

# memorandum

date        January 8, 2021

to            Drew McIntyre, P.E., North Marin Water District

cc            Carmela Chandrasekera, P.E., North Marin Water District

from        Elijah Davidian

subject      Well Siting at 14500 Point Reyes-Petaluma Road

## Introduction

The North Marin Water District (District) is considering installing a new municipal water well on property within Marin County's coastal zone. In order to be viable from a production standpoint, the well site must be located near Lagunitas Creek. The County's regulations restrict some types of development in proximity to creeks. The District has requested a review of these regulations to determine whether the County could permit a new well at the site in question. As described further in this memorandum, based upon a review of applicable regulations and discussion with County staff regarding its interpretation of these regulations, creek proximity would not preclude the County from approving a permit for the new municipal well.

## Background

The North Marin Water District (District) is considering adding a new municipal water well to its Point Reyes water supply system. The property under consideration for the well is located at 14500 Point Reyes-Petaluma Road, in unincorporated Marin County, California.<sup>1</sup> A segment of Lagunitas Creek, identified as a blue-line stream on the most recent edition of the USGS 7.5-minute quadrangle map for the project area traverses the property. An existing District well is located within approximately 100 feet of the creek channel.<sup>2</sup>

## Regulatory Context

The subject property is located within the coastal zone and, therefore, subject to the Marin County Local Coastal Program Unit II (LCP).<sup>3,4</sup> The LCP anticipates and provides for installation of water supply infrastructure within and adjacent to such blue-line streams. For example, the LCP's Natural Resources Policy 3.a provides for development of water supply infrastructure in streams, including impoundments, diversions, channelizations, and

<sup>1</sup> Marin County Assessor's Parcel No. 119-050-17

<sup>2</sup> U.S. Geological Survey, US Topo 7.5-minute map for Inverness, CA 2018. September 5, 2018. Available online at: <https://viewer.nationalmap.gov/basic/?basemap=b1&category=histtopo,ustopo&title=Map%20View#productSearch>. Accessed June 19, 2020.

<sup>3</sup> Marin County Community Development Agency (Marin County), Marin County Local Coastal Program Unit II, as amended (LCP). Adopted by Marin County Board of Supervisors December 9, 1980, Certified by the State Coastal Commission April 1, 1981. Available online at: [https://www.marincounty.org/-/media/files/departments/cd/planning/local-lcp\\_lup\\_unit\\_ii\\_amended\\_bookmarks.pdf](https://www.marincounty.org/-/media/files/departments/cd/planning/local-lcp_lup_unit_ii_amended_bookmarks.pdf). Accessed April 27, 2020.

<sup>4</sup> Marin County Municipal Code, Title 22I, Chapter 22.56I – C Districts

other substantial alterations, provided such projects minimize impacts on sensitive coastal resources.<sup>5</sup> At the same time, Natural Resources Policies 3.c and 3.d call for the establishment of and restrict development within stream buffers.<sup>6</sup> The County's regulations define stream buffers as the area covered by riparian vegetation on both sides of a stream and the area 50 feet landward from the edge of the riparian vegetation. But the definition also states that in no case shall the stream buffer be less than 100 feet in width on either side of the stream, as measured from the top of the stream banks. These regulations are silent on the siting of water supply wells in proximity to streams. However, the LCP's Public Services Policy 2.e(3) requires that new community or mutual water wells serving five or more parcels must demonstrate by professional engineering studies, including as necessary, long-term monitoring programs, that such groundwater or stream withdrawals will not adversely affect coastal resources, including groundwater basins, aquifers, and streams. The policy goes on to require that such engineering studies shall provide the basis for establishing safe sustained yields from these sources.<sup>7</sup>

### **Site Assessment**

In an attempt to avoid work within a stream buffer, the District has identified the approximate extent of the stream buffer on the portion of the property under consideration for well siting.<sup>8</sup> Based upon subsequent investigation of areas outside the buffer – including a hydrologic conditions assessment involving a test well and monitoring wells – the District concluded that the remaining portion of the site is not viable for installation of a new municipal well. This is primarily due to the test well's low yield relative to the existing well which is approximately 70 feet closer to Lagunitas Creek.<sup>9</sup>

### **Discussion**

Considering the results of the hydrogeological analysis, the performance of the existing well, and the portion of the property available to the District for new well installation, it appears the only potentially viable location for the new well site is within the Lagunitas Creek stream buffer, as defined by the County. As further discussed below, the County's regulations governing water supply infrastructure in proximity to creeks do appear to allow such projects within stream buffers. Nevertheless, given the regulations are silent on wells specifically, additional context and interpretation by County staff is considered.

#### *Applicability of Regulations*

The LCP's Natural Resources Policy 3.a provides for approval of stream alterations related to necessary water supply projects, including "stream impoundments, diversions, channelizations, or other substantial alterations." Policy 3.b requires that for such water supply projects "Disturbance of riparian vegetation shall be held to a minimum." Independent of riparian impacts, implementation of such water supply projects would require development within 100 feet of a stream. In contrast, Policy 3.d states that no construction, alteration of land forms, or vegetation removal shall be permitted in the riparian portion of a stream buffer. And the policy goes on to preclude development within the 100-foot stream buffer. Thus, Policy 3.d appears to apply to a classification of development other than necessary water supply projects.

#### *Policy Context*

<sup>5</sup> Marin County Municipal Code Section 22.56.130I.G.1

<sup>6</sup> Marin County Municipal Code Sections 22.56.130I.G.3 and G.4

<sup>7</sup> Marin County Municipal Code Section 22.56.130I.A.3

<sup>8</sup> Garcia and Associates Environmental Consultants. Memorandum to Carmela Chandrasekera and Drew McIntyre, North Marin Water District, from Nate Vorapharuek, Garcia and Associates, re: Ground water test wells site review at 14500 Point Reyes-Petaluma Road, Marin County, October 1, 2019.

<sup>9</sup> PES Environmental, Inc., Report of Exploration for Potential Groundwater Supply Location, Gallagher Ranch Property – North Pasture Area, Gallagher Wells Project, Point Reyes Station, California. December 5, 2019.

The LCP presents a brief history of the Point Reyes water system, its primary waters supply sources, improvements pending at the time of LCP preparation, the ability of the system to meet projected demand, and the need to plan for future expansion. The LCP notes the District's superior water rights in the area derive from the Point Reyes community having appropriated water from Lagunitas Creek and other local streams for over 100 years. At the time of LCP drafting, the primary sources of water for the District's Point Reyes system consisted of three wells at two sites adjacent to Lagunitas Creek. The LCP acknowledges the importance of well proximity to the creek, explaining that "water supply to the three wells is primarily dependent upon the amount of water in Lagunitas Creek and, to a lesser extent it is believed, on the amount of water available in an underground aquifer."<sup>10</sup> Regarding system capacity, the LCP notes that, based upon development projections at the time, the system would be capable of supplying water needs through the year 2000. The document goes on to acknowledge that some expansion of the system would be required if additional water needs were to be met beyond that time.<sup>11</sup> Specifically, LCP's Public Services Policy 2.b state the Point Reyes System is not adequate to meet demand under maximum buildout and that water system expansion planning will be required.

#### *County Staff Interpretation*

ESA contacted Marin County Community Development Agency to better understand how its staff interprets these regulations. On April 20 and 27, 2020, ESA staff spoke with Senior Planner Inge Lundegaard.<sup>12</sup> The discussions centered on whether the LCP regulations would permit a new municipal well within the stream buffer on the subject property. Ms. Lundegaard acknowledged the lack of clarity in the regulations and explained that they needed to be read in the broader context of the LCP. Specifically, she pointed to the LCP's discussion of the existence of wells in proximity to creeks, the community's historic reliance on such wells as its primary water supply sources, and the apparent expectation at the time of the LCP drafting that water system expansion would be required in the future. Thus, Ms. Lundegaard concluded that a new well on the subject property could be permitted within the stream buffer, provided that it complied with other applicable provisions of the LCP, including specifically those of Public Services Policy 2.e(3).

#### **Conclusion**

The County's LCP policies appear to allow necessary water supply projects within stream buffers, while restricting other types of developments within these areas. The LCP's discussion of the Point Reyes water system acknowledges the community's reliance upon wells near Lagunitas Creek, and anticipates system expansion to meet future demand. For these reasons, and based upon discussions with County planning staff, creek proximity alone would not preclude the County from approving a permit for the new municipal well.

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<sup>10</sup> Marin County LCP, p. 139.

<sup>11</sup> Marin County LCP, p. 143.

<sup>12</sup> Personal communication between Elijah Davidian (ESA) and Inge Lundegaard (Marin County Community Development Agency), April 20 and 27, 2020.