

Point Reyes Station Narrative

Water-related Assets and Needs

DRAFT 4/24/2019

Project Area – Historic Downtown and Immediate Surrounding Area

The mapped Point Reyes Station Planning Area encompasses approximately 1,500-acres and includes the subareas of the historic downtown and the Mesa. This planning area focuses on the developed land and excludes GGNRA, restored Giacomini wetlands, and the baylands west of town. The current community engagement focuses on the historic downtown and immediate surrounding area, where there is the co-existence of mix commercial, residential, affordable housing, and public uses. This area is generally characterized by smaller lots, different soils, and more site constraints than the lower density Mesa. The current discussion excludes the Coast Guard property, which is subject to a separate planning process.

Community Planning

This project respects the community planning process. The goals, objectives, and policies of the 2001 Point Reyes Station Community Plan (Community Plan) provide the underpinning for further discussion of water resources. This includes, but is not limited to, the following goals:

1. Preserve the viability of Point Reyes Station as a small, rural, working town; not a predominantly retirement, vacation or tourist location.
2. Preserve the town’s historic and other seasoned buildings and its unpretentious, rural appearance.
3. Carefully manage impacts of tourism on the visual character of the historic downtown district.
4. Minimize the impacts of tourism on the everyday activities of the local population.
5. Create additional affordable housing for people employed locally
6. Protect Lagunitas and Tomasini Creek and other elements of Tomales Bay ecosystem
7. Promote organic agriculture and sustainable living
8. Increase community awareness and participation in planning and development matters.

This project is also consistent with the adopted Marin County Local Coastal Program Land Use Plan, April 19, 2016, Marin Ocean Coast Sea Level Rise Adaptation Report, February 2018, and Marin Ocean Coast Sea Level Rise Vulnerability Assessment, May 2016.

Water Supply/ Assets

Source

Water service to Point Reyes Station is supplied by North Marin Water District's (NMWD) West Marin System serving Point Reyes Station, Olema, Bear Valley (including Point Reyes National Seashore), Inverness Park, and Paradise Ranch Estates. Point Reyes Station accounts for approximately 64% of system. The source of water for the system consists of three wells at two sites adjacent to Lagunitas Creek. Two wells are located on the Coast Guard property, while the third well is approximately 1.7 miles upstream on the Gallagher Ranch. The Gallagher well is upstream of salt water intrusion from tidal inflow and is used as much as possible. However, this single well at the Gallagher Ranch site does not have sufficient capacity to meet water demands of the full-service area of the West Marin System and the Coast Guard wells continue to play a significant water supply role

NMWD diverts water from Lagunitas Creek through a Water License and two Water Right Permits. Streamflow in the creek greatly exceeds water withdrawals needed to supply the West Marin System. Annual runoff to Tomales Bay from Lagunitas Creek, after upstream diversions, averages 63,900 acre-feet per year (AFY) while system withdrawals, based on average daily consumption in 2018, amount to 272 AFY or less than 0.5% of average annual streamflow. In a normal year, the District has water rights for 690 acre-feet of water per year.

NMWD uses a water exchange with Marin Municipal Water District (MMWD) as established in the 2014 Intertie Agreement to satisfy the requirements of the State Water Resources Control Board (SWRCB) Order No. WR 95-17. This Order requires that the district identify an alternate source of water during low flow months (July through October) of dry years. Under the Agreement, stored water can be released by MMWD into Lagunitas Creek from Kent Lake in exchange for compensation by NMWD. The existing Intertie Agreement between the two districts runs through 2040 and provides for a maximum of 250 AF to be exchanged annually.

Since NMWD acquired the private West Marin water system in 1971, they have been upgrading the system's pipelines, hydrants, storage, and treatment.

Distribution

Through the years, distribution lines have been upgraded such that nearly 100% of the pipelines acquired in 1971 have been replaced.

Water Storage (for operation, fire flow, and emergency)

Storage facilities for the entire system consists of 13 storage tanks of varying sizes located throughout the service area. Total storage capacity is about 1.035 million gallons, with more than half (i.e., 580,000 gallons) supplied by three tanks in Point Reyes Station.

Water Treatment

The water supply is treated in a single treatment facility located near the Coast Guard wells. This facility removes naturally occurring iron and manganese, which can affect the color of the

water and result in staining. Treatment consists of adding an oxidant to precipitate the iron and manganese and then filtering the water through pressure filters, which remove the iron, manganese, and any excess oxidant. After filtration, a small amount of chlorine is added to maintain disinfection of the water throughout the pipeline distribution.

Population Served (Point Reyes Station, including the Mesa area)

	<u>Dwelling units</u>	<u>Water Use</u>
1975	351 (2.48 person/ dwelling unit)	
1998	722 (2.48 person/ dwelling unit)	320 AFY
2018	832 (2.48 person/ dwelling unit)	272 AFY

Potential Buildout

The NMWD West Marin Water System 2014 Master Plan includes various future projects necessary to meet ultimate buildout projections as provided in the Community Plan.

Fire Safety

NMWD and the Marin County Fire Department work cooperatively when reviewing fire flow and fire storage requirements. The NMWD 2014 Master Plan developed water storage and fire flow goals based on input from Marin County Fire Department for all District service zones in West Marin. The fire flow/storage goals for downtown Point Reyes Station area are generally 2,000 gallons per minute (gpm) for 2 hours and 1,000 gpm for 2 hours in most other service zones.

Wastewater

Properties within Point Reyes Station are served by individual on-site septic systems. These include conventional standard systems, seepage pits, innovative alternative systems, and original undocumented systems that may include cesspools. Many older homes and businesses with original systems were constructed prior to code requirements for on-site sewage disposal, and likely do not conform with requirements that apply for new development.

While some sites in Point Reyes Station have gentle slopes, appropriate soil types, and groundwater depths that are suitable for onsite wastewater treatment systems (OWTS), some areas are significantly less suitable.

The general method of treatment throughout Point Reyes Station is estimated to be 38% standard systems, 38% alternative systems (less than a third of which have operating permits), and 24% original systems without records of repair (Class IV).

Downtown

The downtown area is underlain by a layer of coarse gravel material which can percolate sewage from individual systems quite well. While the groundwater table may be 10-15 feet below the surface during much of the year, seasonal groundwater can rise to two feet below the surface. This causes seasonal failure of traditional systems. In addition to seasonal high groundwater, small lot size is a major constraint for meeting existing and future increased wastewater demand. Consequently, these properties cannot provide enough area for expansion or replacement of the existing OWTS to meet the current and future wastewater demands.

Alternative systems are used when these type of site constraints preclude the use of standard septic design and leach field specifications. Alternative systems require operating permits that call for the submittal of annual monitoring reports verifying these systems are working properly. Mound systems, sand filters, sand filtered pressure dosed trenches, drip disposal, and other alternative waste disposal systems are permitted by the County Environmental Health Services Division (EHS), subject to ongoing monitoring requirements. The Community Plan supports the use of these and other new disposal techniques, provided the necessary safeguards for natural resource protection and public health can be maintained.

It is noted that between 1996 and 2003, EHS did not require operating permits and routine evaluation reports for alternative systems installed as repairs for existing septic systems. These unmonitored systems are gradually receiving operating permits when there is an application for a remodel or repair. There are currently 13 operating permits for commercial and community septic systems and 9 operating permits for residential alternative systems in downtown and immediate surrounding area.

Because of limited space in the commercial downtown area, some combined systems have been established with two or more buildings connected to one septic system. In several cases, including some of the older residences, adjacent contiguously owned lots are used for leach fields since the developed lot is too small to support a septic system itself.

Mesa

In the areas north and east of downtown, soils generally consist of about one foot of topsoil underlain by Franciscan graywackes, shales, basalts, and ultrabasic rocks. These shallow soils are considered generally insufficient to provide for sewage disposal from standard septic systems. As a result, the Regional Coastal Commission adopted Interpretive Permit Guidelines for the community which limit development densities. Specifically, the Commission's policy states that "... land divisions utilizing septic systems within the community expansion boundary shall generally maintain a one-acre minimum lot size average." This policy is reflected in the

planned zoning district designations in the Mesa area. Because of the lot size and higher elevation, alternative systems can provide adequate wastewater management in this area. There are 10 operating permits for alternative systems in the Mesa area, with an estimated twice as many alternative systems that don't have operating permits.

Historic Considerations for Community System

In 1976, a study and Environmental Impact Report for a community sewer system were prepared by NMWD. At the time, the Point Reyes Station Community Plan endorsed this proposal. This effort was tied to an upgrade of wastewater treatment at the Coast Guard Station. When the community failed to approve funding for its share of the project, the proposal was abandoned.

The 1986 updated Point Reyes Station Community Plan endorsed construction of wastewater collection and treatment system for the downtown village commercial residential (VCR) zoning and Coast Guard housing use. Since then, the land involved for the originally proposed community system is no longer available.

In a town meeting called by the Coast Guard in 1997, the community confirmed its continued opposition to a town sewer. The Coast Guard property is no longer in use and is being considered for conversion to affordable housing. This property is not part of the current water conversation. Future development of this property would include provisions for a separate OWTS.

Much of the community opposition to a community system was concern that it would lead to uncontrolled development and loss of community character in Point Reyes Station. Since then, an updated Point Reyes Station Community Plan, Marin Countywide Plan, and Local Coastal Plan have been adopted that limit development to current zoning. Any proposed change in zoning would require an amendment to the Marin Local Coastal Plan. This requires the equivalent of CEQA environmental review and approval from the County Planning Commission, Board of Supervisors, and the Coastal Commission.

Today, the current 2001 Community Plan encourages alternative systems, new technologies, and monitoring programs. It also calls for screening and limited use of mounds. The Community Plan includes Program CA-2,1e for remedial action that states, *"Large-flow waste disposal systems shall not be permitted unless sufficient land area and financial guarantees are available to cover necessary remedial actions."*

There are less land intensive and new technologies for a community system than what was proposed in 1976. These include, but are not limited to, a community system similar to nearby Marshall where on-site tanks are retained and there is a community leachfield. There are also technologies for compact wastewater recycling units that produces tertiary treated water that could be used for irrigation, dual plumbing of community bathrooms, etc. A feasibility study for a community system would evaluate the various options, environmental benefits, and relative costs.

Public Restroom

In the Community Plan, Objective CA-4.0 calls for development of public restrooms for visitors in the downtown area. In 2008, Marin County funded the construction of a 4 flush restroom facility and playground in Point Reyes Station at the corner of Mesa Road and Toby Street. Businesses without restrooms have since been referring customers to this public restroom.

Restaurants are required to provide restrooms for their customers; this is required by the California State Retail Food Code and the food facility's permit to operate. While takeout food establishments aren't required to have restrooms, those that provide tables and seating must still provide this convenience. Despite the requirements, many businesses still refer customers to the Point Reyes Playground. Prior to the construction of these restrooms, some businesses allowed customers to use their restroom facilities. However, once the public facility was up and running, several downtown businesses closed their restroom doors, creating a reduction in the number of publicly accessible toilets.

In response to the heavy demand, the County added 6 portalets to the Mesa restroom facility that need to be pumped 2-3 times a week. The total daily use is about 900 gpd and there are significantly higher weekend flows. The lack of readily accessible restrooms for downtown customers and tourists continues to be a problem. The annual County cost to maintain all the restrooms and portalets in the Point Reyes Station area, which includes Point Reyes Station Park on Mesa, Green Bridge, Eldred, Grandi, and Whitehouse Pool, is roughly \$240,160. The County cost to rent, pump, and maintain the restrooms at Mesa is spending approximately \$99,000 a year; this does not include staffing costs.

As described in the *West Marin Visitor Needs Assessment*, Aug 2017, one solution would be to build more public bathrooms, for which the report presented several options: 1) Standard public toilets with leachfield; 2) vault toilets with handwashing disposed to graywater system; and 3) a community wastewater system. The latter would also allow downtown businesses to have their own customer serving restrooms on their premise. Such an effort would require community support. In addition to the report's findings, new technologies could also be explored such as waterless composting toilets, similar to the Bronx Zoo.

Accessory Dwelling Units (ADUs)

The Community Plan encourages residential second units (more commonly referred to as ADUs) for creating rental housing, not B&Bs. As more property owners seek to add ADUs and junior accessory dwelling units (JADUs), residents must ensure their on-site systems are adequate.

An ADU is an independent unit with a full kitchen up to 1200 square feet in size. ADUs less than 500 square feet within an existing structure may require septic evaluation even if it does not increase the number of bedrooms on record. New ADUs up to 1,200 square feet require septic systems to be upgraded to comply with current code.

A JADU is located within the existing footprint of a residence and typically has a wet bar and other small food preparation facilities. A septic evaluation is not required for these new units. But property owners should make sure their existing system can handle the increase use associated with a JADU.

Septic Regulations

Marin County's regulations and permit process for septic systems are intended to protect public health and nearby waterway and must meet State requirements. The State Water Board issued new regulations address the siting, design, operation and maintenance of onsite wastewater treatment systems (OWTS Policy) in 2012. In response, the Marin County Board of Supervisors approved Marin's Local Agency Management Plan to comply with these State regulations in 2016. The County is currently awaiting the State's final approval of this plan. A key element of the OWTS Policy is the protection of impaired water bodies, which includes Tomales Bay and Lagunitas Creek. Under the Policy, existing, new, and replacement septic systems within 600 feet of an Impaired Water Body, are subject to special and enhanced treatment. This would extend into parts of downtown Point Reyes Station and to homes along Tomasini Creek. The County proposes a 200-foot setback and supplemental pretreatment of the wastewater prior to pressure distribution dispersal. If the State approves this, there would be an additional consideration for some properties to have pretreatment units.

Graywater

Graywater is water from bathtubs, showers, bathroom sinks, washing machines, and laundry tubs. Graywater does not include wastewater from toilets, urinals, kitchen sinks, dishwashers, photo lab sinks, or water from soiled diapers.

Marin County encourages graywater systems. Clothes washer systems and simple systems are exempt from construction permits. Marin County only requires a notification be filed with EHS for simple graywater systems. A construction permit and plans are required for complex systems and on-site treated non-potable graywater systems. For graywater systems where the plumbing will be altered, or back flow prevention valves are needed, a plumbing permit from the Building and Safety Division may be required.

More information on the types of graywater systems and considerations for installing them is available at <https://www.marincounty.org/depts/cd/divisions/environmental-health-services/graywater-systems>.

Water and Wastewater for Community Evacuation Center

Questions have been raised about water and wastewater service to West Marin School when it becomes an evacuation center. As noted about, Point Reyes Station customers receive water from NMWD storage tanks. During power outages, the school, as well as all NMWD customers, continue to receive water from these tanks. The water district can operate strictly from storage for 1-2 days. If the outage is going to be longer than 24 hours, NMWD would bring in one of their portable generators to power their Point Reyes Treatment Plant.

The septic tank at the school is designed with 24-hour capacity. If power at the school is going to be out for more than 24-hours, an emergency generator is needed. The ability and size of the school's emergency generator to maintain operation of their septic system is being evaluated. Additionally, contingencies can be planned for that include pumping services for the septic tank and rental of portalets.

Water Quality

Tomales Bay and Lagunitas Creeks are designated pathogen-impaired water bodies because of the risks to shellfish harvesting and recreation (both contact and non-contact.)

Tomales Bay

Under the Federal Clean Water Act, the State is required to establish Total Maximum Daily Load (TMDLs) for pollutants that impair the beneficial uses of water bodies. In compliance with these requirements, the Regional Water Quality Control Board (RWQCB) issued its 2005 report *Pathogens in Tomales Bay – Total Maximum Daily Load*. The TMDL sets a target of zero discharge of human waste to the waters of Tomales Bay and its tributaries, which includes Lagunitas Creek. This is based on the knowledge that human waste can be a significant source of pathogenic organisms, including viruses. RWQCB and Marin County EHS are committed to eliminating faulty septic systems and implementing various onsite wastewater management programs and projects to address the water quality concerns in the Tomales Bay watershed. The recent outbreak of norovirus outbreak from local shellfish underscores the importance of on-going efforts to reduce human waste.

Lagunitas Creek at Green Bridge

Once a week from April 1 through October 31, EHS collects a water sample on Lagunitas Creek at Green Bridge to test for Total Coliform, E. Coli, and Enterococcus. While these bacteria themselves are generally not pathogenic, they are used as indicators of the potential presence of other pathogens that are linked to human illness. When lab results exceed State recreational standard for recreational water, an advisory is posted.

These seasonal samples have been collected every year since 2003. During these past fifteen years, the number of advisories has ranged from 100% of the time in 2004 to only 6% of the time in 2013. On average, advisories were warranted for 16 weeks of the sample season, a little more than half of the 7-month sample period. No correlation has been seen between rainfall and flow. While advisories occur throughout the sample period, they appear to be a little more frequent towards end of summer.

Sea Level Rise

From the Marin County report *Marin Ocean Coast Sea Level Rise Vulnerability Assessment, May 2016*, sea level rise predictions indicate 4.7 -24 inches by 2050 and 16.6 -65.8 inches by 2100. The State of California has adopted a new set of guidelines since the Adaptation Report was completed. The 2018 Update report is at

[http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3 Exhibit-A OPC SLR Guidance-rd3.pdf](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A OPC SLR Guidance-rd3.pdf)

Water Supply

The main wells on the Coast Guard property are subject to salt water intrusion on a routine basis. This salinity intrusion will only increase with rising sea level. The NMWD has an operation plan to avoid saltwater intrusion and utilizes the upstream Gallagher well. However, the existing Gallagher Well capacity is limited, and an additional well is needed at this location.

Any county and/or state efforts to elevate/retrofit roads subject to sea level rise flooding would necessitate modifications to existing water lines (as well as power and gas utilities) buried within the roadway for certain areas of Sir Francis Drake Boulevard and State Route 1.

Wastewater

Any property subject to flooding also has a seasonally inundated septic system, which prevents proper functioning. Properties along Lagunitas Creek, particularly fronting Sir Francis Drake, will be subject to increased flooding and subsequent periods of septic failure due to sea level rise. Additionally, sea level rise would raise the water table, which would exacerbate seasonal and/or year-round problems for on-site systems in low lying area. The USGS is collecting data on this.

Flooding

Current seasonal flooding creates access problems getting in and out of town and results in school closures. The community has reached out to Caltrans to manage seasonal flowing in sections of Shoreline Highway. Diligent maintenance of storm drains has created local problems as well. With sea level rise, flooding is probable on portions of Shoreline Highway in the long-term scenario. However, Green Bridge is vulnerable in the near term. Any renovation of Green Bridge should address this. Buildings along Lagunitas Creek are vulnerable in the extreme scenario of 6.6 ft and a 100-year storm. Recreational assets will also be vulnerable to flooding. This includes White House Pool and trail.

The County is trying to assist homeowners that need to elevate their homes for flood protection. Contact Jack Liebster at jliebster@marincounty.org.