

Bolinas Community Public Utility District

HISTORY AND OVERVIEW

The Bolinas Community Public Utility District ("BCPUD") was formed in 1967 pursuant to a resolution of the Marin County Board of Supervisors which consolidated two previously existing districts: the Bolinas Beach Public Utility District (formed in 1927 to serve the Big Mesa) and the Bolinas Public Utility District (formed in 1935 to serve the Little Mesa and downtown areas). The BCPUD is located in unincorporated western Marin County, immediately to the south of the Point Reyes National Seashore and to the west of the Golden Gate National Recreation Area. The BCPUD has a jurisdictional boundary of approximately 2.6 square miles and covers 1,649 acres of unincorporated Marin County, as depicted in the map below. Approximately one-fifth of that acreage (350 acres) is part of the Point Reyes National

Seashore. In total there are 1,168 legal parcels encompassed within BCPUD's boundary.

As a public utility district, the BCPUD's governance authority is codified in the California Public Utilities Act of 1913, which empowers the district to provide a range of municipal services. The district is governed by a five-member Board of Directors, who are elected by registered voters (or appointed in-lieu of a contested election) to



staggered four-year terms, and managed by a General Manager who supervises of staff of four shift operators and one administrative assistant. At present, the BCPUD directly or indirectly provides water, sewer, solid waste, drainage, and parks and recreation services within its boundaries.

Potable Water Service

The Bolinas Community Public Utility District provides potable water services through its own supply, transmission, treatment, storage, and distribution facilities to 587 homes and businesses in the community of Bolinas. The BCPUD serves a population of approximately 1,500 full-time residents and an additional 1,000 seasonal or part time residents. All water diverted by BCPUD from its surface water sources receives treatment via inline coagulation and low-pressure microfiltration at its Woodrat Water Treatment Plant, constructed in 1995.





The majority of the BCPUD's distribution infrastructure was constructed prior to World War II by its two predecessor agencies, the Bolinas Beach Public Utility District and the Bolinas Public Utility District. The distribution system is comprised of approximately 19 miles of water mains which are gravity-fed from the District's two treated water storage tanks, the West Tank and the East Tank, which store a combined volume of 860,000 gallons of treated water.

BCPUD's water treatment plant with solar array and the Woodrat Reservoir 1 in the background

The District's water is obtained from surface sources – the Arroyo Hondo Creek and two small emergency reservoirs supplied by unnamed streams -- contained within a 2 square mile watershed area of the Point Reyes National Seashore. In combination with the District's permitted diversions, these sources provide the BCPUD with an estimated maximum available annual yield of 167 acre-feet of water. Due to the limited nature of the BCPUD's surface water supplies, the BCPUD Board of Directors in 1971 declared a water shortage emergency and enacted a moratorium on new connections to the water system which remains in effect today. Water conservation is a way of life in Bolinas, with most households using less than 100 gallons of water per day.



BCPUD's East and West Water Storage Tanks





In 2021, the BCPUD received approval from the State Water Resources Control Board ("SWRCB") to add two existing groundwater wells as emergency sources to its water system to provide some resilience for the district in times of drought. The district applied to the California Department of Water Resources ("DWR") Small Communities Drought Relief Program for grant funding to install the treatment facilities and infrastructure needed to connect the wells to the district's distribution system and DWR approved the funding in September 2022. The BCPUD currently is in the process of applying for coastal permits to install the new facilities.

BCPUD's watershed sources map

Wastewater Service

The BCPUD is the successor agency to the Marin County Sanitary District #3, organized in 1908. The District's sewer service area encompasses approximately three square miles with a collection system of pipelines stretching approximately three linear miles and consisting of pipes ranging in size from two inches to six inches. The collection system was constructed in two phases prior to and immediately after World War I, and serves 162 connections (residential and business) in the downtown area of the community of Bolinas, as well as one additional connection on the Bolinas Mesa.

In 1975, responding to an order from the State of California to cease and desist disposing of the system's effluent in the channel of the Bolinas Lagoon, the BCPUD constructed a pump station, force main and treatment facility. The facility is an integrated pond system which uses no chemicals in the treatment process, relying instead on a biological process of methane fermentation, with aeration and recirculation for odor control, and with ultimate disposal through pond evaporation and spray disposal on 45 acres of grasslands.



In 1990, the BCPUD completed an infiltration and inflow ("I&I") correction project to eliminate unwanted storm runoff and seawater intrusion into the collection system. While the project reduced I&I by 70%, the district continues to experience capacity problems in years when rainfall exceeds 50 inches. As a result, the district has continued a moratorium on new service connections enacted in 1985 as a requirement for state funding.



The BCPUD's sewer system is regulated by the Regional Water Quality Control Board for the San Francisco Bay Region ("Regional Board"). Since 1988, the district's sewer treatment facility has been subject to Waste Discharge Order 88-100. In late 2021, Regional Board staff notified the district that this permit is outdated and the Regional Board intended to transition to district's treatment facility to the statewide General Order for Small Domestic Wastewater Treatment Systems (SWRCB Order WQ 2014-0153-DWQ). The district will be required to upgrade its treatment facility in order to meet the requirement of this order; as such, the district is working on a work plan and timeline for completion for Regional Board approval.

Drainage Service

The majority of residences within the District's jurisdictional boundaries are located on the Big Mesa and served by on-site wastewater treatment systems (septic systems). In the early 1990's the BCPUD hired Todd Engineering to prepare a set of drainage improvement maps with the objective of providing a high-level integrated approach to improving drainage on the Big Mesa by lowering the water table and improving septic system functioning via a series of projects to be executed by residents (or groups of residents) and their contractors over time. BCPUD provides project consultation services to District residents who are interested in implementing surface drainage projects on the Big Mesa. The District also provides culverts to for project implementation "at cost" for those that are eligible.

Parks and Recreation

BCPUD does not have direct involvement in day-to-day parks and recreation activities within the District's jurisdictional boundaries. While the district owns the property on which Mesa Park (12-acres) is located and which has been improved with a parking lot, soccer field, baseball field, basketball court, playground and skate park, the land and the activities programmed there are managed by the Fire House Community Park Agency ("FHCPA"). FHCPA is a joint powers authority (JPA) whose member agencies include BCPUD and the Bolinas-Stinson Union School District. The JPA was created on January 21, 1985, with the stated intention of providing recreational opportunities to the taxpayers and residents of the area and to the students of the school and their families. FHCPA is a separate special district receives no direct funding from BCPUD but rather receives revenue by way of Measure A funds and ad valorem property taxes.

Solid Waste Disposal Services

BCPUD provides residential and commercial properties within the District with weekly solid waste disposal, recycling and organic waste collection services pursuant to a franchise agreement with Recology Sonoma Marin.

GOVERNANCE AND MANAGEMENT

The BCPUD has a five-member board that is elected to staggered four-year terms. All directors are required to be registered voters within the District's jurisdictional boundaries. The Board of Directors meets regularly on the 3rd Wednesday of each month at 7:30 p.m. at the BCPUD's Administrative Building located at 270 Elm Road in Bolinas, and holds special meetings as needed. The Board has a President, a Vice-President and three directors; the district's General Manager serves as Secretary to the



Board. The Board also has several committees including Finance, Legal, Personnel, and Operations. Full time employees include the General Manager, Administrative Assistant, Chief Operator and three Shift Operators. The Board of Directors appoints the General Manager, who serves on an at-will basis, to oversee all District activities and implement the policies established by the Board of Directors. The Board provides policy direction to the General Manager on matters within the authority of the Board by majority vote of the Board members present during duly-convened public meetings.

CRITICAL INFRASTRUCTURE ASSETS

Category	Name	Address	Value	Fire Severity Zone	Flood Zone	Tsunami Zone	Debris Flow Zone
		High Potential Loss	 	Zone			Zone
Dams	Woodrat 1	400 Mesa Road,	lacilities		I	Ι	
Dailis	Reservoir	Bolinas					
Dams	Woodrat 2	450 Mesa Road,					
Duilis	Reservoir	Bolinas					
	Neser von	Dominas					
		Critical Infrastru	cture				ı
Water/Wastewater	Administrative	270 Elm Road,	\$3 million	Moderate			
Facilities	Building	Bolinas	75				
Water Facilities	Corporation Yard	270 Elm Road,	\$700,000	Moderate			
	and Shop Buildings	Bolinas	, , , , , ,				
Water Facilities	Woodrat Water	400 Mesa Road,	\$1.9 million				
	Treatment Plant	Bolinas					
Water Facilities	West Tank (potable	390 Mesa Road,	\$1.2 million				
	water storage)	Bolinas					
Water Facilities	East Tank (potable	390 Mesa Road,	\$1.2 million				
	water storage)	Bolinas					
Water Facilities	Booster Pump	390 Mesa Road,	\$200,000				
	Station	Bolinas					
Water Facilities	Water distribution	BCPUD jurisdictional					
	system (serves	boundary					
	residents with						
	potable water)						
Water Facilities	Water transmission	Arroyo Hondo					
	system (conveys	watershed, Point					
	raw water to	Reyes National					
	treatment plant)	Seashore					
Water Facilities	Upper	Arroyo Hondo Creek,					
	Impoundment (fixed	Point Reyes National					
	concrete structure)	Seashore					
Water Facilities	Lower	Arroyo Hondo Creek,					
	Impoundment	Point Reyes National					
	(radial gate	Seashore					
	structure)						



Category	Name	Address	Value	Fire Severity Zone	Flood Zone	Tsunami Zone	Debris Flow Zone
Water Facilities	Pump house (conveys water from Woodrat 2 reservoir to treatment plant)	510 Mesa Road, Bolinas	\$100,000				
Wastewater Facilities	Laboratory	101 Mesa Road, Bolinas	\$300,000				
Wastewater Facilities	Wharf Road Sewer Lift Station	51 Wharf Road, Bolinas	\$500,000				
Wastewater Facilities	Force Main	Wharf Road, Olema- Bolinas Road to Treatment Poinds at 101 Mesa Road, Bolinas					
Wastewater Facilities	Wastewater Treatment Ponds Facility (integrated ponds, disposal fields, seepage ponds and groundwater wells)	101 Mesa Road, Bolinas					
Wastewater Facilities	Wastewater Irrigation Pump Station	101 Mesa Road, Bolinas	\$450,000				
Wastewater Facilities	Wastewater collection system (serves customers on sanitary sewer system)	BCPUD jurisdictional boundary					
Electrical Power Facilities	Solar PV System	400 Mesa Road (water treatment plant)	\$821,000				
Electrical Power Facilities	Solar PV System	101 Mesa Road, Bolinas (wastewater treatment plant)	\$415,000				



Please update the following Capability Assessment Tables from the 2018 Marin County MJHMP. The BCPUD was not included in the 2018 MJHMP so this is the first time BCPUD has completed this assessment.

3.2 CAPABILITY ASSESSMENT

Capabilities are the programs and polices currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capability assessment is divided into four sections: regulatory, administrative and technical, fiscal, and outreach and partnerships.

3.2.1 REGULATORY CAPABILITIES

The legal and regulatory capabilities include existing ordinances and codes that affect the District's physical or built environment. Examples of legal and/or regulatory capabilities can include: a jurisdiction's building codes, zoning ordinances, subdivision ordnances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans. The table below lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place.

Table 3.1: Legal and Regulatory Capabilities

	Legal and Regulatory Capabilities			
Plans Comprehensive / Master Plan	Yes/No Latest Update	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions? Integrated Coastal Watershed Management Plan (July 2007)		
Comprehensive/Master Plan	Yes	addresses water supply and reliability, water and wastewater treatment, and water conservation, among other things in the Tomales Bay and neighboring watersheds; it identifies hazards and watershed planning efforts; may be used to implement mitigation actions. Marin County LAFCO Countywide Water Service Study (March 2016) – independent assessment of public water service in Marin County over next 5 – 10 years, including but not limited to an evaluation of supply and demand Countywide and within service areas; may be used to implement mitigation actions. BCPUD Sewer System Management Plan (2023); identifies planned improvement projects, can be used to implement mitigation actions.		
Strategic Plan	No			
Capital Improvements Plan	Yes	Hazards identified in the district's CIP are funded based on priority via the district's annual budget process. Mitigation projects could be included in the CIP. If the Board approves CIP funding, the plan supports implementation of mitigation actions.		
Economic Development Plan	No	N/A		
Local Emergency Operations Plan	Yes	The district's plan addresses district-specific responses to hazards;		



		does not identify projects to mitigate.
Continuity of Operations Plan	Yes	Plans in place to ensure continuity of operations for water and wastewater systems; do not identify projects to mitigate.
Flood Mitigation Plan (FMP)	No	N/A
Engineering Studies for Streams	Yes	The district's consulting hydrogeologist developed a base flow recession model for the Arroyo Hondo Creek; can be used to implement drought-related mitigation actions.
Open Space Management Plan	No	N/A
Regional Transportation Plan (RTP)	No	N/A
Stormwater Management Plan/Program	No	N/A
Community Wildfire Protection Plan	Yes	Marin County Community Wildfire Protection Plan; identifies hazards, can be used to implement wildfire mitigation actions.
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	Marin County Local Coastal Program and Marin County Collaboration: Sea-level Marin Adaptation Response Team (C-SMART); both programs identify hazards and can be used to implement mitigation actions.
Building Code, Permitting, and Inspections	Y/N	Are codes adequately enforced?
Building Code	N	N/A
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	N/A
Fire department ISO rating:	N	N/A
Site plan review requirements	N	N/A
Land Use Planning and Ordinances	Y/N	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Municipal Code	Y	District ordinances and resolutions authorize, among other things, the collection of water and sewer service fees to fund all operations, capital improvements, debt service and mitigation projects. Adequately administered. No enforcement relating to hazard impacts.
Zoning ordinance	N	
Subdivision ordinance	N	
Floodplain ordinance	N	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	N	
Flood incurance rate mans		
Flood insurance rate maps	N	



Acquisition of land for open space and public recreation uses	N	
Erosion or sediment control program	N	

Table: District of Bolinas Community PUD Legal and Regulatory Capabilities
Source: District of Bolinas Community PUD

N/A to the BCPUD- Government Code Section 65300 applies to cities and counties

District of Bolinas Community PUD General Plan or Master Plan

California Government Code 65300 requires that every District and County in the state have a General Plan. The District of Bolinas Community PUD General Plan, adopted in Date, was prepared over a year period that included an extensive public review process. The General Plan is the most important policy and planning document in the District and is used by virtually every department. The General Plan is the District's statement of its vision for the future. The General Plan contains policies covering every aspect of the District: land use (how land can be developed), circulation, noise, air quality, housing, open space and conservation, and health and safety.

District of Bolinas Community PUD specific goals and policies related to mitigation of natural hazards are as follows:

Table 3.3: General Plan or Master Plan

	General Plan or Master Plan
Goal/Policy/ Program	Explanation
Land Use Element	
Goal	
Policy	
Program	
Conservation and	Open Space Element
Goal	
Policy	
Program	
Public Safety	
Goal	
Policy	
Program	
Public Facilities Ele	e <mark>ment</mark>
Goal	
Policy	



	General Plan or Master Plan
Goal/Policy/ Program	Explanation
Program	

Table District of Bolinas Community PUD Goals and Policies
Source: District of Bolinas Community PUD General Plan

3.2.2 ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The administrative and technical capability identifies the District personnel responsible for activities related to mitigation and loss prevention. Many positions are full time and/or filled by the same person.

Table 3.4: Administrative and Technical Capabilities

А	Administrative and Technical Capabilities			
Administrative	Yes/No	Is coordination effective?		
Planning Commission	No			
Hazard Mitigation Planning Committee	No			
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	Vegetation management (mowing, brush removal, tree pruning/thinning/removal) on district lands and easements to reduce wildfire risk and facilitate access; culvert clearing and road-side ditch maintenance to reduce flooding.		
Mutual aid agreements	Yes	CalWARN; mutual aid agreement with Bolinas Fire Protection District; informal mutual agreements under discussion with neighboring water districts.		
Technical	Yes/No	Has capability been used to assess/mitigate risk in the past?		
Warning systems/services (Reverse 911, outdoor warning signals)	No			
Hazard data and information	No			
Grant writing	Yes	Grants from CalFire and State of California to conduct fire fuel reduction projects on district lands to reduce wildfire risk; grant from DWR to connect existing groundwater wells to district water system to reduce drought risk.		
Hazus analysis	No			



Staff/Personnel Resources	Yes/No Full Time/ Part Time	Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	No	
Floodplain Administrator	No	
Emergency Manager	Yes	General Manager and Chief Operator serve this role; coordinate with other districts and/or Marin County as needed during emergencies; trained on hazards and mitigation.
Community Planner	No	
Civil Engineer	Yes	The district's consulting water and wastewater engineers assist the district in the enforcement of regulations, have training on hazard mitigation, and facilitate coordination with other agencies as needed.
GIS Coordinator	No	
Community Development Staff	No	
District Planning, Building, and Public Works Staff	No	
Police Department Staff	No	
Fire Protection District Staff	No	
Community Development Staff	No	

Table District of Bolinas Community PUD Administrative and Technical Capabilities

Source: District of Bolinas Community PUD

3.2.3 FISCAL CAPABILITIES

The fiscal capability assessment shows specific financial and budgetary tools available to the jurisdictions such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; impact fees for homebuyers or developers for new development; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

Table 3.5: Fiscal Capabilities

·				
Fiscal Capabilities				
Financial	Yes/No	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?		
Capital improvements project funding	Yes	Feasibility studies, planning, engineering and construction. Resource can be used to fund future mitigation actions.		
Authority to levy taxes for specific purposes	No			



Fees for water, sewer, gas, or electric services	Yes	The district has the authority to assess water and sewer service fees to fund operations, capital improvement projects and debt service. Resource can be used to fund future mitigation actions.
Impact fees for new development	No	
Storm water utility fee	Yes	The district has the authority to assess a drainage service fee. Resource has been used to improve surface water drainage and can be used to fund future mitigation actions (flooding).
Incur debt through general obligation bonds and/or special tax bonds	Yes	Resource has been used to finance construction of current water treatment plant and sewer system treatment facility; Clean Renewable Energy Bonds used to install solar PV arrays at both locations. Resource can be used to fund future mitigation actions.
Incur debt through private activities	No	
Community Development Block Grant	No	
Other federal funding programs	Yes	USDA Rural Development funding programs used in the past for infrastructure upgrades. Federal grant and infrastructure awards could be used to fund mitigation projects to address sea level rise, drought, wildfire, earthquake, and severe weather event hazards.
State funding programs	Yes	California's Drinking Water State Revolving Fund, Clean Water State Revolving Fund, and DWR's Small Communities Drought Relief Fund used in the past for infrastructure upgrade and can be used to fund future mitigation actions.

Table District of Bolinas Community PUD Fiscal Capabilities

Source: District of Bolinas Community PUD

3.2.4 COMMUNITY OUTREACH

The outreach and partnerships capability assessment shows outreach and public education programs available to the Bolinas Community PUD and the partnerships utilized to promote those programs.

Table 3.6: Community Outreach

Community Outreach				
Outreach and Partnerships	Yes/No	Could the program/organization help implement future mitigation activities?		
Local citizen groups or non- profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Yes, the community of Bolinas has many local citizen groups and non-profit organizations dedicated to disaster and emergency preparedness, wildfire risk reduction, preservation of emergency access and egress, preservation of critical facilities and roads, as well as environmental protection. These groups and organizations have partnered with the district in the past (and several are doing so now) on hazard mitigation		



		projects and would be very important partners in the implementation of future mitigation activities.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	The district is actively engaged with the community of Bolinas via the Board of Directors' regular monthly meetings, a quarterly newsletter, periodic special mailings, and social media on a variety of topics including, but not limited to, responsible water use, sewer system "dos and don'ts", solid waste disposal rules, and so forth. These platforms can be used to help implement future mitigation activities.
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Community Rating System	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	The district has participated in a public-private partnership to stabilize a critical access road (Terrace Avenue) in Bolinas and this partnership has continued as the road is threatened by bluff erosion. The district also is cooperating with the efforts of a local citizens' group to evaluate the wildfire and public safety risks posed by a eucalyptus grove on district lands. These and other public-private partnerships can be used to help implement future mitigation activities.

Table District of Bolinas Community PUD Community Outreach
Source: District of Bolinas Community PUD

4.1 CHANGES IN DEVELOPMENT

Marin County is a county located in the northwestern San Francisco Bay Area. As of the 2020 census, the population was 262,231. Its county seat and largest District is San Rafael. Marin County is across the Golden Gate Bridge from San Francisco, and is included in the San Francisco—Oakland—Berkeley, CA Metropolitan Statistical Area.

Marin County is considered in the California Floristic Province, a zone of extremely high biodiversity and endemism. There are numerous ecosystems present, including Coastal Strand, oak woodland, mixed evergreen forest, and Coast Redwood Forests chaparral, riparian zones and large expanses of publicly managed forest and recreation lands. Marin County's natural sites include the Muir Woods redwood forest, the Marin Headlands, Stinson Beach, the Point Reyes National Seashore, and Mount Tamalpais.

The various Marin County Jurisdiction's General Plans guide growth and development across the County based on maintaining the County's small communities with their own unique character. Future large development in the County is not expected within the next 5 years, however, some managed development has been identified, approved, or submitted.



There has not been a significant amount of development within Marin County since the last plan update in 2018. There has not been any increased risk to the County as a result of new development since the last plan update in 2018.

Future land use and growth management strategies in Marin County aim to concentrate future development into and toward existing communities away from locations where natural characteristics may limit development (e.g., steep slopes or sensitive habitats), and to areas that have, or can readily be supplied with, adequate public facilities and services. This is done through various policies relating to zoning and minimum development standards and requirements. Zoning designations prescribe allowed land uses and minimum lot sizes for the purpose of supporting efficient infrastructure design, conservation of natural resources, and to avoid conflicting uses.

As a small special district in unincorporated Marin County, the BCPUD does not have jurisdiction over land use or planning in the community (that responsibility lies with the Marin County Community Development Agency). Significant development is not anticipated for Bolinas within the next 5 years given development constraints and the limited nature of the local water supply and consequent moratorium on new connections to the water system. The table below identifies projects planned for district facilities or infrastructure in the next five years.

Future Growth Areas								
Development	# of Units	# of Parcels	Project Date	Acres	Fire Severity Zone	Flood Zone		
New Administrative Building – 270 Elm Road, Bolinas	2-3 offices (likely a shared facility)	1 parcel: APN 190- 241-04	Within next 3 – 5 years; preliminary site assessment in progress		Moderate	С		
Wharf Well – new treatment facilities	n/a	1 parcel: APN 193- 061-03	To be completed by 6/30/24		Moderate	С		
Resource Recovery Well – new treatment facilities	n/a	2 parcels: APN 193- 030-38 (well site) and APN 193- 020-45 (treatment facility site)	To be completed by 6/30/24		Moderate	С		
Takal								
Total								

Table 4.1: District of Bolinas Community PUD Future Growth Areas