



Marin Local Agency Formation Commission

Municipal Service Review

Novato Region Supplemental

**Marin County Flood Control and Water Conservation District
Zone 1**

DRAFT REPORT

MARCH 2021

PREFACE

This Municipal Services Review (MSR) documents and analyzes services provided by local governmental agencies in the Novato region. Specifically, it evaluates the adequacy and efficiency of local government structure and boundaries within the region and provides a basis for boundary planning decisions by the Marin Local Agency Formation Commission (LAFCo).

Context

Marin LAFCo is required to prepare this MSR in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000, et seq.), which took effect on January 1, 2001. The MSR reviews services provided by public agencies—cities and special districts—whose boundaries and governance are subject to LAFCo. The analysis and recommendations included herein serve to promote and coordinate the efficient delivery of local government services and encourage the preservation of open space and agricultural lands.

Commissioners, Staff, Municipal Services Review Preparers

Commissioners

Sashi McEntee, Chair	City	City of Mill Valley
Craig Murray, Vice Chair	Special District	Las Gallinas Valley Sanitary District
Damon Connolly	County	District 1 Supervisor
Judy Arnold	County	District 5 Supervisor
Barbara Coler	City	Town of Fairfax
Lew Kious	Special District	Almonte Sanitary District
Larry Loder	Public	Commission
Chris Skelton	Public Alternate	Commission
Tod Moody	Special District Alternate	Sanitary District #5
James Campbell	City Alternate	City of Belvedere
Dennis Rodoni	County Alternate	District 4 Supervisor

Staff

Jason Fried	Executive Officer
Jeren Seibel	Policy Analyst
Olivia Gingold	Clerk/Jr. Analyst

MSR Preparers

Olivia Gingold, Clerk/Jr. Analyst

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1.0 INTRODUCTION

1.1 ROLE AND RESPONSIBILITY OF LAFCO

Local Agency Formation Commissions (LAFCOs) were established in 1963 and are political subdivisions of the State of California responsible for providing regional growth management oversight in all 58 counties. LAFCo’s authority is currently codified under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (“CKH”), which specifies regulatory and planning powers delegated by the Legislature to coordinate and oversee the establishment, expansion, and organization of cities and special districts as well as their municipal service areas.

Guiding LAFCo’s regulatory and planning powers is to fulfill specific purposes and objectives that collectively construct the Legislature’s regional growth management priorities under Government Code (G.C.) Section 56301. This statute reads:

“Among the purposes of the commission are discouraging urban sprawl, preserving open space and prime agricultural lands, efficiently providing governmental services, and encouraging the orderly formation and development of local agencies based upon local conditions and circumstances. One of the objects of the commission is to make studies and to obtain and furnish information which will contribute to the logical and reasonable development of local agencies in each county and to shape the development of local agencies so as to advantageously provide for the present and future needs of each county and its communities.”

LAFCo decisions are legislative in nature and not subject to an outside appeal process. LAFCOs also have broad powers with respect to conditioning regulatory and planning approvals so long as not establishing terms that directly control land uses, densities, or subdivision requirements.

Regulatory Responsibilities

LAFCo’s principal regulatory responsibility involves approving or disapproving all jurisdictional changes involving the establishment, expansion, and reorganization of cities and most special districts.¹ More recently LAFCOs have been tasked with also overseeing the approval process for cities and districts to provide new or extended services beyond their jurisdictional boundaries by contract or agreement as well as district actions to either activate a new service or divest an existing service. LAFCOs generally exercise their regulatory authority in response to applications submitted by the affected agencies, landowners, or registered voters.

Recent CKH amendments, however, now authorize and encourage LAFCOs to initiate on their own jurisdictional changes to form, consolidate, and dissolve special districts consistent with current and future community needs. LAFCo regulatory powers are described in Table 1-1 below.

¹ CKH defines “special district” to mean any agency of the State formed pursuant to general law or special act for the local performance of governmental or proprietary functions within limited boundaries. All special districts in California are subject to LAFCo with the following exceptions: school districts; community college districts; assessment districts; improvement districts; community facilities districts; and air pollution control districts.

Table 1-1: LAFCo's Regulatory Powers

Regulatory Powers Granted by Government Code (G.C.) Section 56301	
• City Incorporations / Disincorporations	• City and District Annexations
• District Formations / Dissolutions	• City and District Detachments
• City and District Consolidations	• Merge/Establish Subsidiary Districts
• City and District Outside Service Extensions	• District Service Activations / Divestitures

Planning Responsibilities

LAFCos inform their regulatory actions through two central planning responsibilities: (a) making sphere of influence (“sphere”) determinations and (b) preparing municipal service reviews. Sphere determinations have been a core planning function of LAFCos since 1971 and effectively serve as the Legislature’s version of “urban growth boundaries” with regard to cumulatively delineating the appropriate interface between urban and non-urban uses within each county. Municipal service reviews, in contrast, are a relatively new planning responsibility enacted as part of CKH and are intended to inform – among other activities – sphere determinations. The Legislature mandates, notably, all sphere changes as of 2001 be accompanied by preceding municipal service reviews to help ensure LAFCos are effectively aligning governmental services with current and anticipated community needs.

1.2 MUNICIPAL SERVICE REVIEWS

Municipal service reviews were a centerpiece to CKH’s enactment in 2001 and are comprehensive studies of the availability, range, and performance of governmental services provided within a defined geographic area. LAFCos generally prepare municipal service reviews to explicitly inform subsequent sphere determinations. LAFCos also prepare municipal service reviews irrespective of making any specific sphere determinations in order to obtain and furnish information to contribute to the overall orderly development of local communities. Municipal service reviews vary in scope and can focus on a particular agency or governmental service. LAFCos may use the information generated from municipal service reviews to initiate other actions under their authority, such as forming, consolidating, or dissolving one or more local agencies.

All municipal service reviews – regardless of their intended purpose – culminate with LAFCos preparing written statements addressing seven specific service factors listed under G.C. Section 56430. This includes, most notably, infrastructure needs or deficiencies, growth and population trends, and financial standing. The seven mandated service factors are summarized in the following table.

Table 1-2: Mandatory Determinations

Mandatory Determinations / Municipal Service Reviews (Government Code Section 56430)
1. Growth and population projections for the affected area.
2. Location and characteristics of any disadvantaged unincorporated communities within or contiguous to affected spheres of influence.
3. Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies.
4. Financial ability of agencies to provide services.
5. Status and opportunities for shared facilities.
6. Accountability for community service needs, including structure and operational efficiencies.
7. Matters relating to effective or efficient service delivery as required by LAFCo policy.

1.3 MARIN LAFCO COMPOSITION

Marin LAFCo is governed by a 7-member board comprised of two county supervisors, two city councilmembers, two independent special district members, and one representative of the general public. Each group also gets to appoint one “alternate” member. Each member must exercise their independent judgment, separate from their appointing group, on behalf of the interests of all residents, landowners, and the public. Marin LAFCo is independent of local government and employs its own staff. Marin LAFCo’s current commission membership is provided below in Table 1-3.

Table 1-3: Marin LAFCo Commission Membership

Name	Position	Agency Affiliation
<i>Sashi McEntee, Chair</i>	<i>City</i>	<i>City of Mill Valley</i>
<i>Craig Murray, Vice Chair</i>	<i>Special District</i>	<i>Las Gallinas Valley Sanitary District</i>
<i>Damon Connolly</i>	<i>County</i>	<i>District 1 Supervisor</i>
<i>Judy Arnold</i>	<i>County</i>	<i>District 5 Supervisor</i>
<i>Barbara Coler</i>	<i>City</i>	<i>Town of Fairfax</i>
<i>Lew Kious</i>	<i>Special District</i>	<i>Almonte Sanitary District</i>
<i>Larry Loder</i>	<i>Public</i>	<i>Commission</i>
<i>Chris Skelton</i>	<i>Public Alternate</i>	<i>Commission</i>
<i>Tod Moody</i>	<i>Special District Alternate</i>	<i>Sanitary District #5</i>
<i>James Campbell</i>	<i>City Alternate</i>	<i>City of Belvedere</i>
<i>Dennis Rodoni</i>	<i>County Alternate</i>	<i>District 4 Supervisor</i>

Marin LAFCo offices are located at 1401 Los Gamos Drive, Suite 220 in San Rafael. Information on Marin LAFCo’s functions and activities, including reorganization applications, are available by calling (415) 448-5877 by e-mail to staff@marinlafco.org or by visiting www.marinlafco.org.

2.0 EXECUTIVE SUMMARY

This study represents Marin LAFCo’s scheduled supplemental regional municipal service review of local agencies in the Novato region of central Marin County. The underlying aim of the study is to produce an independent assessment of municipal services in Marin County Flood Control Water Conservation District’s Flood Control Zone 1 (FZ1) over the next five to ten years relative to the Commission’s regional growth management duties and responsibilities. The information generated as part of the study will be directly used by the Commission in (a) informing future boundary changes, and – if merited – (b) initiating government reorganizations, such as consolidations, and/or dissolutions.

2.1 AFFECTED PUBLIC AGENCIES

This report focuses on one agency operating in the Novato Region as listed below and shown in Figure 2-1.

Table 2-1: Novato Area Supplemental MSR Agencies

Novato Agency Names
Marin County Flood Control Water Conservation District - Flood Control Zone 1

This agency provides a range of municipal services to the communities it serves, including:

Flood Control Zones

Reduce frequency and severity of flooding in the watershed.

2.2 PLANS, POLICIES, STUDIES

Key references and information sources for this study were gathered for the district considered. The references utilized in this study include published reports; review of agency files and databases (agendas, minutes, budgets, contracts, audits, etc.); Master Plans; Capital Improvement Plans; engineering reports; EIRs; finance studies; general plans; and state and regional agency information (permits, reviews, communications, regulatory requirements, etc.). Additionally, the LAFCo Executive Officer, Policy Analyst, and/or Clerk/Jr. Analyst contacted each agency with requests for information.

The study area for this MSR includes communities within the City of Novato as well as unincorporated areas adjacent to the City. In the areas entirely outside of the City, Marin County has the primary authority over local land-use and development policies (and growth). The City of Novato has authority over land use and development policies within the City. City, County, and Community plans were vital for the collection of baseline and background data for this agency. The following is a list of documents used in the preparation of this MSR:

- City and County General Plans
- Specific Plans
- Community Plans
- Agency databases and online archives (agendas, meeting minutes, website information)

2.3 AGENCY AND PUBLIC PARTICIPATION

Within the approved scope of work, this study has been prepared with an emphasis in soliciting outside public review and comment as well as multiple opportunities for input from the affected agencies. This included an agency startup meeting with Marin LAFCo, information requests sent to individual agencies, draft agency profiles also sent to the agency, and review of the draft report prior to Commission action.

This MSR is posted on the Commission's website (www.marinlafco.org). It may also be reviewed at the LAFCo office located at 1401 Los Gamos Drive, Suite 220 in San Rafael during open hours.

2.4 WRITTEN DETERMINATIONS

The Commission is directed to prepare written determinations to address the multiple governance factors enumerated under G.C. Section 56430 anytime it prepares a municipal service review. These determinations are similar to findings and serve as independent statements based on information collected, analyzed, and presented in this study's subsequent sections. The underlying intent of the determinations is to identify all pertinent issues relating to the planning, delivery, and funding of municipal services as it relates to the Commission's role and responsibilities. An explanation of these seven determination categories is provided below.

1. Growth and Population

This determination evaluates existing and projected population estimates for the City of Novato and the adjacent unincorporated communities within the study area.

2. Location and Characteristics of any Disadvantaged Unincorporated Communities Within or Contiguous to the Sphere of Influence.

This determination was added by Senate Bill (SB) 244, which became effective in January 2012. A disadvantaged community is defined as an inhabited community of 12 or more registered voters having a median household income of 80 percent or less than the statewide median household income.

3. Capacity and Infrastructure

Also discussed is the adequacy and quality of the services provided by each agency, including whether sufficient infrastructure and capital are in place (or planned for) to accommodate planned future growth and expansions.

4. Financing

This determination provides an analysis of the financial structure and health of each service provider, including the consideration of rates and service operations, as well as other factors affecting the financial health and stability of each provider. Other factors considered include those that affect the financing of needed infrastructure improvements and compliance with existing requirements relative to financial reporting and management.

5. Shared Facilities

Opportunities for districts to share facilities are described throughout this MSR. Practices and opportunities that may help to reduce or eliminate unnecessary costs are examined,

along with cost avoidance measures that are already being utilized. Occurrences of facilities sharing are listed and assessed for more efficient delivery of services.

6. Government Structure and Local Accountability

This subsection addresses the adequacy and appropriateness of existing boundaries and spheres of influence and evaluates the ability of each service provider to meet its demands under its existing government structure. Also included is an evaluation of compliance by each provider with public meeting and records laws (Brown Act).

7. Other Matters Related to Effective or Efficient Service Delivery, as Required by Commission Policy

Marin LAFCo has specified the sustainability of local agencies as a priority matter for consideration in this MSR. Sustainability is not simply about the environment but can consider the sustainability of an organization and its ability to continue to provide services efficiently for many years to come. Sustainable local governments that take practical steps to protect the environment and our natural resources through land conservations, water recycling and reuse, preservation of open space, and opting to use renewable energy are the key players in determining the sustainability of the region.

In addition, other matters for consideration could relate to the potential future SOI determination and/or additional effort to review potential advantages or disadvantages of consolidation or reorganization.

A summary of determinations regarding each of the above categories is provided in Chapter 3 of this document and will be considered by Marin LAFCo in assessing potential future changes to an SOI or other reorganization.

3.0 DETERMINATIONS

Growth and population projections for the affected area.

a) As stated in the Novato MSR, projected near-future growth is expected to be moderate in the City of Novato. According to the Association of Bay Area Governments, the Novato population is expected to increase to a total population of 53,900 by 2025 with an estimated annual growth rate of 0.3 percent.

The location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence.

a) There are no identified DUCs within the study area.

Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies, including needs or deficiencies related to sewers, municipal and industrial water, and structural fire protection in any disadvantaged unincorporated communities within or contiguous to the sphere of influence.

a) As noted above, there are no unincorporated communities within the study area that have been identified as disadvantaged. FZ1 does have a large amount of aging infrastructure, and with the financial constraints described in the section below, infrastructure deficiencies could increasingly become a problem for this agency. Financial constraints have caused FZ1 to forgo replacement and rehabilitation of facilities at the end of their expected service life as early as 2005 and it is acknowledged that flood damage could have been prevented or minimized had that pump station received necessary replacement and rehabilitation.

Financial ability of agencies to provide services.

a) FZ1 prepares budgets and financial statements annually in accordance with established governmental accounting standards. FZ1 just recently passed a new budget structure which budgets a baseline of fixed, operational costs while excluding major projects. The intention is to avoid inconsistent spikes in the year-to-year budgets when major expenditures are approved. The major expenditures will now have separate actions for approval at major project milestones and will be tracked in a project-specific ledger. The County Board of Supervisors, acting as the Board for the Marin County Flood Control and Water Conservation District, may also amend FZ1's budgets by resolution during the fiscal year in order to respond to emerging needs, changes in resources, or shifting priorities. Expenditures may not exceed appropriations at the fund level, which is the legal level of control.

b) The County Administrative Officer is authorized to transfer budgeted amounts between accounts or funds under certain circumstances, however; the County Board of Supervisors, acting as the Board for the Marin County Flood Control and Water Conservation District, must approve any increase in the operating expenditures, appropriations for capital projects, and transfers between major funds and reportable fund groups. Audited financial statements are also prepared as part of the County of Marin audit which is performed by an independent certified public accounting firm.

c) FZ1 has the funds to cover baseline costs but not enough funds to account for growing needs as a result of aging infrastructure, rising cost-of-living, and unfunded environmental mandates. Budget constraints in the last 15-20 years have caused FZ1 to forgo additive items that would have been beneficial to them because of concerns with unfunded maintenance needs. FZ1 passed their first and only benefit assessment in 1984 but this benefit was not fixed to rises in the cost of living. Prices have risen over the last 35 years, but the benefit assessment has stayed relatively flat, causing FZ1 to increasingly fall behind on maintenance needs. Staff are faced with the challenges of maintaining aging infrastructure while simultaneously planning for sea-level rise adaptation with a lagging revenue source.

FZ1 worked to pass a ballot measure in 2017 that would solve their revenue problem, but the ballot measure failed. This forced the District to pivot towards other revenue sources. Right now, the most viable revenue source is grant money, but working with grants creates a whole host of issues for FZ1. To begin with, grants can be hard to secure. According to FZ1 staff, current grant funding sources for major flood control improvements is very limited and highly competitive and does not necessarily address the existing infrastructure deficit

Not only are these grants competitive, but they are conditional on certain factors. For example, the California Office of Emergency Services will not fund pump station projects if the facility is nearing its life expectancy because that work is not considered a hazard mitigation effort. Other grants are not awarded unless project proposals include habitat restoration elements, and even when grant money is secured, it often requires fund matching. This means FZ1 would still need to have adequate revenue to meet these grants' matching requirements. Grants should be relied on only as supplemental or additive revenue, rather than the main source of revenue that the Flood Zone operates off of. A ballot measure is a much more reliable way to secure adequate funding for FZ1, and would also help FZ1 meet the necessary grant matching requirements.

Staff may also be able to pursue funding from other agencies in the region that have a common interest or shared infrastructure. The City of Novato is one example of an agency in the FZ1 that may benefit from the improvement of flood control infrastructure within their boundaries, and as a result, may help fund that construction. The being said, Novato itself has limits to its fund availability.

Caltrans and SMART are also being brought into the picture as potential co-sponsors of projects because of the extra benefits that some of the additive items could offer both of those agencies in the name of reducing flooding and sea-level rise vulnerability on parts of the Caltrans Highway and SMART Railway.

Much of the SMART track is in areas that have or could flood. Novato Creek downstream of Rowland is an example of a SMART project that the City and District contributed to because it raised the bridge and reduced in-creek obstructions. There are sections of Highway 37 that are also prone to flooding and may benefit from upstream projects that although not directly adjacent to the Highway, will be beneficial to that area. Whether or not those potential benefits are beneficial enough to elicit funding from these agencies is less clear.

In the past, the County has also offered up funding for FZ1 projects, and could be another resource for FZ1 to collaborate with in the future should a mutually beneficial project arise. That being said, just like the City of Novato, Novato Sanitary District, CalTrans, and SMART, the County also has other priorities to fund as well and any funds they do offer up should be seen as a one-time collaboration and nothing more. The Board of Supervisors should not be expected to consistently offer up funding to the Zone as a reliable source of revenue.

Although Staff has a list of potential funding sources, as past experience shows, these funding sources can be unreliable and are less adequate than the sure-fire funding source that a ballot measure would create. It is highly recommended that FZ1 prepare another ballot measure to secure funding from the tax base. It could be useful to create a subzone that levies the taxes only on parcels in FEMA Special Flood Hazard Areas, rather than the entire tax base within the FZ1's boundaries. It is also highly suggested that the new measure be tied to inflation to prevent the same issue of a lagging revenue source that FZ1 is currently facing from arising in the future. FZ1 needs to create this more reliable and consistent source of revenue if they are to ensure the adequate provision of flood control services in the coming years.

Status of, and opportunities for, shared facilities.

a) There are no opportunities for shared facilities at this time, but cost-sharing may be present among local agencies in this area. Within its budgetary constraints, FZ1 has found that allocating some of its available funding in collaboration with other agencies has allowed for projects to be completed that FZ1 deems useful to the zone as a whole. These are projects the District otherwise would not have been able to complete on its own with its current level of funding. A perfect example of this is the Stafford Lake and Dam facility, which is owned and maintained by North Marin Water District (NMWD). Although FZ1 staff acknowledges that it does not make much sense for FZ1 to get involved in the day-to-day maintenance of this area, they have helped fund improvement projects for Stafford Lake in the past. There have been discussions of increasing the capacity of Stafford Lake in the future, which it would make sense for FZ1 to help fund part of. The benefits of this expansion were preliminarily assessed in the Novato Creek Watershed Program, and because NMWD joined the Marin County Multi-Jurisdictional Local Hazard Mitigation Plan, they are now eligible for FEMA grants for hazard mitigation projects such as this one. A new FEMA program called BRIC (Building Resilient Infrastructure Communities) offers up to \$50 million for a single project, and a Stafford Dam joint project between NMWD and FZ1 should fit within his limit. If this project were to move forward, it would be an appropriate place for FZ1 to potentially offer some funding and technical assistance because of the flood service provision benefits that the expansion of Stafford Lake would create.

Accountability for community service needs, including governmental structure and operational efficiencies.

a) FZ1 encompasses a large area, and as a result, has a lot of different agencies within its sphere of influence that have infrastructure relevant to FZ1. This infrastructure, although not all directly owned or managed by FZ1, still impacts flood control management. This unique situation means

that critical management between many different stakeholders beyond FZ1 is required in order to ensure that FZ1 is adequately providing its services.

Most entities in the zone have been cooperative. FZ1 meets with Caltrans, the City of Novato, and Novato Sanitary District on a quarterly basis, and also communicates with some neighborhood groups that are particularly impacted by flooding, but cooperation with other entities that have direct stakes in flood control work is not always as robust as it needs to be.

There are no forums that regularly bring together all three of the District, Caltrans, and SMART. This was particularly problematic following a 2019 levee breach on the SMART right-of-way that put financial pressure on the FZ1's already limited funds when they responded to the breach, in spite of the damage not being on District property.

In order to make the provision of flood control services more robust and efficient, more collaboration in the future is necessary, particularly with the public entities who operate within this zone.

Any other matter related to effective or efficient service delivery, as required by commission policy

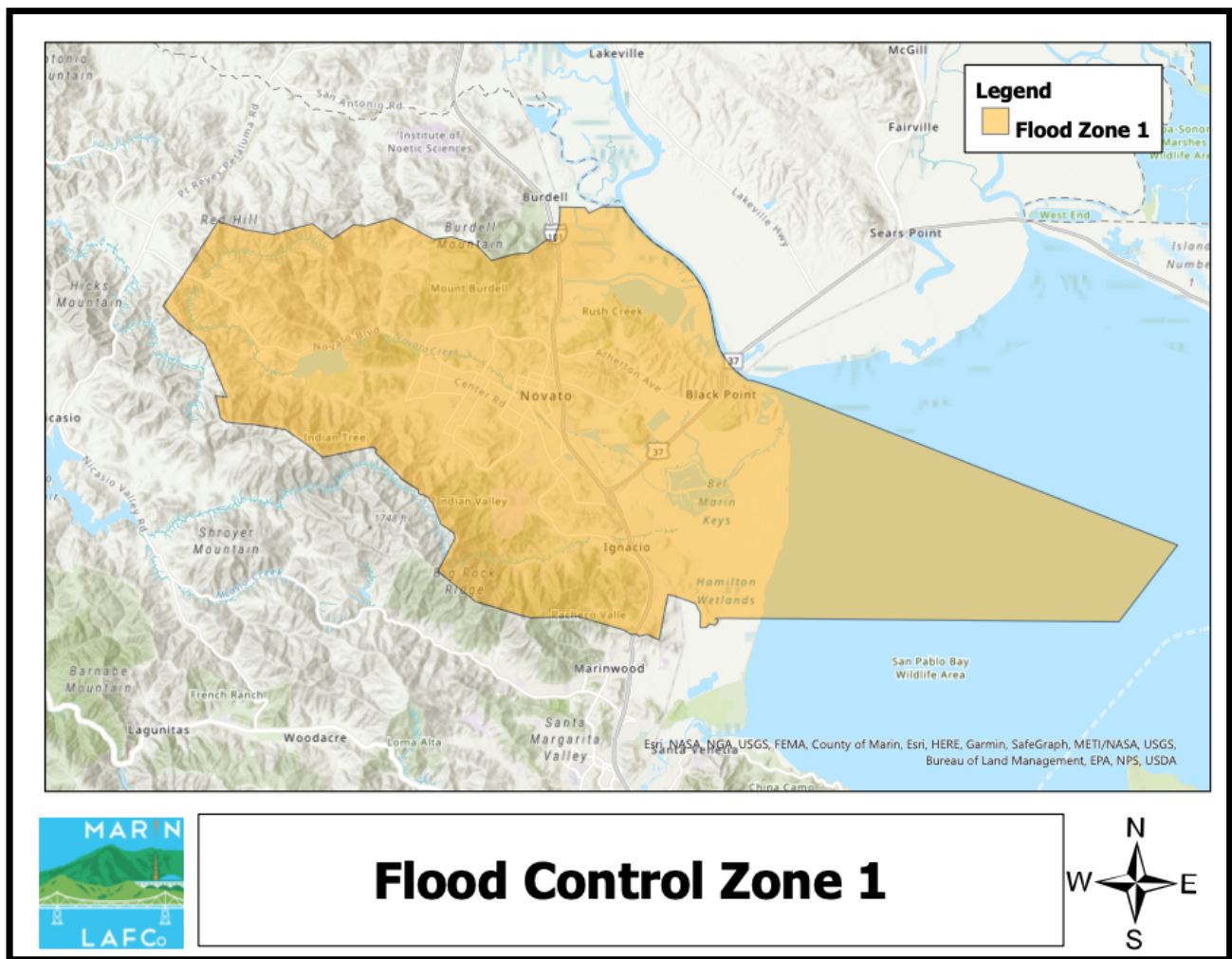
a) As mentioned above, FZ1 has a lot of infrastructure in the zone that may be operated by other agencies but remains relevant to flood control. A more comprehensive map of what that infrastructure is, and who it is officially owned/serviced by would be useful to FZ1 in ensuring better flood control services to the area. Making this map browser-based and publicly accessible would be even more beneficial as there have been issues in the past with members of the public bouncing around between agencies in an effort to determine who does what. This could be something that is built from the asset management and "flood inquiry" system FZ1 already presently has in the works. Another idea is to create a members-only section of Marin Map for the City of Novato and Flood Control District to both utilize. In this section, the two agencies would each upload all the easement and property ownership data they have. Additional cross-checking outside the database may still be necessary depending on the completeness of information but this would be a good place to start in making a clearer and more accessible distinction of which agencies are responsible for certain easements or facilities.

b) Additional funding for the Flood Zone would increase their capacity to provide flood control services to the area and could move the Zone into a better Community Rating System (CRS) class. It is recommended that FZ1 staff work together with City staff to produce an analysis of what it would take to move the Flood Zone into a higher CRS class, and an analysis of how much the average citizen in a special Flood Hazard area pays for flood insurance, and how much they could save if FZ1 was in a higher class. It is suspected that the discounts on insurance afforded to citizens if FZ1 moves into a higher CRS class could outweigh the cost of the parcel tax that would be necessary to move the Flood Zone into that class.

4.0 REGIONAL SETTING

This Municipal Service Review (MSR) is a supplemental addition to the Novato Area MSR completed in January 2020. The full Novato area regional setting can be found at the Marin LAFCo website, www.marinlafco.org. As shown in figure 4-1 Flood Control Zone 1 covers the City of Novato and a wide breadth of surrounding unincorporated area extending eastwards towards the Bay. The FZ1 area is relatively coterminous with the boundaries of the Novato Watershed, and a map of this zone is depicted below.

Figure 4-1: Flood Zone 1 Boundary



5.0 FLOOD CONTROL ZONE #1 – NOVATO

5.1 OVERVIEW

Flood Control Zone #1 (FZ1) is the largest flood zone in Marin and covers over 45 square miles in the Novato area of Marin County. Zone coverage encompasses not only the City of Novato, but also portions of unincorporated County in Indian Valley, Bel Marin Keys, Green Point, Black Point, Loma Verde, and western Novato. The boundaries of FZ1 are relatively consistent with the boundaries of the Novato Creek Watershed, which extends eastward from Big Rock Ridge, Stafford Lake, and Mount Burdell, through intertidal bay land to San Pablo Bay. The watershed covers a 45 square mile drainage area. FZ1 is particularly prone to flooding because of its geography. It has experienced 12 major floods in the last 90 years – a little over one per decade.

FZ1 was formed by the Marin County Flood Control and Water Conservation District outlined in Resolution No. 3982 approved by the Board of Supervisors in 1955 in order to manage the excessive flooding issues that downtown Novato and its surrounding areas were experiencing. FZ1 has a 5-member advisory board which is selected by the Marin County Flood District Board. The Advisory Board meets annually on the first Thursday of February. This meeting is when the Board addresses matters such as the budget and annual work plan. Other special meetings may be called by the District Manager when the District’s business needs dictate. Special meetings may also be called at the request of the Advisory Board Chair. The significant amount of land and infrastructure that the District owns in FZ1 leads to a lot of activity in the zone. This calls for the Zone to meet relatively often outside of its regular annual meeting.

Also, due to its size, FZ1 overlaps many other local, regional, and state agencies. These include the City of Novato, the Bel Marin Keys Community Services District, the North Marin Water District, the Novato Sanitary District, the Sonoma Marin Area Rail Transit, and CalTrans. In addition to these government agencies, FZ1 also works with local community groups, such as Old Town Novato Flood Group. The staff from FZ1, the Old Town Novato Flood Group, and the City do meet on an ad hoc basis (quarterly). Quarterly virtual coordination meetings have continued between the City, Novato Sanitary District, and Caltrans to coordinate where all 3 agencies interface at state highways as well. Meetings between FZ1 and other government agencies are much less frequent and tend to occur on an as-needed basis. These meetings are usually topic-specific and often pertain to maintenance specifically.

An overview map of FZ1 is provided in Figure 5-1, along with the boundary of the City of Novato. There is a small piece of the City of Novato that is not included in the Flood Zone’s boundary. FZ1 Staff believes it is likely that this piece of the City was incorporated after the Zone was created, but because it has no flood control needs, the boundary of the Zone was never amended to include that portion of land. Figure 5-2 shows a general map of Flood Control Zone 1 infrastructure in the lower half of FZ1. This map is not entirely comprehensive because some infrastructure that affects flooding and prevention is not owned by FZ1, but is still critical to FZ1’s services. FZ1 and the other local agencies own different assets in the area but one comprehensive list of who owns what is not available and may be difficult to create because each specific situation may call on a different agency to respond. Rather, when something critical comes up, each group

has to communicate with the others to find out who is responsible for the issue. Because of this, FZ1 may still play a role in managing that infrastructure, irrespective of ownership.

Figure 5-1: Flood Control Zone 1 Overview Map

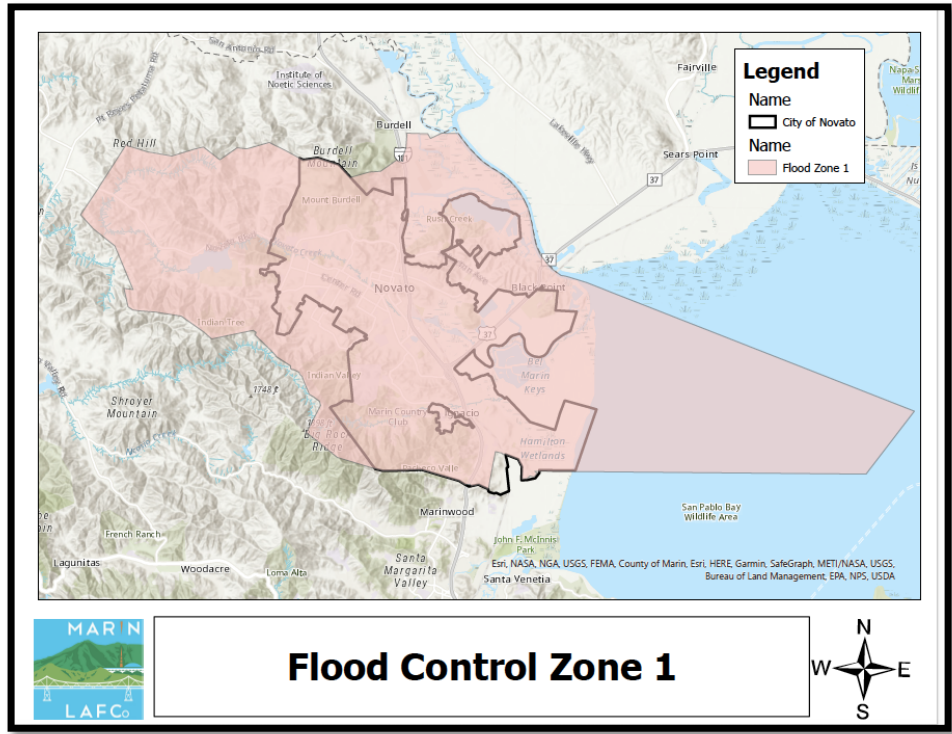


Figure 5-2: Flood Control Zone 1 Infrastructure

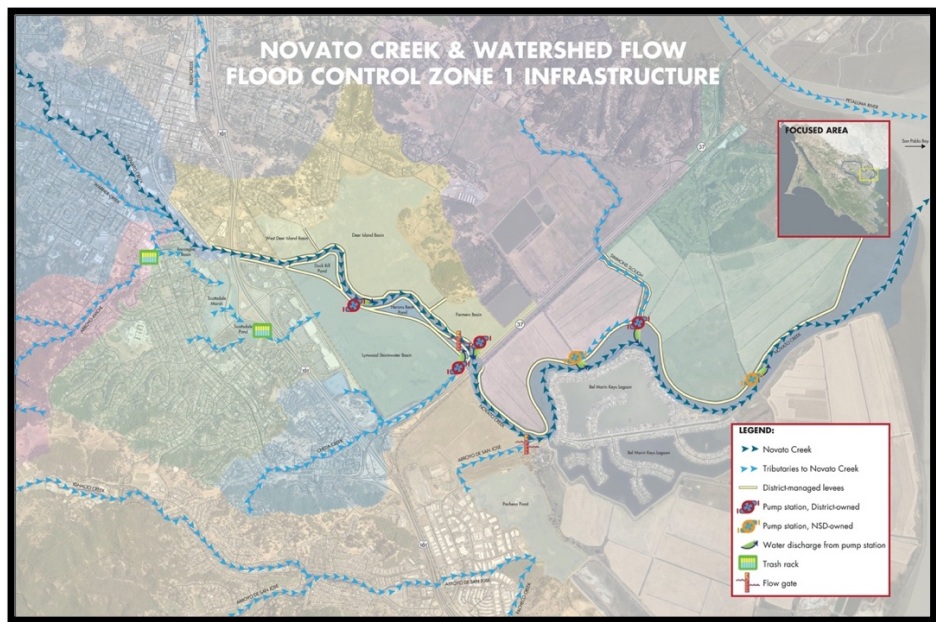


Table 5-1: Flood Control Zone No. 1 Overview

Flood Control Zone #1		Novato	
Primary Contact	Hannah Lee – Senior Civil Engineer		
Phone	(415) 473-2671		
Office Location:	Department of Public Works, 3501 Civic Center Drive, San Rafael, CA 94903		
Formation Date	1955	Services Provided	Flood Control
Service Area	45 Square Miles	Population Served	63,000

5.2 FORMATION AND DEVELOPMENT

FZ1 was established in 1955. Since its formation in 1955, changes to FZ1 have included the incorporation of the City of Novato in 1960, growth and development in the City and its surrounding areas, expansion of FZ1 related projects in incremental steps, and general maintenance of FZ1 properties and assets.

In November of 1984, FZ1 residents passed two special assessments. The first was a 4-year tax for years 1984 through 1988, and was approved for capital projects. The second assessment of \$9 per parcel was created to fund the maintenance of FZ1 projects in perpetuity. This second special assessment, however, did not include a cost-of-living adjustment. This has meant that as costs rise and infrastructure ages the money raised from this assessment has failed to keep up with current costs.² FZ1 attempted to pass a ballot measure in 2017 titled Measure E to bring in more tax revenue, but it failed with nearly a two-thirds majority *against* it. A two-thirds majority *in favor* was needed for the measure to pass. It was anticipated by FZ1’s Advisory Board Members that FZ1 would not achieve 2/3 approval in the foreseeable future, projecting at least 10 years before that approval rate could be achieved.³

While additional funds are still critical for FZ1 operations, the Zone staff focuses its limited revenue on maintaining and improving the 18 miles of creeks, 4 pump stations, 9 miles of levee, and other flood control facilities in the Novato Watershed, as well as managing periodic removals of accumulated sediment from Novato Creek and its tributaries.⁴ They also have to consider priorities for future-thinking projects such as those identified in the Novato Watershed Program and Deer Island Basin Restoration project which will not only address current flood control needs but also prevent future flood disasters. These assets are all critical for not only managing flooding when it happens but also preventing flooding in the future, especially with sea-level rise.

² [Novato Creek Watershed Benefit Assessment FAQ](#)

³ [FZ1 Advisory Board Meeting Minutes, November 16, 2017](#)

⁴ [Novato Creek Watershed Benefit Assessment FAQ](#)

5.3 DISTRICT BOUNDARY AND SPHERE OF INFLUENCE

FZ1's sphere of influence is coterminous with its jurisdictional boundary and includes a total of 21,580 parcels. Land use within Novato is predominantly residential but also includes commercial and mixed-use areas, business and industrial areas, and community and natural resource lands. The predominant land uses in unincorporated District territory are generally comprised of agricultural, public facility, open space, rural residential, and low-density residential lands⁵

5.4 POPULATION AND GROWTH

FZ1 encompasses the community of Novato and surrounding unincorporated areas which includes all of Census Tracts 1022.02, 1022.03, 1032, 1041.01, and 1041.02, as well as most of tracts 1031 and 1050, and parts of tracts 1011 and 1330. The City of Novato is the second-largest city in Marin to be developed. It grew rapidly between 1970 and 1990. The development of Novato leveled off between 1990 and 2000 but then began to increase again. Novato is presently engaged in downtown redevelopment for potentially both commercial and residential uses and expects to see a growth in jobs in the coming years. It was identified by the Marin Countywide Plan as "having the greatest growth potential in Marin for commercial and industrial development." The January 2020 Novato Area MSR projected a population of 63,000 by 2020 which is an increase from the year 2000.

5.5 MUNICIPAL SERVICES

Flood Control

The way that the City of Novato was developed altered the Novato Creek Watershed's channel network from its historically natural conditions. Many of its channels are narrower and deeper than they should be given the size of the watershed and the level of rainfall this area experiences. Bank erosion implies that the watershed's channels are widening, but many of these channels are constrained by urban development on their banks. With urbanization, many channels were re-routed or directly connected to storm drain systems which also increased the rate of creek bed and bank erosion. These issues only exacerbated the fact that this area is already prone to flooding due to its topography.

FZ1 has averaged more than one major flood per decade over the course of the last 90 years, with particularly severe floods in 1940, 1955, 1982, 1998, and 2006. These floods caused damage and inconvenience to residential and commercial properties alike. As recently as 2016-2017, a portion of Highway 37 within the zone's boundaries was closed for 27 days due to flooding issues. This affected neighborhood streets after heavy winter storms.⁶ Parcels in the Old Town Novato area have seen their backyards turn into "lakes", particularly during floods which hit the properties in 2011 and 2019. To address the needs of this area, the Zone built its first pump station (Lynwood) in 1968. Then, in 1972, the Flood Control District acquired 1,200 acres of land in the lower Baylands. This land was initially supposed to be developed into residential homes, but FZ1 instead utilized the lands for flood storage, flood protection, tidal marsh restoration, sea level rise

⁵ From Novato MSR

⁶ Novato Flood Protection and Watershed Program

adaptation projects, and water re-use.⁷ The Zone built 3 more pump stations in 1971 (Cheda), 1989 (Simmons Slough, formerly a large portable pump until a permanent station was installed in 2020), and 1990 (Farmers) respectively.

In the 1970s, the Flood Control Zone contracted with an engineering firm in an effort to identify options for improving the level of flood protection. This project would eventually become the Novato Creek Flood Control Project, an 8-phase project that was initiated in 1985. The project included improvements on Stafford Lake, Novato Creek, Warner Creek, and Arroyo Avichi, and intended to achieve protection from a 50-year flood event. The final phase of the project was completed in 2006. Since the completion of the Novato Creek Flood Control project, improvements to the channel at Vineyard and Warner Creeks in 2008 and 2009 were initiated in response to flooding in 2006.

Most recently, FZ1 has pivoted to a few new projects, most notably the Novato Watershed Program, which aims to create a “framework that integrates flood protection, creek and wetland restoration, fish passage and water quality improvements with public and private partners, to protect and enhance Marin’s watersheds.”⁸ The Deer Island Basin Complex Restoration Complex is another example of a big multi-benefit project FZ1 has initiated. This project, which involves restoration of the Deer Island basin as well as two stormwater ponds adjacent to the basin, has included collaboration with the SF Bay Restoration Authority and attracted grant funding because of the design’s sustainability elements. In 2020, the Zone also completed a Levee Evaluation Report, which was funded by the state and which identifies remedial alternatives to reduce the risk of levee failure. Other projects FZ1 is presently focusing on include sea-level rise adaptation and widening of the corridor between Highway 37 and SMART which remains a bottleneck between District lands.

In addition to these projects, FZ1 continues to maintain its 4 pump stations (Lynwood, Simmons Slough, Farmers, and Cheda) along the Novato Creek. It also owns and maintains 9 miles of levee along Novato Creek, and tide gates and trash racks on tributaries that lead to both Novato Creek and Rush Creek. Every 4 years, Zone 1 removes sediment accumulation from lower Novato Creek, Warner Creek, and Arroyo Avichi.

With the exception of the Simmons Pump station, the other three pump stations are nearing or beyond their expected design life of 50 years. Simmons Slough is already under construction, but FZ1 had been hoping to fund replacements for the other pumps using grants. In the process of addressing Lynwood Pump Station, the district found out that Cal OES does not fund projects for pump stations if they are near or past their expected design life as the project is not considered “hazard mitigation”. FZ1’s current revenues are not robust enough to support the replacement of these pumps, so other projects are being considered instead. This is discussed in more depth in Section 5.8.

FZ1 also has a number of other facilities relevant to flood control within its boundary that belong to various entities such as CALTrans, SMART, Novato Sanitary District, and North Marin Water

⁷ [Novato Flood Protection and Watershed Program](#), p.7

⁸ [Novato Watershed Program Fact Sheet](#)

District. All of these agencies have different responsibilities for infrastructure that impacts or is impacted by flooding in the area. This division of responsibilities mandates coordination between these jurisdictions.

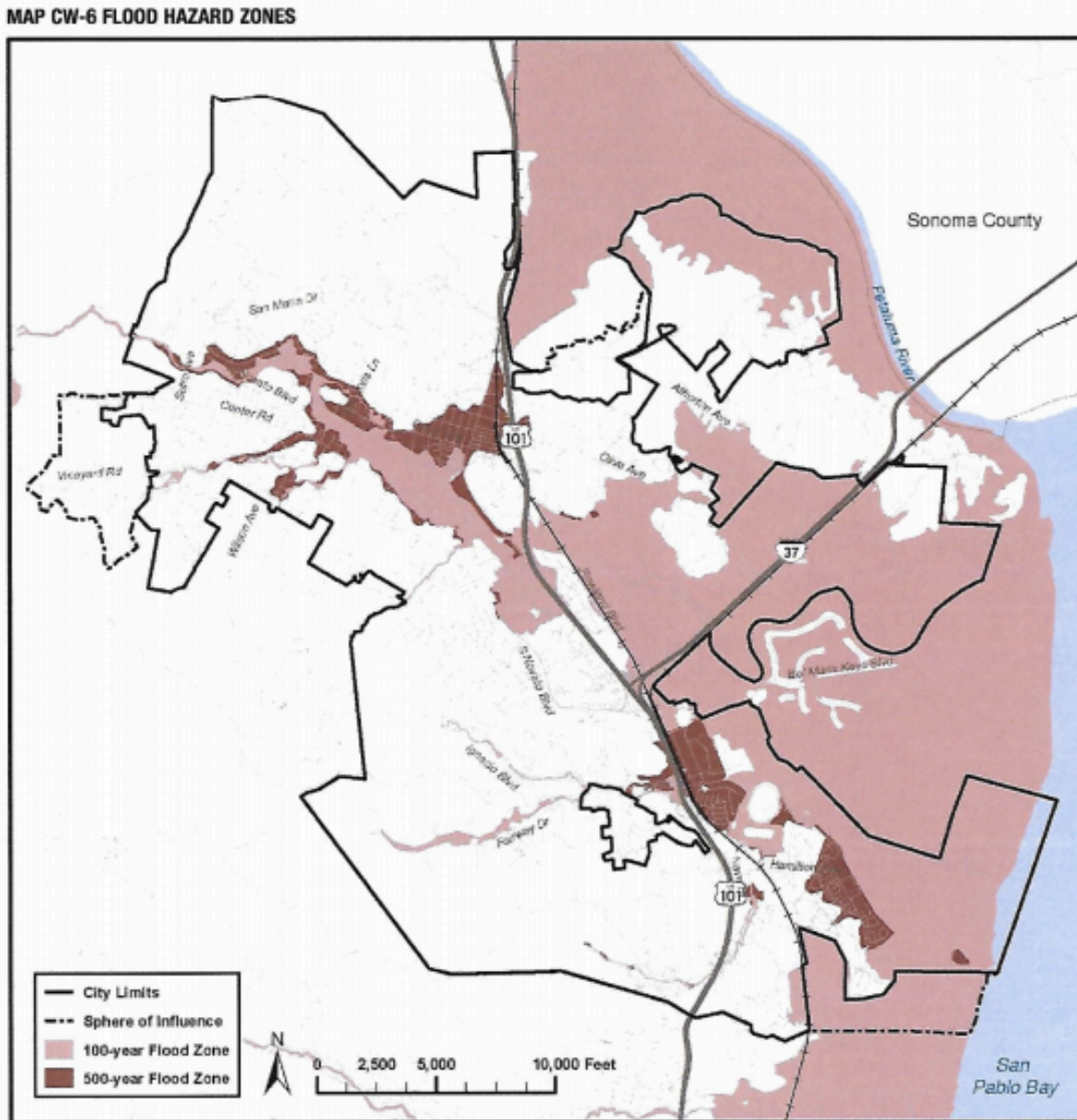
In some cases, it is clear where responsibilities lie and how the roles of the different agencies interrelate with one another. For example, FZ1 is responsible for addressing flooding from the major creeks, but the City of Novato remains responsible for local flood mitigation in incorporated areas, while the County is responsible for local flood mitigation in unincorporated areas. CalTrans is another example of an organization whose responsibilities are clear cut. CalTrans is aware that anything within their right of way is their responsibility to address.

A majority of maintenance responsibilities are clearly defined between the different agencies in the area. FZ1 has cooperative agreements with some of these entities to assist with maintenance and operations. With several exceptions, the City is generally responsible for getting storm drainage to the creeks (i.e. street drains, ditches) and Novato Sanitary District is generally responsible for the creeks, while FZ1 is responsible for basins, levees, and pump stations. This is by no means all-encompassing but gives a general idea of the distribution of responsibilities between different entities.

There are instances, however, where the designation of responsibilities breaks down. This makes it difficult to determine who is supposed to operate and maintain certain facilities. Old Town Novato Flood Group recently informed the District that they learned at a City Council meeting at which the City's Stormdrain Master Plan was discussed, that certain key drainage facilities linking some City street drains in Nave Gardens to the District-managed creeks were not the responsibility of the City. FZ1 had previously assumed the City had easements at these facilities. It turns out that in spite of the easements being drawn on the subdivision map that there has likely never been an offer of dedication of the easements nor acceptance of the easements by either agency. If something happened to these facilities (such as a sinkhole), it would affect the ability of the road drainage to drain to creeks. This shows that although there are some places where it is clear which agencies are responsible for which tasks, it is also clear that in other situations, no agency is designated to certain infrastructure and this could create problems if the infrastructure ever needed maintenance or hazard mitigation.

There is also a large amount of flood infrastructure on private lands that is not clearly the responsibility of one specific agency. It is important to FZ1, and all the other agencies within its boundaries, to maintain strong communications to ensure that responsibilities are clearly divided and that the activities of one agency do not impede the activities of another agency. Within the Flood Zone, some properties are presently at higher risk of flooding than others. FEMA has a flood hazard map, shown in Figure 5-3, which depicts the extent of projected flooding from 100- and 500-year floods. It is clear from this map that a large portion of the Flood Zone is at high risk of a 100-year flood (FEMA Special Flood Hazard Area) while the 500-year flood risk extends to a slightly larger area. With such a large portion of the Flood Zone at risk of flooding during a 100-year flood, it is no surprise that Highway 37 has been affected and that yards and streets have been overwhelmed with flooding in the Old Town Novato Area in recent years.

Figure 5-3: Zones at Risk of 100- and 500-Year Floods



Any property within the 100-year Flood Zone is included in a FEMA Special Flood Hazard Area. This area is significant when determining costs for flood insurance. The City of Novato in 1995 and the County of Marin in 2016 joined the Federal Emergency Management Agency (FEMA) Community Rating System (CRS). Based on a high-level review by LAFCo staff, it was approximated that the City of Novato has 1,382 policies, which cost \$1,133,120 in total. This averages out to \$853 annual cost in flood insurance to City of Novato residents. Since flood insurance premiums are many times higher in Special Flood Hazard Areas (SFHA) the average annual cost in SFHAs is likely higher than \$853 annually.

It is of note, that this analysis only covers the City of Novato. Additionally, any parcel in the Flood Hazard Area is charged significantly higher rates for flood zone insurance, so the \$853 annual average does not capture unincorporated areas at all, nor does it capture how high costs can be in higher risk areas and may overstate insurance costs in lower risks areas. That being said, this does give a good frame of reference for the annual costs of flood insurance. A more in-depth analysis by FZ1 Staff and the City of Novato would be necessary to get a picture of insurance costs throughout the district and the potential for savings.

Currently, both the City and the County are in CRS class 6, which can get a homeowner a 20% discount on flood insurance⁹. For those in the Special Flood Hazard Area, this 20% discount can significantly reduce the costs of their flood insurance. Floodplain management activities above and beyond basic FEMA requirements may help residents get further reductions in insurance premiums, but additional activities are nearly impossible without a larger revenue source for the Flood Zone to work with.

5.6 ORGANIZATION STRUCTURE

Advisory Board

Flood Control Zone #1 was formed by the Board of Supervisors of the Marin County Flood Control and Water Conservation District. The goal was to create a zone that would improve flood protection for businesses, government, and emergency service facilities, as well as homeowners and residents in the watershed.¹⁰ It is a dependent special district with the Marin County Board of Supervisors as its governing body. The Advisory Board consists of five (5) members appointed by the District Board. County Supervisors are elected to four-year terms of office, with no term limits.

Table 5-2: County of Marin Board of Supervisors

Member	Position	Experience	Term
Damon Connolly (District 1)	2 nd -Vice President	Government	Expires January 2023
Katie Rice (District 2)	Supervisor	Government	Expires January 2025
Stephanie Moulton-Peters (District 3)	Supervisor	Government	Expires January 2025
Dennis Rodoni (District 4)	President	Construction	Expires January 2025
Judy Arnold (District 5)	Vice President	Government	Expires January 2023

⁹ National Flood Insurance Community Rating System

¹⁰ Novato Creek Watershed Benefit Assessment FAQ

Advisory Board

The Board of Supervisors appoints five (5) members, who shall reside in Flood Control Zone #1, to an Advisory Board that oversees the zone. The Advisory Board will make recommendations to the Board of Supervisors on necessary actions. This Advisory Board meets on the first Thursday of February to discuss annual items such as maintenance updates and the budget. A written update is provided to the Board of Supervisors unless a meeting is needed to discuss a time-sensitive issue. The current Advisory Board consists of the five appointees noted below in Table 5-3.

Table 5-3: Flood Control Zone #1 Advisory Board Members

Member	Position	Term
William (Bill) Long	Chairperson	2019-2023
James (Jim) Grossi	Vice-Chairperson	2019-2023
Drew McIntyre	Board Member	2017-2021
Gary Butler	Board Member	2019-2023
Susan Lattanzio	Board Member	2018-2021

Staffing and District Operations

As a dependent district of the County, all administrative services are provided by county departments, including legal counsel and compilation of financial transaction reports for the State Controller's Office required under Government Code Section (53891).

5.7 ACCOUNTABILITY AND TRANSPARENCY

Meetings and Agendas

Advisory Board meetings are held at least once a year as required by the by-laws. The meeting date, time, and location are posted on the Marin Watershed Program website: <https://www.marinwatersheds.org/>. Meetings are being held virtually for the time being in response to Executive Order N-29-20 which arose as a result of the Novel COVID-19.

Also posted on the website are agendas, staff reports, and meeting minutes, as well as periodic Statements of Proposed Action regarding Zone maintenance projects. The Board met as recently as November 5, 2020, to hear updates on the budget and current projects, as well as discuss the Zone's vision for the future - namely surrounding the work plan and funding strategies, as well as climate change and other auxiliary items.

5.8 FINANCIAL OVERVIEW

Flood Control Zone #1 posts draft budgets on the Marin Watershed Program Website as part of meeting packet materials. The draft budgets have changed in structure every few years over the last 10 years, but the most recent budget included actuals for the prior year, a proposed budget for the upcoming year, and preliminary estimates for the two following years.

At the November 2020 FZ1 Advisory Board meeting, a new budget structure was introduced consistent with the County’s financial system. A baseline budget that excludes major project expenses was recommended by the County Administrator’s Office and will be utilized; this budget is expected to stay relatively consistent year to year to avoid the inconsistent spikes from major project expenditures. Any project expenditures will now require separate budgets and approval actions.¹¹

Financial Audit

The County of Marin operates an Internal Audit Unit within its Department of Finance. The unit provides continuous monitoring of the County’s activities and reports to management staff on the results of risk evaluations.

Revenues and Expenditures

The FY 2019-2020 expenditure budget for FZ1 shows a general trend upwards, rising by \$4.5 million between FY 2017-18 (Actual) and FY 2019-20 (Proposed). This is mostly due to an uptick in Maintenance of Facilities, Professional Services and Trade or Construction Services, and Utilities. Most other costs stayed relatively steady with only small increases. Some even fell.

Total expenditure in FY 2019-20 was set to be \$6,590,636 with revenue lagging slightly behind at \$4,086,574 (\$2,842,356 in actual revenues and \$1,247,218 in Grant Reimbursements). The Zone is able to cover this deficit because they have an unrestricted fund balance entering FY 2019-20 of \$3,888,099. They anticipate spending this restricted fund balance down to \$1,162,036 in FY 2019-20 and then slowly building the fund balance back up with increases in FY 2020-21 and FY 2021-22.¹²

FZ1’s budget from 2014/15 to 2019/20 is depicted below in Table 5-4.

¹¹ FZ 1 Advisory Board Staff Report, November 5, 2020

¹² FZ1 Proposed FY 2019-2020 Budget

Table 5-4: Flood Zone 1 Budget Table

Description	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	FY19/20
Total Fund						
Balance	2,387,818.15	3,101,729.96	3,919,489.61	3,377,534.95	4,403,352.26	5,287,408.44
Unrestricted Fund						
Balance	2,009,180.97	2,905,395.55	3,239,186.08	2,768,729.70	3,326,870.62	4,751,173.15
Taxes & Interest	2,281,547.82	2,449,055.63	2,613,840.11	2,684,495.98	2,902,608.20	2,977,557.58
Intergovernmental	0.00	0.00	9,673.44	129,647.74	60,898.08	927,226.35
Misc Revenue	13,869.28	3,966.76	270,000.00	0.00	250.00	500.00
Transfers In	0.00	0.00	0.00	0.00	0.00	0.00
Total Revenue	2,295,417.10	2,453,022.39	2,893,513.55	2,814,143.72	2,963,756.28	3,905,283.93
Salaries & Benefits	817,486.27	920,717.23	1,030,226.69	989,590.33	1,044,442.10	968,958.14
Services & Supplies	764,019.02	714,545.51	2,405,241.52	798,736.08	1,035,258.00	1,188,528.95
Total Expense	1,581,505.29	1,635,262.74	3,435,468.21	1,788,326.41	2,079,700.10	2,157,487.09
Prior Year						
Encumbrance	378,637.18	196,334.41	680,303.53	608,805.25	1,076,481.64	536,235.29
Current Year						
Encumbrance	-196,334.41	-680,303.53	-608,805.25	-1,076,481.64	-536,235.29	-3,087,628.00
Ending Fund						
Balance	3,101,729.96	3,919,489.61	3,377,534.95	4,403,352.26	5,287,408.44	7,035,205.28
Ending						
Unrestricted Fund						
Balance	2,905,395.55	3,239,186.08	2,768,729.70	3,326,870.62	4,751,173.15	3,947,577.28

FZ1’s annual revenue comes from two main sources: the ad valorem tax (of which they receive 9.5% or \$2 million) and the \$9 parcel tax created in 1984. In total, revenues from non-one-time sources are about \$3,000,000 a year. Over the years, FZ1 has seen some fluctuations, namely in revenues attributed to miscellaneous sources, intergovernmental revenue (normally grants or money from Cities and State), and transfers in (also money transferred from cities). These variable revenues often come from grants and also money transferred from flood-control stakeholders in the zone, such as the City of Novato, to help fund flood control projects. These variable funds help make up for the deficit from the lagging parcel tax.

As for the two main sources of income, the ad valorem is relatively constant from year to year and rises most years. The \$9 parcel tax on the other hand is fixed and has been outpaced by the gradual rise in costs and aging infrastructure. Although FZ1 attempted to pass a new parcel tax in 2017 to address this issue, the ballot measure failed to pass. FZ1 is now focused on grant funding, but most grant funds do not cover 100% of design and construction¹³ and grant funding can be difficult to secure. FEMA Grants in particular are only awarded for hazard mitigation, not for routine

¹³ [FZ1 Advisory Board Meeting Minutes, November 16, 2017](#)

maintenance. Other grants require sustainability aspects to be considered when designing new projects, emphasizing habitat restoration in particular. Even when grants are secured, they do not always necessarily cover the costs of projects. Grants can sometimes require anywhere from 25-50% of a “local match” to be covered by FZ1. This means that even when grants are secured, funding may still become a burden to FZ1.

Flood Control Zone 1 has little to no revenue available for new capital projects.¹⁴ FZ1’s “[s]taff are faced with the challenges of maintaining aging infrastructure while simultaneously planning for sea-level rise adaptation with any additional funding dependent upon State and Federal grant programs”.¹⁵ Not only does this cause issues for funding future construction, but it also impedes funding for current construction. When it is too expensive to replace pumps, costs associated with extending the life of these aging pumps begin to mount.

The Lynwood Pump Station is a great example of this issue. This pump has been overdue for a replacement for years. FZ1 made plans to replace the pump back in 2005 but did not have adequate funding to proceed. Maintenance of this pump station has since cost the zone \$369,312 for repairs and replacement of parts as the station continues to deteriorate. This is money that could have gone towards pump station rehabilitation and/or upgrades instead. What makes matters worse is that even with repairs in place, the pump station cannot operate at its full capacity due to a lack of back-up power. Installation of a generator for back-up power would have been particularly beneficial as the PG&E power goes out at this location many times per year, but with limited funds this type of project is impossible.

As the above example shows, funding is undoubtedly a concern for FZ1 in the future. Multiple projects have been scaled back or abandoned over the last 10-20 years, and although Lynwood Pump Station serves as a prime example of this issue, FZ1 has also had to scale back other projects. Budget constraints caused FZ1 to forgo additive items that would have been beneficial to them in both the Deer Island Basin Complex Tidal Wetlands Restoration Project design and the Simmons Slough construction project because of concerns with unfunded maintenance needs. Deer Island Basin also had to be scaled back when all the consultant proposals were over budget.

If all the Zone did was maintain what they have without building any new facilities, they estimate needing an additional \$1-2 million per year, **in addition** to the slightly less than \$3 million in revenue that FZ1 currently brings in, to be in good operating stance. This in total would account for covering the \$2 million operating budget, setting aside at least \$2 million per year in a fund for repairs and rehabilitation (R&R) of levees and pump stations, and sediment removal (which requires around \$500,000 to be set aside per year but occurs every 4 years). This would be money that accounted for Operations & Maintenance, Repair, Rehabilitation & Reconstruction (all activities that are NOT grant eligible). This does not include any additive activities, nor does it

¹⁴ Novato Flood Protection and Watershed Program, p. 1

¹⁵ FZ 1 Advisory Board Staff Report, November 5, 2020

account for activities that FZ1 may be relying on grant revenue for. (See earlier sections about the unreliability of grant funding.)

After the loss of the ballot measure that FZ1 put forward for more funding in 2017, FZ1 has had to consider alternatives, especially the immediate needs of its 3 aging pump stations. The first alternative is setting aside money for rehabilitation to simply extend the life of the pump stations. The second is to design entirely new pump stations located at different and possibly more productive locations, that would simultaneously qualify for grant matching funds. FZ1 may also be able to appeal to other interested parties, namely SMART and CalTrans, to help fund projects that would have a dual-benefit for the functionality of those two public agencies' services.

The Novato Watershed Program was also created as a joint effort between the County, FZ1, Novato Sanitary District, City of Novato, and North Marin Water District in an effort to address the funding issue FZ1 is experiencing, especially because the Flood Control Zone foresees increased flood risks related to rising sea levels and a changing climate that capital projects will be necessary to mitigate.

The capital projects proposed by the Novato Watershed Program are expected to cost around \$31 million (2017 cost estimates). Although the Novato Watershed Program is well-positioned to aggressively pursue grant funds for project implementation, grants usually have to be matched.¹⁶ FZ1 hoped to fund 2/3 of this project over the course of the next 18 years using money from the 2017 special parcel tax. This ballot measure would have helped raise the money necessary for general funding as well as the money needed to match possible grant funding. Since this parcel tax failed to pass, how the Watershed Program will be funded is less clear.

It is apparent that staff has had to cut back on maintenance, repairs, and construction because of budget constraints in recent years. As climate change-related issues increase flood control needs in the area, without a new revenue source FZ1 may not have sufficient funds to adequately serve their region in the years to come.¹⁷ This is a problem that needs to be addressed immediately, as flood control is a vital service to this area.

If this problem is neglected, residents in the Zone should expect more flooding in areas that are already at risk, such as Nave Gardens, as well as flooding in areas that were perceived as lower risk. They will also be faced with the threat of the rising cost of flood insurance in areas that used to have lower rates.

¹⁶ Novato Flood Protection and Watershed Program, p. 1

5.9 SUSTAINABILITY

FZ1 is directly affected by climate change. Heat from the globe's rising temperatures is absorbed by the ocean, which leads to sea-level rise and increases the severity of winter storms, both factors which exacerbate flooding issues in an already flood-prone region.

In addition, in 2017 as a sustainability initiative, the Regional Water Quality Control Board began regulating the District's regular preventive creek maintenance. Through the new programmatic permit, there are restrictions on the amount of maintenance that can be performed each year, mandates for the development of quantitative thresholds for creek maintenance, and significant recurring fees to be paid to the water board that take away from the amount of funding that can be spent on physical creek maintenance. This change affects FZ1 more than the other zones because this zone owns and/or has maintenance easements over a much larger network of creeks than in any other zone. FZ1 *has* to keep climate change in mind when looking at future capital projects, for both legal and weather-related reasons.

The 2016 Hydraulic Study, conducted by the Novato Watershed Program, provided a computerized program that created an "existing conditions" model. This allowed for the analysis of known storm and flood events. This existing condition model also allowed for the projection of impacts that any potential flood control project would have on flood protection, and the analysis and management of present conditions. This created the opportunity to see the long-term effects that forward-thinking projects may have and sets FZ1 up for more successful planning of future flood mitigation and allows FZ1 to incorporate the anticipated impacts of climate change.

FZ1 is not only impacted by sustainability concerns, their actions can also create sustainability concerns. FZ1 contains the Novato Creek Baylands within its boundaries and protecting and restoring this vital habitat is important to FZ1. FZ1 hopes to keep not only climate change but also habitat protection and restoration at the forefront of their practices. By promoting future capital projects that will work with natural processes to manage flooding, the proposed projects intend to restore stream and wetland habitats, positively impact water quality, and allow for adaptation to sea level rise. The Deer Island Basin Tidal Marsh restoration design is an example of one of these projects which marries sustainability and habitat restoration.