	115
Spent at convenience store in last 30 days: \$40-\$50	74	9.3%	117	1,875	8.8%	110
Spent at convenience store in last 30 days: \$100+	210	26.4%	116	5,189	24.2%	107
Entertainment (Adults)						
Dined out in last 12 months	445	56.0%	110	11,150	52.1%	103
Home (Households)						
HH did any home improvement in last 12 months	148	31.5%	115	3,358	29.8%	109
Psychographics (Adults)						
Buying American is important to me	461	58.0%	157	10,592	49.5%	134
Usually buy based on quality - not price	155	19.5%	106	3,882	18.1%	99
Price is usually more important than brand name	265	33.3%	119	6,702	31.3%	112
Usually use coupons for brands I buy often	138	17.4%	109	3,908	18.3%	114

Appendix C. Existing Conditions - Zoning, Transportation, Natural Hazards

Exhibit 22. Zoning in South Beach - Peninsula

Source: City of Newport.



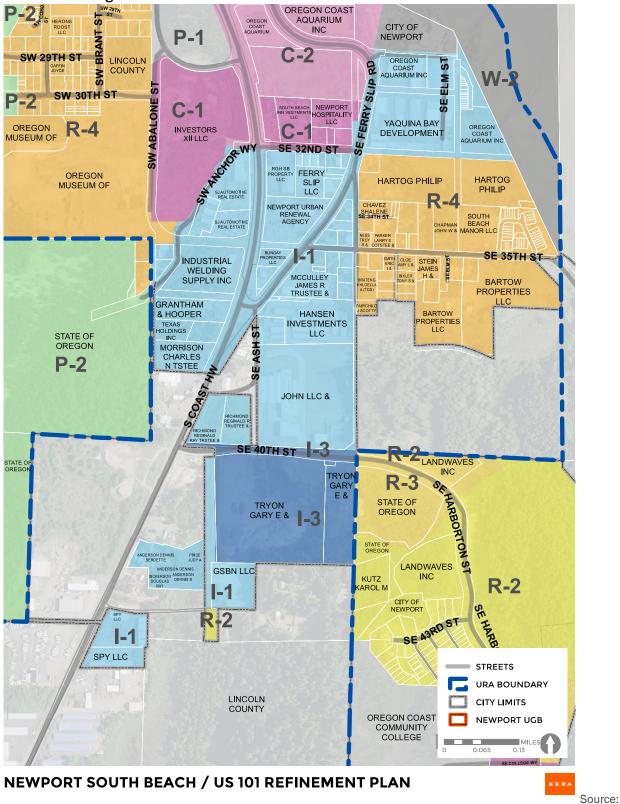


Exhibit 23. Zoning in South Beach – US 101

City of Newport. Exhibit 24. Zoning in South Beach – Airport Investment Zone Source: City of Newport.

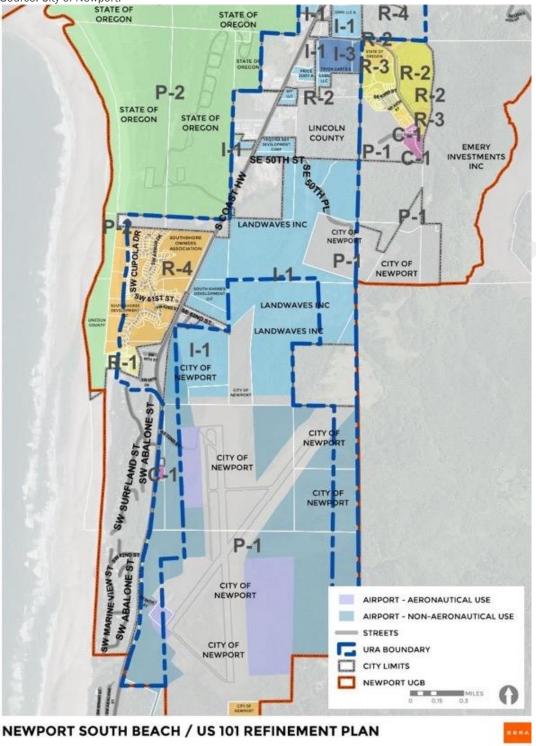
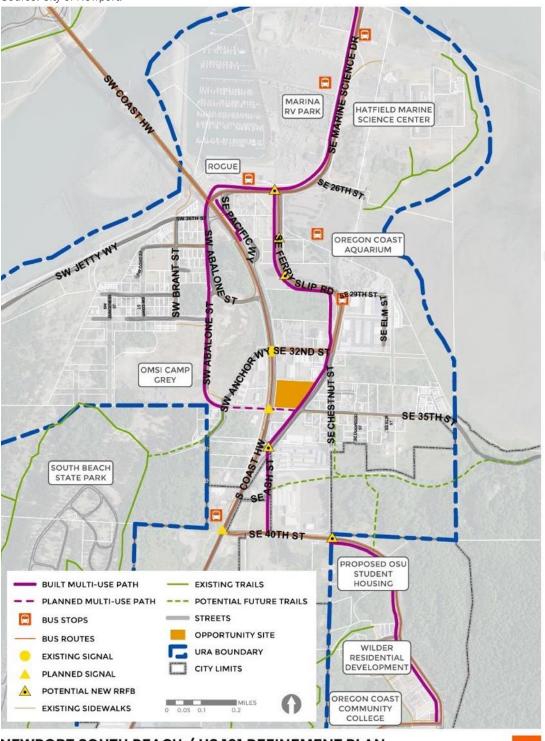


Exhibit 25. Transportation Network in South Beach

Source: City of Newport.

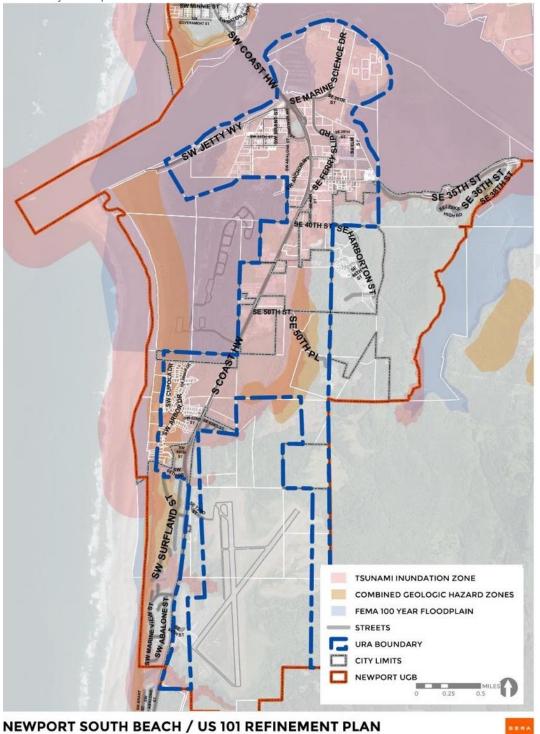


NEWPORT SOUTH BEACH / US 101 REFINEMENT PLAN

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Exhibit 26. Natural Hazards in South Beach

Source: City of Newport.



Appendix D. Sewer Connection Alternatives

DRAFT Technical Memorandum

Date:	June 09, 2021
Project:	Newport South Beach / US101
To:	ECONorthwest
From:	Justin Moman, P.E.
	Katie Husk, P.E.
	Murraysmith
Re:	Newport South Beach Sewer Connections Alternatives Evaluation

Introduction

The City of Newport is considering multiple approaches to improve the sewer infrastructure in the South Beach / U.S. 101 Highway Corridor in order to expand sanitary sewer service for five non-aeronautical development areas at the Newport Airport. The current layout of the City's sanitary sewer system in this area is patchwork in nature with the proposed development areas unlinked to the wastewater conveyance and treatment facilities located to the north. The Newport Airport is presently utilizing an on-site septic system which is undersized to meet future development plans for the property with projected flows of 4,000 gallons per day.

Purpose

The purpose of this memorandum is to provide an alternatives analysis for sanitary sewer infrastructure improvements to serve the non-aeronautical development areas identified by the City. This includes a discussion of the strengths and weaknesses of each alternative, an evaluation of short-term and long-term advantages, and a planning-level cost estimate for each alternative.

Analysis of Alternatives

In order to adequately compare each of the sewer infrastructure alternatives, Murraysmith developed analysis criteria by which to evaluate each option. Each criterion is discussed in detail below. A summary table of the capital costs may be found in Table 1 in the summary section of this report. Summary analysis criteria results may be found in Table 2.

Timeline

Design and construction timelines have the potential to affect development plans for the airport property, other planned construction projects, etc. Timeline may be a major factor depending on the urgency of the project.

Regulatory Hurdles

Some alternatives require regulatory approval which may require additional effort to obtain in comparison to other alternatives. This can affect the project schedule, costs, and feasibility of the project. This is especially relevant for this project when considering onsite systems that will be permitted independently of the City's existing wastewater treatment plant.

Expandability (Growth)

Developing a wastewater plan with future growth of the community in mind could mitigate future cost impacts. Options with on-site disposal of effluent maintain capacity within the existing wastewater treatment plant (WWTP) and may be expandable for future growth.

Ease of Operation and Maintenance

The upkeep of a wastewater facility is imperative for its future performance. On-site facilities require much more maintenance and oversight and personnel training that should be taken into consideration.

Private Property Impacts (Easements)

Construction along the roadway will require land acquisition, which would likely have impacts on both the cost and the timeline of the project.

Expand Airport Septic System

The first alternative is the expansion of the existing airport septic system to a large onsite septic system (LOSS) that would accommodate additional future flows. The existing system location does not have room to accommodate enough additional loading, so the southern triangle of land between the airport runways was selected as the best location for this expansion.

The selected location is at a higher elevation than most of the airport development areas, so package pump stations are assumed at each area to convey the wastewater to the septic system. E/One package pump stations with grinder pumps were identified to meet the low- and intermittent-flow requirements of this application to prevent fouling of the pumps and conveyance lines by reducing solids present in wastewater. A detail and description of a suitable package pump station is included in Appendix E. Package Pump Station.

Flows would be pumped from the airport development areas to a new septic tank where solids will be separated from the liquids. Effluent from the septic tank would then be disposed via infiltration trenches in four absorption areas. A dosing system will be required to alternate the absorption areas.

The primary components of this alternative are:

- Five (5) pump stations located at the airport development areas
- 8,000-gallon capacity septic tank
- Dosing system to alternate the absorption areas
- Absorption field
 - 4,667 linear feet of trench minimum divided into four (4) absorption areas.
 - Each area contains eight (8) trenches that are 2-feet wide, 150-feet long, and spaced 10 feet on-center.
 - Approximate area of absorption field is 61,500 square feet (1.4 acres).

Estimated capital cost: \$594,000

Advantages

- Capacity in existing wastewater treatment plant is maintained.
- The system is entirely contained on airport property.
- Expandable to meet the needs of future growth.
- Limited operation and maintenance costs.

- Requires additional soil studies to determine feasibility. Soil survey shows potential high groundwater in area that could constrain this alternative.
- The selected location for the absorption field is uphill from many development areas and will likely require pump stations.
- Permitting will be required, but modification of the existing permit may be possible.
- Trenchless technology will be required to install force main(s) with casing under the runway.
- Maintenance access and the impact of airport activities at the proposed site should be considered.
- Additional expenditures will be required for operations, maintenance, and periodic solids disposal.
- Requires FAA review.
- Requires leach field within airport area.

Sewer Extension 1: Gravity to Southshore Pump Station and New Force Main to Inlet Pump Station

This first sewer extension alternative is the construction of a gravity sewer line from the airport facilities, down SE 72nd St., and along US-101 to the existing Southshore Pump Station (PS). A force main (FM) would be constructed along SE 62nd St. and an unimproved fire road to the Newport wastewater treatment plant's influent pump station (IPS). This new force main would replace the existing force main from the Southshore PS and reduce flows through other portions of the collection system.

The primary components of this alternative are:

- 6,750 linear feet of 6-inch gravity sewer
- 6,450 linear feet of 5-inch force main
- Package pump stations at airport development areas where gravity conveyance is not feasible

Estimated capital cost: \$5,091,000

Advantages

- Utilizes existing pump station.
- Gravity conveyance is likely be feasible for some development areas.
- Allows for easy sewer collections of existing neighborhood on SE 62nd Street

- The gravity pipeline installation will likely be deep on portions of the airport property in order to maintain slopes that will achieve scouring velocity.
- An additional lift station could potentially be required to connect to existing pump station.
- Substantial work required along Highway 101 would impact traffic.
- ROW acquisition along pipeline route would likely be required.
- Will require extended design schedule relative to other alternatives.

Sewer Extension 2: Pump Station at Surfland and New Force Main

The second sewer extension alternative includes the construction of a new pump station in the Surfland area, near 82nd St. and Hwy 101. For this alternative, a new gravity sewer would be constructed from the airport property in the vicinity of SE 84th St., beneath Hwy 101, and to the new pump station. A combination of open cut and trenchless technologies would likely be required due to topography in the area and in order to limit impacts to traffic. From the pump station, a force main would be constructed along Hwy 101 to the influent pump station.

This option is contingent on the completion of the Surfland Sewer Extension project as proposed by Brown and Caldwell in the February 2018 Sanitary Sewer Master Plan (SSMP). The SSMP Surfland project included the construction of a new pump station at Surfland as well as a new force main from the Surfland Pump Station to the Influent Pump Station. The estimated cost for the SSMP Surfland extension project is \$6.3 million. These costs are not included in the estimate presented in this report.

The primary components of this alternative are:

- 1,350 linear feet of 6-inch gravity sewer
- Package pump stations at airport development areas where gravity conveyance is not feasible

Estimated capital cost: \$1,297,000

Advantages

- Direct routing from airport to pump station makes it easier to achieve scouring velocities in gravity line.
- Gravity conveyance is likely be feasible for some development areas.
- Limited operation and maintenance cost compared to other alternatives.

- Contingent upon capital investment in and operation and maintenance of SSMP Surfland extension.
- Work required in Highway 101 corridor would likely impact traffic.
- Some ROW acquisition along pipeline route may be required.
- Direct routing to the pump station would likely require trenchless installation, which may have significant cost impacts.
- Will require extended design schedule compared to other alternatives.
- Force main would skip over 62nd Street; eventually another PS required for the neighborhood in between

Onsite Treatment

The final alternative is onsite treatment of wastewater from the development areas. Packaged treatment facilities that can be installed onsite are available from multiple equipment manufacturers. This option is similar to the LOSS, with a small treatment facility replacing the septic tank and absorption field components. The estimate included in this report assumes the use of the MEMPAC-E5 by Cloacina. The MEMPAC is a membrane bioreactor package wastewater treatment plant that can meet Class C recycled water standards, at a minimum, for onsite land application of treated effluent. An informational flyer containing a schematic and product description for this package plant may be found in Appendix F. Package Plant.

The main components that would need to be constructed for this alternative are:

- Five (5) pump stations located at the airport development areas
- Packaged treatment plant
- Land application system

Estimated Capital Cost: \$1,960,000

Advantages

- Capacity in existing wastewater treatment plant is maintained.
- The system is entirely contained on airport property.
- Expandable to meet the needs for future growth.
- Recycled water can be reused on site depending on the level of treatment.

- Operations and maintenance costs including mechanical upkeep, electrical costs, chemical additives, operator requirements, and routine removal of solids.
- The location of the plant may be uphill from many development areas and require pump stations.
- Permitting will be required, but modification of the existing permit may be possible.
- Maintenance access and the impact of airport activities at the proposed site should be considered.

Summary

A summary of capital costs can be found in **Table 1**. A summary and scoring (highest score is most favorable) of each option can be found in **Tale 2** below.

Table 1: Capital Costs Summary

Alternative	Estimated Capital Cost
Expand Airport LOSS	\$594,000
Sewer Extension 1: Gravity to Southshore PS and New FM to IPS	\$5,091,000
Sewer Extension 2: PS at Surfland and New FM to IPS	\$1,297,000
New Onsite WWTP (Package Plant w/ Land Application)	\$1,960,000

Notes:

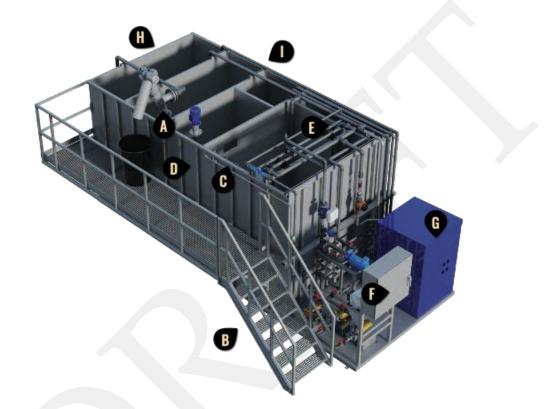
- 1. Cost includes material costs and installation, mobilization (12%), general conditions (8%) contractor O&P (12%), contingency (40%), and ELA (Engineering, Legal, and Administration) (25%)
- 2. Estimate is for planning purposes only; AACEI Class 5 estimate ranges from -30% to +50%

Alternative	Timeline	Regulatory Hurdles	Expandability (growth)	Ease of Operation and Maintenance	Private Property Impacts (Easements)	Total
Weight	20%	20%	20%	20%	20%	
Expand	This	Permitting required	Septic system	Requires regular	No	
Airport	alternative's	for land application	may be	maintenance and	additional	
Septic	timeline may be	of effluent. May be	expanded to	solids removal.	property	
System	impacted by	able to utilize	increase capacity	Can follow	acquisition	
	permitting, but	existing permit.	at lower capital	operations and	needed	
	there are limited	Soils studies and	cost compared to	maintenance		
	construction	groundwater	other	schedule of		
	delays.	investigation is required.	alternatives.	existing facility.		
Score	8	8	10	7	10	43
Sewer	This alternative	No significant	Utilizes capacity	Limited near-term	Additional	
Extension 1:	may be	permitting	of existing	O&M needs.	ROW	
Gravity to	constructed at	requirements	WWTP. Adds	(Assumes pump	purchase	
Southshore	any time but		redundancy to	maintenance part	required	
Pump Station	may have an		existing system,	of Southshore	along US-101.	
	extended design		increasing	pump station		
	schedule.		capacity of	O&M).		
			conveyance system.			
Score	8	10	6	10	5	39
Sewer	This alternative	No significant	Utilizes capacity	Limited near-term	Minimal	
Extension 2:	is dependent on	permitting	of existing	O&M needs.	ROW	
Gravity to	the completion	requirements	WWTP	(Assumes pump	acquisition	
Surfland	of the Surfland			maintenance part	required	
Pump Station	sewer extension			of Surfland sewer	-	
	project and may			extension project).		
	have extended					
	design schedule					
Score	5	10	5	10	6	36
Onsite Tractor on t	This	Permitting required	May be	Requires regular	No additional	
Treatment	alternative's	for land application of treated effluent.	expanded to	operation and maintenance.	additional	
	timeline may be impacted by	May be able to	increase capacity.	Access to airfield	property	
	delays	utilize existing	capacity.	is required.	acquisition needed	
	associated with	permit.		Requires new	neeueu	
	permitting	Permit.		training and		
	Permitting			maintenance		
				protocol.		
Score	8	7	8	5	10	38

Table 2: Non-Monetary Evaluation of Alternatives

Appendix E. Package Pump Station

MEMPAC™- E



- A: Integrated screening
- B: Aluminum stairs and platform (optional full catwalk and stairs shown)
- C: All sensory equipment is mounted on the Cloacina Slide Rail[™] System and is accessible from the inspection platform
- D: Corrosion-resistant 304 stainless steel tankage and components come standard
- E: Membrane filtration equipment is factory-installed and wet tested for a minimum of 24 hours prior to shipping
- F: Electrical panel and controls system are factory-installed and tested
- G: Optional semi-sound attenuated blowers
- H: Integrated aerated sludge storage chamber
- I: Biological Nutrient Removal (BNR)

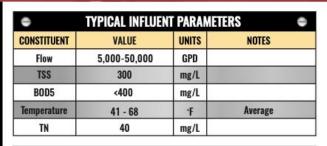
Prior to delivery, clients will be given exact connection points for power, communication, influent, effluent and WAS.

STAINLESS STEEL MEMBRANE BIOREACTOR WITH ECONOMIZED EQUIPMENT SELECTIONS

CLOACINA.COM | INFO@CLOACINA.COM | 888.483.8469

PRODUCT DESCRIPTION

Municipal clients with tight project budgets often seek economical treatment solutions capable of meeting stringent discharge and re-use requirements. The MEMPACTM-E, designed for flow ranges of 5,000 – 50,000 Gallons Per Day (GPD) in increments of 5,000 gallons, has standard, streamlined designs and economized equipment selections while still incorporating most of the revolutionary features of the other MEMPAC models. Pricing on the MEMPAC-E is comparable to extended aeration systems. This system has expedited construction and delivery timelines.



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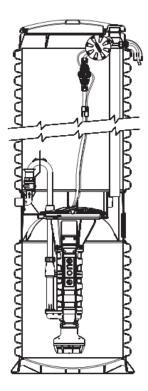
TYPICAL EFFLUENT PARAMETERS					
CONSTITUENT	VALUE	UNITS	NOTES		
BOD5	<10	mg/L			
TSS	<10	mg/L			
TN	<10	mg/L			

0	TYPICAL APPLICATIONS	0
	mestic waste from mobile home parks, resorts, schools, ds, commercial developments, truck stops and rest areas	

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DH071/DR071



Patent Numbers: 5,752,315 5,562,254 5,439,180

* Discharge data includes loss through check valve, which is minimal.

NA0050P01 Rev A

General Features

The model DH071 or DR071 grinder pump station is a complete unit that includes: the grinder pump, check valve, HDPE (high density polyethylene) tank and controls. The DH071 or DR071 is packaged into a single complete unit, ready for installation.

The DH071 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The DR071 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

All solids are ground into fine particles, allowing them to pass easily through the pump, check valve and small diameter pipelines. Even objects not normally found in sewage, such as plastic, rubber, fiber, wood, etc., are ground into fine particles.

The 1.25-inch discharge connection is adaptable to any piping materials, thereby allowing us to meet your local code requirements.

The tank is made of tough corrosionresistant HDPE. The optimum tank capacity of 70 gallons (265 liters) is based on computer studies of water usage patterns. A single DH071 or DR071 is ideal for one, average single-family home and can also be used for up to two average singlefamily homes where codes allow and with consent of the factory. This model can accommodate flows of 700 GPD (2650 lpd).

The internal check valve assembly, located in the grinder pump, is custom-designed for non-clog, trouble-free operation.

The grinder pump is automatically activated and runs infrequently for very short periods. The annual energy consumption is typically that of a 40watt light bulb.

Units are available for indoor and outdoor installations. Outdoor units are designed to accommodate a wide range of burial depths.

Operational Information

Motor

1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections

4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

Discharge Connections

Pump discharge terminates in 1.25inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge*

15 gpm at 0 psig (.75 lps at 0 m TDH)

11 gpm at 40 psig (.63 lps at 20 m TDH)

7.8 gpm at 80 psig (.47 lps at 42 m TDH)

Overload Capacity

The maximum pressure that the pump can generate is limited by the motor characteristics. The motor generates a pressure well below the rating of the piping and appurtenances. The automatic reset feature does not require manual operation following overload.

