

Appendix B

2009 Initial Study/Mitigated Negative Declaration

INITIAL STUDY

GALLAGHER WELLS AND PIPELINE PROJECT

March 2009

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1.0 INTRODUCTION AND BACKGROUND

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code 21000 *et seq.* and the *State CEQA Guidelines*, California Code of Regulations Section 15000 *et seq.*

The proposed project includes drilling one additional well at North Marin Water District's (NMWD) Gallagher Wells site and constructing a pipeline to connect the existing and new well at this well site to NMWD's water treatment plant. There is one existing well at this well site, but the well is not connected to the NMWD treatment and delivery system, and it has not been used since it was developed. The water from these wells would be used to supplement the existing Coast Guard Wells, which are the primary water source for the Point Reyes Water Treatment Plant. The proposed project also includes construction of a new stream gauging station, demolition and abandonment of an existing NMWD well (Downey Well), and the transfer of an existing NMWD water right for instream uses. A project site map is shown on Figure 1

2.0 PROJECT LOCATION AND SETTING

As shown on Figure 2, the Gallagher Well site is located on a small parcel of land (130 feet by 85 feet; located at 38°04'47"N and 122°47'66"W) owned by NMWD on property commonly called the Gallagher Ranch (14500 Point Reyes-Petaluma Road), which is located 1.3 miles northeast of Highway 1 at Point Reyes Station. Access is provided by Point Reyes-Petaluma Road. The well site is on the south bank of Lagunitas Creek, across the creek from Point Reyes-Petaluma Road near the east end of the private Gallagher Ranch bridge. The proposed pipeline would be installed within the right of way of Point Reyes-Petaluma Road for about a mile where it would connect to an existing pipeline that delivers water from the existing Downey Well site to NMWD's treatment plant, which is located about 500 feet north of the end of Commodore Webster Drive in Point Reyes Station.

The only residence near the well site is the residence on the Gallagher Ranch, which is located about 300+ feet east of the existing well site and 400 to 800 feet from the proposed well site. There are no residences located along the section of Point Reyes-Petaluma Road where the new pipeline would be constructed.

The Downey Well (located at 38°04'35"N and 122°47'38"W) is located within the stream channel of Lagunitas Creek approximately 2,900 feet northeast of the treatment plant. NMWD proposes to abandon this well.

Existing Water Rights

NMWD diverts water from Lagunitas Creek through a Water License and two Water Right Permits. Water License 4324B allows NMWD to divert water between May 1 and November 1 of each year at a rate not exceeding 0.67 cubic feet per second (cfs) for a maximum diversion of 148.8 acre-feet per year. The authorized points of diversion under this License include the Coast Guard Wells, the Downey Well, and the Giacomini Ranch site. The License contains a

number of stipulations that limit or prohibit diversion when streamflow in Lagunitas Creek falls below levels needed to protect fish and wildlife.

The Water Right Permit 19724 allows diversion of 0.699 cfs (maximum of 212.7 acre-feet diverted) on a year-round basis. Water Right Permit 19725 allows a maximum diversion of 0.961 cfs (292.5 acre-feet maximum) on a year-round basis. The water rights under these two Permits are junior rights that are not available during the summer months (July through October) of dry years. A dry year is defined as a year in which the total precipitation that occurs from October 1 through April 1 is less than 28 inches as measured at the Marin Municipal Water District's Kent precipitation gauge. The Permits authorize diversion from the Coast Guard Wells, Gallagher Well site, Downey Well, and a point upstream from the Green Bridge.

To meet water demand in dry years when water cannot be diverted from Lagunitas Creek due to the restrictions described above, NMWD has an Intertie Agreement with the Marin Municipal Water District (MMWD) to release up to 250 acre-feet of water from Kent Lake. To date, no water has needed to be released under this Intertie Agreement since a dry year has not occurred.

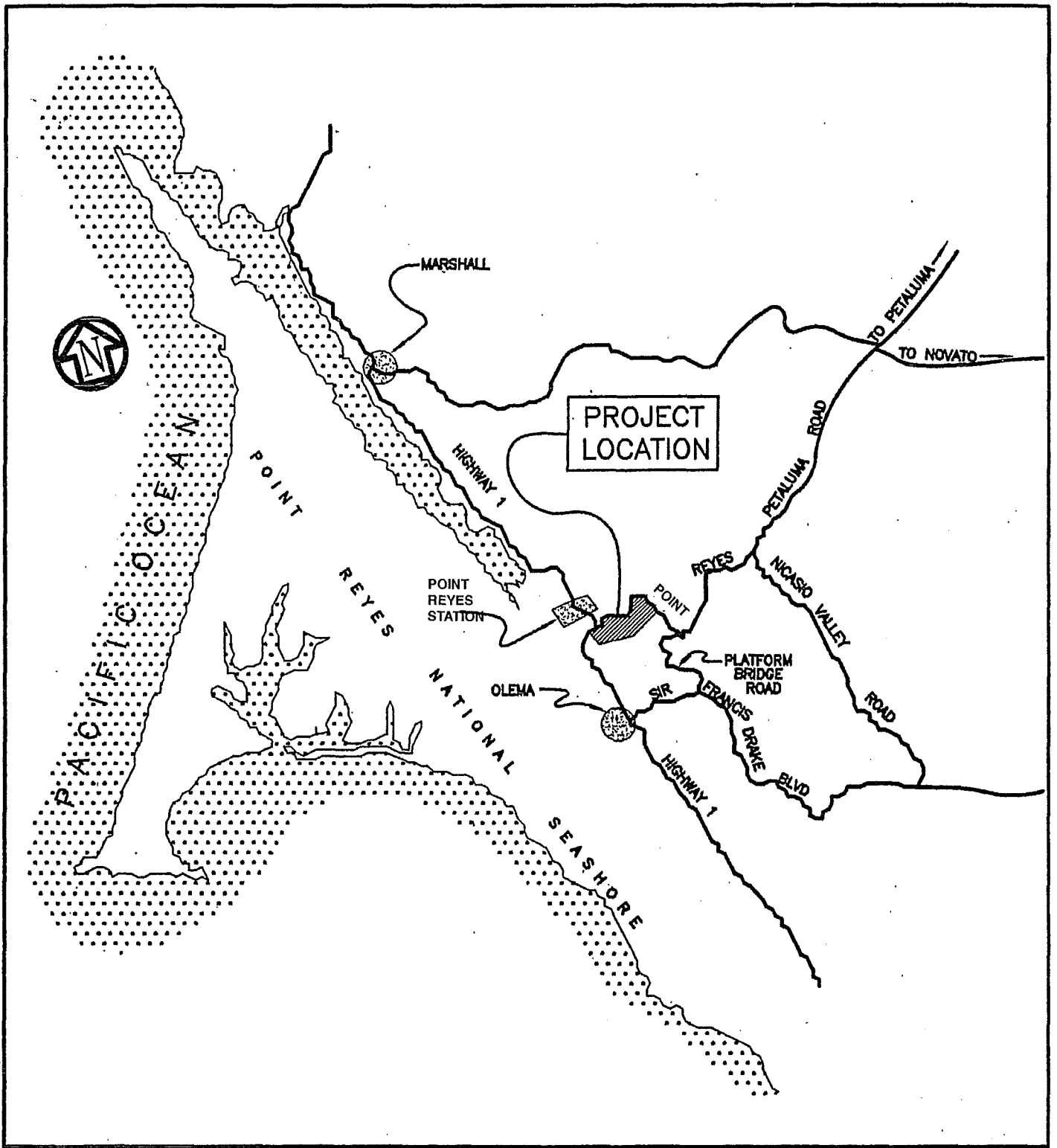
3.0 PROPOSED PROJECT DESCRIPTION

1. Project Objectives and Benefits

NMWD historically has relied on the two Coast Guard Wells (located to the south of its treatment plant, which is located approximately 500 feet from the end of Commodore Webster Drive at the Point Reyes Station Coast Guard Housing Facility) to supply water for the West Marin service area. Due to the wells' location in the upper tidal reach of Lagunitas Creek, they are under the influence of flows in the tidal reach of Lagunitas Creek and subject to periodic salinity intrusion and occasional flooding. The Gallagher Ranch site is upstream of any flooding and tidal reaches of Lagunitas Creek. However, the existing NMWD Gallagher supply well has a limited flow capacity (170 gallons per minute) and is not connected to the West Marin distribution system. This project would increase the Gallagher Well site's capacity and integrate those wells into the District distribution system. Because the Coast Guard Wells largely have good water quality, are reliable during most months, and have ample recharge, the Coast Guard Wells will continue to be the primary supply.

This historic salinity intrusion problem may be exacerbated by the National Park Service's conversion of the Giacomini Ranch to tidal wetland, which will increase salinity in upstream portions of Lagunitas Creek. According to the Final EIS/EIR for the Giacomini Wetland Restoration Project, the Park Service will not implement the Olema Marsh portion of the restoration project until either further studies are done to determine whether that part of the restoration would increase salinity; new information is received showing that the project would not adversely pose a threat to NMWD water quality; or NMWD constructs the pipeline connecting the Gallagher Wells to the treatment plant.¹ The proposed project would satisfy the third criterion, thereby allowing the Park Service to conduct the proposed Olema Marsh restoration.

¹ National Park Service, Giacomini Wetland Restoration Project: Final EIS/EIR, Response C-20, Volume 2, page 8, 2007.



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GALLAGHER POINT REYES PIPELINE

Figure 1: VICINITY MAP

MARIN COUNTY

CALIFORNIA

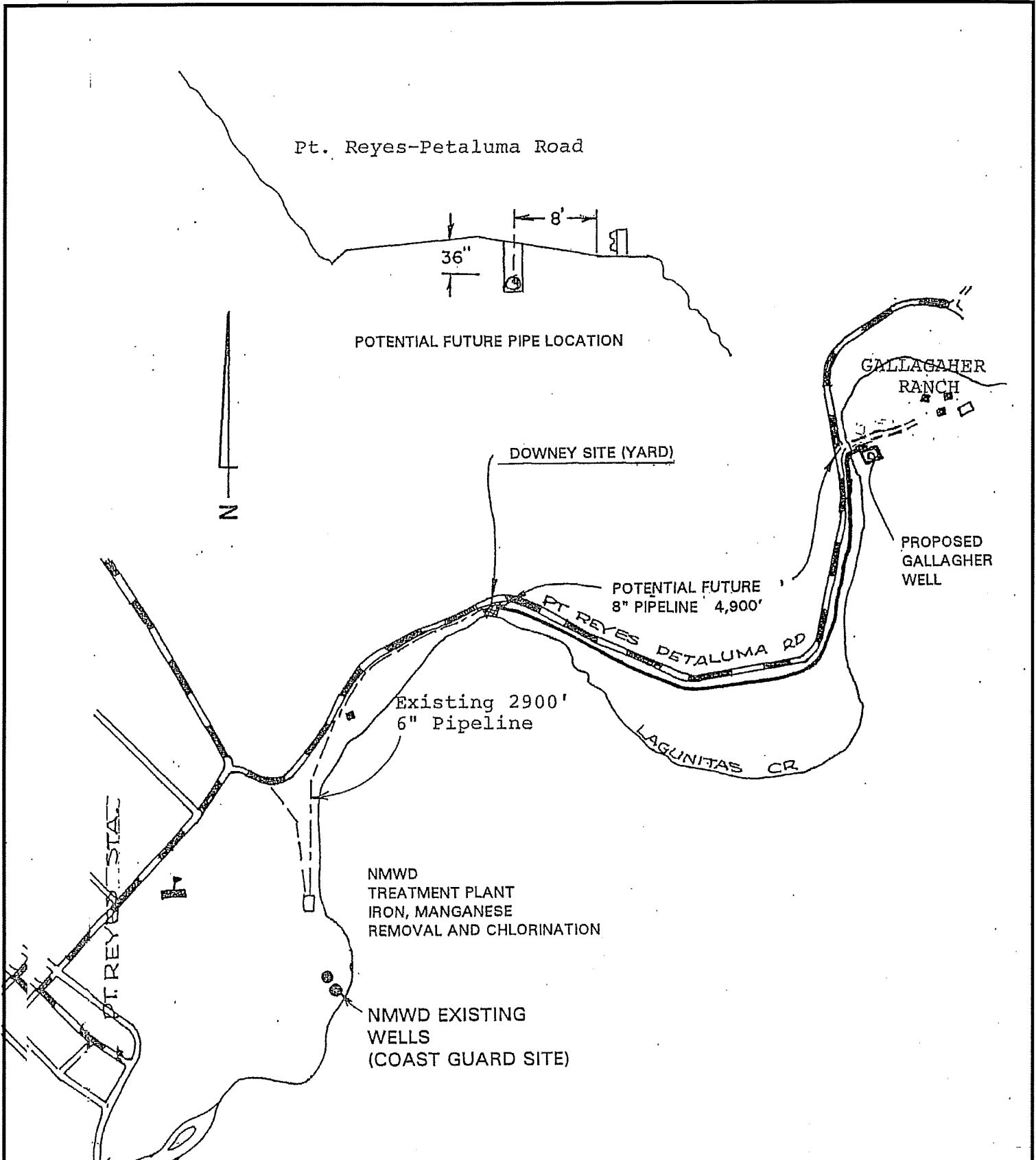


Figure 2: PROPOSED PROJECT

NORTH MARIN COUNTY WATER DISTRICT NOVATO, CALIFORNIA	GALLAGHER RANCH WELL	DES	DR	CH	REC	SCALE	
							DATE 6-26-92
		APPROVED:					SHEET NO. OF SHEET
		RE 11696					NO. Figure 2

FIGURE 3
PROPOSED GALLAGHER
WELL SITE

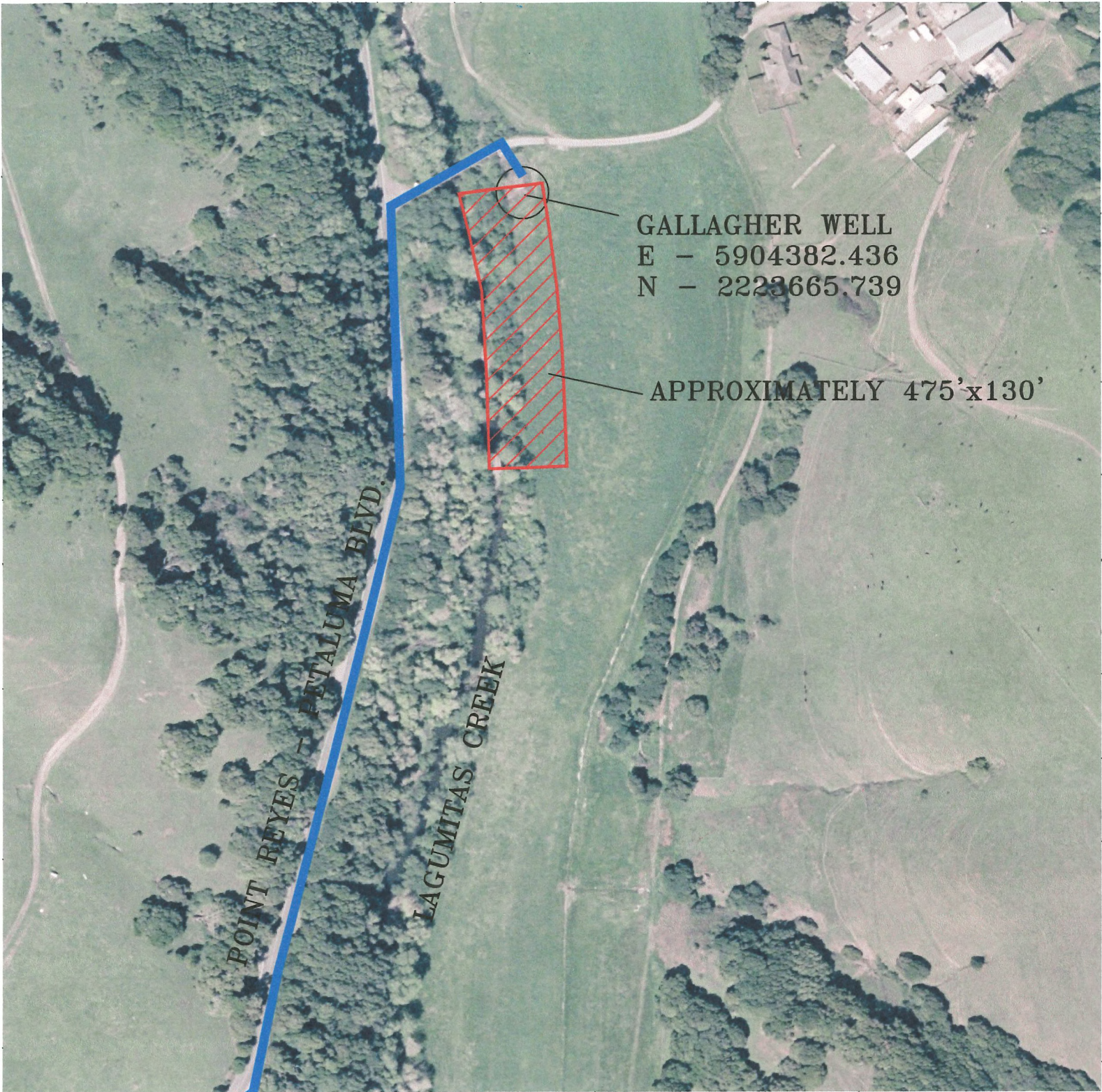


FIGURE 3

Given this background, NMWD's stated project goals and objectives include:

- **Provide Local Water Security.** This new water source would be used during periods of high tides, avoiding saltwater intrusion into the existing primary supply wells (Coast Guard Wells). By establishing a reliable emergency backup source of water upstream of the high tide water influences of Tomales Bay, water service reliability will increase. The new well will serve West Marin communities of Point Reyes Station (including the Coast Guard housing area), Inverness Park, Paradise Ranch Estates, Bear Valley (including the Point Reyes National Seashore) and Olema. The North Marin Water District has an agreement to assist the Inverness Public Utilities District during emergency water shortages. Development of this supplementary supply therefore stands to benefit that community.
- **Protect NMWD Communities' Water Supply From Flooding.** This will be accomplished by providing a reliable and secure source of water during flood events. During such events, the existing primary supply wells (Coast Guard Wells) may be inundated under Lagunitas Creek floodwaters and cannot be used as a source of water until the floodwaters recede.
- **Protect NMWD Communities' Water Supply From Drought.** Lower instream flows in Lagunitas Creek during dry or drought years increases salt-water intrusion at the existing primary supply wells. This project will reduce off-tide pumping at the primary supply wells during dry years. The present off-tide pumping practice is to pump at higher rates before and after high tide events to recapture distribution system storage.

NMWD believes that the project would have the following benefits:

- **Water Supply and Reliability.** The project insures reliable, high quality water supplies during high tide and flood events on Lagunitas Creek. In addition to communities of Point Reyes Station, Olema, Bear Valley, Paradise Ranch Estates and Inverness Park, the Town of Inverness may also benefit because it has an emergency water supply connection to the NMWD West Marin distribution system.
- **Flood Management.** The project provides a dependable means of avoiding effects of flooding in Lagunitas Creek on District's West Marin water supply.
- **Protect Groundwater Quality.** The project insures protection for Coast Guard Wells and the aquifer from saltwater intrusion by avoiding pumping at Coast Guard Wells during periods of high tide and low flows in Lagunitas Creek.
- **Habitat Protection.** The project will reduce North Marin Water District's water supply impacts on Lagunitas Creek for fish habitat.
- **Reduce Conflict Between Water Users** – The project is a preferred alternative to off-tide pumping at higher rates at the existing Coast Guard Wells. The North Marin Water District would provide collaborative support to National Park Service (NPS) on the

Giacomini Wetlands restoration project by working on this new source of water away from the restoration. Off-tide pumping may become increasingly unreliable in future years as salinity intrusion at the Coast Guard Wells near Lagunitas Creek could increase due to the recent restoration of natural hydrologic conditions at the Giacomini Wetlands.

- **Wetland Restoration** – The project allows the National Park Service to implement its planned Olema Marsh restoration, which will allow full implementation of the beneficial Giacomini Wetland Restoration Project.
- **Benefits to Lagunitas Creek** – The project will permanently dedicate 212.7 acre feet (0.699 cfs) of Lagunitas Creek water that the District can currently divert (by transfer of Water Right Permit 19724) to instream uses (i.e., for the benefit of plants, fish, and wildlife using the creek). Reduction in off-tide pumping at higher rates would also benefit the Lagunitas Creek fishery by keeping more water in the stream.

2. Wells and Pipeline

The proposed project includes an additional well and a pipeline to supplement a periodically unreliable water source. The existing Gallagher Well was drilled to a depth of 54 feet and has a sustained yield of about 170 gallons per minute. NMWD proposes to construct one additional well at the Gallagher Wells site to increase the water available from this site to a maximum of 300 gallons per minute. The new well may be installed in an area outside the land currently owned by NMWD. Figures 2 and 3 shows the area where the new well might be drilled. If the proposed new well is outside the land currently owned by NMWD, then NMWD will need to purchase that land from the current owner.

Water from the wells will be piped through grassland to the existing Gallagher Ranch private road/driveway and then along that road to the private bridge. The pipe will be hung from the bridge, so no work would take place within Lagunitas Creek. Water will then be transported by about 4,900 feet of new 12-inch pipeline to be installed along Point Reyes-Petaluma Road to the existing Downey Well site where it would connect to the existing 6-inch pipeline that connects the Downey Well to the District's Point Reyes Treatment Plant. The pipeline proposed along Point Reyes-Petaluma Road would be within the pavement or shoulder of that road.

3. Abandonment of the Downey Well and Change the Point of Diversion

NMWD will abandon the existing Downey Well that lies within the Lagunitas Creek stream channel. This well is a hazard, causes adverse impacts to the stream and produces water with poor water quality. The well was originally constructed on the bank of the stream, but the creek has migrated and captured the wellhead, so that currently it is located in the middle of the creek. Since 1994, this well has been used to deliver raw water to the Giacomini Ranch for irrigation. The existing well head will be removed in the following way:

- The entire 12-inch well casing will be filled with bentonite (clay) chips.
- An excavator will be driven to the edge of the streambank (no equipment will enter the stream channel). Using a hoe ram attachment, the concrete surrounding the well head will

be broken into 3-5 large pieces. Using a clam shell attachment to the excavator, the pieces of concrete will be removed from the stream bed.

- The well pipe will be cut off to be below the water level (about 2-4 feet would be cut off).

There is an existing access road to the well site. NMWD annually uses this road to conduct maintenance of the well. To get near the well head, NMWD places 3-foot concrete blocks over the portion of this road nearest the streambank to allow access by heavy equipment. The concrete blocks are removed each year following completion of well maintenance. This same procedure would be used to allow access by the excavator, though because the excavator has a longer reach than the equipment used to maintain the well, fewer concrete blocks would need to be installed for well removal.

NMWD proposes to amend its Water Right 4324B and Permit 19725 to add the Gallagher Well site as a point of diversion. NMWD will petition the State Water Resources Control Board (SWRCB) to change the approved points of diversion for License 4324B from the Giacomini Ranch, Coast Guard Wells, and Downey Well to the Coast Guard Wells, Downey Well site, and the Gallagher Wells.

4. Gauging Station

An existing stream gauging station is located between Point Reyes-Petaluma Road and Lagunitas Creek immediately north of the Gallagher Ranch driveway. In order to gauge the streamflow downstream of the area where the existing and the new Gallagher Well would be located, the stream gauge will be relocated to a point about 1,200 feet south of the existing Gallagher Well. This site was identified as an appropriate site by NMWD and U.S. Geological Survey (USGS) staff during a March 17, 2008 site visit. The stream gauge station meets USGS standards; it would be a very small installation measuring approximately 3 feet by 3 feet by 4 feet; it would be elevated to be above the 100-year flood elevation. It would be constructed on the east side of the creek with access from the Gallagher Ranch pasture that borders this section of the creek. It would be powered by either an electrical line from a nearby power pole or a solar cell. It would contain a telephone or cell phone connection to send data.

5. Dedication of Water for In-Stream Uses

As allowed under California Water Code Section 1707, NMWD proposes to dedicate the water that the District can now divert under its Water Right Permit 19724 to permanent instream use. The Permit allows diversion of 212.7 acre feet of water per year (at a maximum rate of 0.699 cubic feet per second). NMWD will petition the State Water Resources Control Board (SWRCB) to change the place of use and purpose of use for 0.699 cubic feet per second (cfs) of water diverted from Lagunitas Creek under Water Right Permit 19724 for municipal uses in the NMWD West Marin Service Area for the purpose of preserving and enhancing wetland habitat, and fish and wildlife resources in Lagunitas Creek pursuant to Water Code Section 1707. The new place of use is defined as instream flows for the protection, preservation, restoration and recovery of aquatic organisms, including but not limited to coho salmon and steelhead trout pursuant to Recovery Planning measures to be developed under the Memorandum of Understanding Among National Marine Fishery Service, California Department of Fish and

Game, Army Corps of Engineers, Fish Net4C, counties of Mendocino, Sonoma, Marin, San Mateo, Santa Cruz and Monterey and the County of Humboldt as executed on May 16, 2002.

6. Construction Process and Phasing

Construction of the pipeline will require one excavator and one backhoe for earthwork and grading tasks; a loader for moving and placing backfill; and smaller equipment for finishing work. Once construction is completed, traffic to and from the site will be minimal. Construction truck traffic includes 10-wheeler trucks to dispose of excavated materials and flatbed semi trucks for delivery of new pipe.

Removal of the Downey wellhead will require the use of an excavator a dump truck to remove the broken concrete, and hand power tools. It is estimated that this process can be completed in two days.

Installation of the gauging station would require a small truck to haul the equipment and hand tools to install.

Construction of the project would consist of four phases: (1) drilling of a new well (three weeks of work), (2) installation of the pipeline along Point Reyes-Petaluma Road (two months of work), (3) demolition of the Downey Well (two days), and 4) installation of the relocated gauging station (two days). At most, the construction would last 4 months, but some of the work could be done conterminously.

4.0 LEAD AGENCY

1. Project Title

Gallagher Wells and Pipeline Project

2. Lead Agency Name and Address

North Marin Water District
P.O. Box 146
Novato, CA 94948

3. Contact Person and Phone Number

Mr. Drew McIntyre
Chief Engineer
North Marin Water District
P.O. Box 146
Novato, CA 94948
415.897.4133

5.0 OTHER PERMITS AND REGULATORY OVERSIGHT

The North Marin Water District is the public agency responsible for approving and carrying out the proposed project and is considered the Lead Agency under CEQA. NMWD is responsible for preparing this Initial Study. NMWD will approve the Mitigated Negative Declaration prepared for the proposed project and either approve or reject the project after the Mitigated Negative Declaration has been circulated for public review and comment.

The California State Water Resources Control Board, Division of Water Rights would need to approve the proposed changes to Water License 4324B and Water Right Permits 19724 and 19725.

The California Department of Fish and Game will need to approve a Streambed Alteration Agreement to allow the instream work needed to abandon the Downey Well and possibly to install pipes for the relocated gauging station.

The California Department of Fish and Game will review the proposed project and Water License amendment to ensure that the project will not significantly affect fish or other wildlife. It is expected that Point Reyes National Seashore will also review the proposed project since much of the section of creek that might be affected downstream of Gallagher Wells is within the Golden Gate National Recreation Area (GGNRA) (and Point Reyes National Seashore administers this portion of GGNRA), plus the project would allow the Park Service to implement the Olema Marsh Restoration project.

The County of Marin will need to issue an Encroachment Permit for installing the pipeline and a Well Abandonment Permit for abandoning Downey Well. Because the project is within the Coastal Zone, the County is a Responsible Agency that would need to approve a Coastal Development Permit for the project. The new well site is on property classified and zoned as Coastal Agricultural Production Zone. A well is a conditional use in this zone, and it requires the County to approve a Use Permit.

6.0 RELATED PROJECTS

A review of the Marin County Community Development Agency's most recent inventory of proposed development projects as of September 2008 (*PROPDEV44*, published in October 2008), shows that there are two other proposed projects in the Point Reyes Station area; they are:

- Reuse of the existing Grandi Building at 11101 Highway One in Point Reyes Station for 3 residential units, 22 hotel rooms, and 17,361 square feet of retail use. This project has been approved.
- The Bar-Or Subdivision/Lot Line Adjustment would allow a 5-lot subdivision of 21.3-acre property off Viento Way in Point Reyes Station. This subdivision has been already approved, but no development is proposed at this time.

The proposed project will not increase the water supply available to NMWD. NMWD is allowed to take its maximum allowed diversion from its existing Coast Guard Wells. The District has adequate capacity from these wells to serve projected buildout in the area as described in the 2007 Marin Countywide Plan.

7.0 INITIAL STUDY CHECKLIST

This section documents the anticipated environmental effects of the proposed project using an Initial Study Checklist and providing a brief explanation supporting the findings of each checklist item.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

Agriculture Resources

Aesthetics

Air Quality

Biological Resources

Cultural Resources

Geology & Soils

Hazards & Hazardous Materials

Hydrology/Water Quality

Land Use & Planning

Mineral Resources

Population & Housing

Noise

Public Services

Recreation

Transportation & Traffic

Utilities & Service Systems

Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **could not** have a significant effect on the environment and a **Negative Declaration** will be prepared. _____

I find that although the proposed project **could** have a significant effect on the environment, there **will not** be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A **Mitigated Negative Declaration** will be prepared. x

I find that the proposed project **may** have a significant effect on the environment, and an **Environmental Impact Report** is required. _____

I find that the proposed project **may** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **Environmental Impact Report** is required, however it must analyze only the effects that remain to be addressed. _____

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards and (b) have been avoided or mitigated pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. _____

Signature

Date

Mr. Drew McIntyre, Chief Engineer
North Marin Water District

EVALUATION OF ENVIRONMENTAL IMPACTS

This Initial Study is based on CEQA's Environmental Checklist Form. Each item on the checklist is answered as either "potentially significant impact," "less than significant with mitigation incorporated," "less than significant," or "no impact" depending on the anticipated level of impact. The checklist is followed by explanatory comments corresponding to each checklist item.

A "no impact" response indicates that it is clear that the project will not have any impact. In some cases, the explanation to this response may include reference to an adopted plan or map. A "less than significant impact" response indicates that there will be some impact but that the level of impact is insufficiently substantial to be deemed significant. The text explains the rationale for this conclusion. A "less than significant impact with mitigation incorporated" response indicates that there will be a potentially significant impact, but the Initial Study determines there are adequate mitigations, which are described and have been included in the project, to reduce the level of impact to an insignificant level. Finally, a "potentially significant impact" response would indicate that the Initial Study cannot identify mitigation measures to adequately reduce the impact to a level that is less than significant. In the latter case, an EIR would be required, but no "potentially significant impacts" have been identified for this proposed project.

DISCUSSION OF ENVIRONMENTAL IMPACTS

The proposed project will have potentially significant impacts in the areas of air quality, biological resources, cultural resources, geology and soils, hazardous materials, hydrology and water quality, noise, transportation and traffic, and utilities and service systems. All potentially significant impacts identified in this Initial Study can be reduced to a level that is less than significant if mitigation measures recommended in this Initial Study are incorporated into the project.

I. Aesthetics

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Have a substantial adverse effect on a scenic vista?</i>			X	
b. <i>Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</i>			X	
c. <i>Substantially degrade the existing visual character or quality of the site and its surroundings?</i>			X	
d. <i>Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</i>				X

a. *Have a substantial adverse effect on a scenic vista?* **Less than significant impact.**

Once the construction phase is finished, project improvements would not be visible from public vantage points. The small gauging station enclosure would be screened by vegetation between Point Reyes-Petaluma Road and the creek. The well head vault would be almost flush with the ground surface. Piping would be underground, except where it attached to the underside of the Gallagher Ranch bridge. The pump control steel cabinet would be aboveground but screened for public view by roadside vegetation from Point Reyes/Petaluma Road. The project would not alter existing open space views in the area.

b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?* **Less than significant impact.**

See the discussion above under Item I(a).

c. *Substantially degrade the existing visual character or quality of the site and its surroundings?* **Less than significant impact.**

See the discussion above under Item I(a).

d. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?* **No impact.**

The project will not include lights nor improvements that generate any substantial amount of glare.

II. Agricultural Resources

<i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</i>			x	
b. <i>Conflict with existing zoning for agricultural use, or a Williamson Act contract?</i>			x	
c. <i>Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?</i>				x

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? **Less than significant impact.***

The potential well site contains soils classified as Blucher-Cole complex (2 to 5% slope). The State has mapped this area as Farmland of Statewide Importance. However, the area that would be converted to other use would be the wellhead, which would cover approximately 10 square feet. This would be considered a less than significant conversion. While NMWD would fence off an area of about 0.25 acre surrounding the new well to limit access by grazing animals, this would not be a conversion of the prime soils; since they would remain available for possible future agricultural use. Even if excluding livestock from the one-quarter acre well site is considered as "conversion," this is still such a small amount of land (about 10,000 square feet) that the impact is considered less than significant.

- b. *Conflict with existing zoning for agricultural use, or a Williamson Act contract? **Less than significant impact.***

The new well would not interfere with adjacent grazing uses. A small area surrounding the new well would be purchased and fenced off, but the loss of as much as 0.25 acre would not adversely impact grazing operations of the Gallagher Ranch. The owners of the Gallagher Ranch property filed their intention to not renew a Williamson Act contract on the property on July 1, 2005. The proposed project would not affect this non-renewal process.

- c. *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?* **No impact.**

See the discussion in the previous item. The project will not significantly affect agricultural operations in the area. If future use of the proposed Gallagher Wells in some fashion adversely affects the production of the private well on the Gallagher Ranch, the loss of water from this well will be offset by NMWD providing make-up water for the ranch.

III. Air Quality

<i>Where available, the significance criteria by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Conflict with or obstruct implementation of the applicable air quality plan?</i>		X		
b. <i>Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</i>		X		
c. <i>Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</i>		X		
d. <i>Expose sensitive receptors to substantial pollutant concentrations?</i>		X		
e. <i>Create objectionable odors affecting a substantial number of people?</i>				X

- a. *Conflict with or obstruct implementation of the applicable air quality plan?* **Less than significant with mitigation incorporated.**

Once construction of the project is completed, the project will not result in any emissions of air pollutants. Construction emissions will include emissions from gas and diesel powered equipment and small particulates (i.e., dust) generated during pipeline construction.

Heavy equipment used for well drilling, pipeline excavation and placement, well demolition, and hauling equipment and supplies could create fugitive dust and emit nitrogen oxides (NO), carbon monoxide (CO), sulfur dioxide (SO₂) hydrocarbons (HC), and particulate matter with a diameter of less than 10 microns (PM₁₀). The construction emissions and movement of soil would be short term and temporary, but could still cause adverse effects on local air quality.

The Bay Area Air Quality Management District (BAAQMD) includes construction emissions in the emission inventory that is the basis for regional air quality plans. Construction emissions are not expected to impede attainment or maintenance of air quality standards in the Bay Area.

The BAAQMD, in its CEQA Guidelines, has developed an analytical approach that obviates the need to quantitatively estimate those emissions. Instead, BAAQMD has identified a set of feasible PM₁₀ control measures for construction activities. The project includes those controls as Mitigation Measure AQ-1 described below, to reduce the effects of construction activities.

Mitigation Measure AQ-1

In accordance with the BAAQMD CEQA Guidelines (BAAQMD, 1999), the project shall implement the following actions (that are pertinent to this project) to control dust from escaping from the site:

- Water all active construction areas at least twice daily;
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 miles per hour (mph) in construction areas;
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph;
- Minimize idling time; and
- Maintain properly tuned equipment.

In addition to the measures identified above, construction activities are also required to comply with all applicable BAAQMD rules and regulations, specifically Rule 8-15 regarding asphalt paving and Regulation 6 regarding particulate matter and visible emissions.

Mitigation Monitoring and Reporting

The mitigation measures shall be implemented throughout the construction phase. NMWD shall include the requirements in the construction contract. The contractor shall be responsible for implementation.

Impact Significance After Mitigation

Implementation of these standard dust control measures will reduce dust to levels that the BAAQMD recognizes as being acceptable. The impact would be reduced to a level that is less than significant.

- b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?* **Less than significant with mitigation incorporated.**

As noted above, the project will include the BAAQMD-required control measures so that the project is not expected to violate any air quality standard.

Construction of the project will require the use of energy that will result in the emission of greenhouse gases (GHG) to the environment that would adversely affect the earth's climate and aggravate global climate change (GCC). The project itself is too small to have a significant impact on GCC. Though the project itself would not measurably affect GCC, it is an increment, albeit a very small one, in the cumulative development of the area and statewide that would adversely affect GCC. The State has adopted a target of reducing GHG emissions to 1990 levels by 2020, and the County has adopted a target of reducing the GHG emissions in the County by 15% by 2015. The Gallagher Wells site would require the use of a 15-horsepower pump to pump water to the treatment facility. However, when this pump is in use, the existing pump at the Coast Guard Wells site would not be in use. So, there would not be an increase in electrical demand. The project's contribution to GCC would be limited to emissions from heavy equipment used when installing the well, pipeline, and gauging station and demolishing the Downey Well. This small amount of GHG emissions would be further offset by the fact that developing this alternate well allows the National Park Service to implement its planned Olema Marsh restoration, which will allow full implementation of the Giacomini Wetland Restoration Project (see further discussion of this beneficial impact of the project under Checklist Item IV(a) below. This restoration would have substantial benefits as described in the EIS/EIR prepared for that project. Benefits would include establishing more vegetation and woody vegetation, which would sequester carbon. The project's GHG emissions would be limited to the construction phase and would not be a significant increment of the cumulative impact on GCC. In fact, the restoration made possible by the project might result in sufficient carbon sequestration to at least offset these short-term emissions.

- c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?* **Less than significant with mitigation incorporated.**

As noted above, the project will include the BAAQMD-required control measures so that the project is not expected to contribute a substantial amount of any criteria pollutant.

- d. *Expose sensitive receptors to substantial pollutant concentrations?* **Less than significant with mitigation incorporated.**

There are no residences near the gauging station or the Downey well site. There are no residences located along the section of Point Reyes-Petaluma Road where the new pipeline would be constructed. The residence at the Gallagher Ranch is 400 to 800 feet from where the new well would be drilled (depending on the final well location). As noted above, the project will include the BAAQMD-required control measures so that the project is not expected to contribute a substantial amount of any criteria pollutant. It is not expected that even during the relatively brief construction phase that the project would expose nearby residents or other sensitive receptors to substantial pollution concentrations.

- e. *Create objectionable odors affecting a substantial number of people?* **No impact.**

The project would not have the potential to generate objectionable odors.

IV. Biological Resources

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?</i>		X		
b. <i>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?</i>		X		
c. <i>Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</i>		X		
d. <i>Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</i>			X	
e. <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i>				X
f. <i>Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>				X

- a. *Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? Less than significant with mitigation incorporated.*

Lagunitas Creek originates on the north slope of Mt. Tamalpais and flows in a northwesterly direction for 25 miles to where it discharges in Tomales Bay. It is an important stream that supports approximately 10% of the remaining coho salmon run in Northern California. Marin Municipal Water District (MMWD) maintains four dams in the upper part of the watershed as well as Nicasio Reservoir on a tributary of Lagunitas Creek with the water behind these dams supplying much of the potable water demand of Southern Marin County. Preservation and restoration of this stream has been a major focus of environmental groups and governmental agencies since at least the 1980s.

In assessing the impacts of the proposed change in diversion point to add the Gallagher Wells and the new pumping from the Gallagher Wells on biological resources as well as hydrologic resources, the analysis in this Initial Study focuses on the adverse changes to the environment between the new point of diversion at the Gallagher Wells site and the existing points of diversion at the Coast Guard Wells. The State has previously accepted potential impacts that might occur from NMWD's diversion of Lagunitas Creek water when approving NMWD's existing Water Right License and its two Water Right Permits and determined that the impacts have been appropriately mitigated when establishing the conditions for the license and the two permits. The license and permits allow diversion from the Downey Well site. Therefore, the State has approved NMWD to divert all its water rights from that point, though historically the District has only used the Downey Well for limited times and on a periodic basis. To ensure a worst case assessment, this Initial Study assesses impacts to biological resources between Gallagher Wells and the Coast Guard Wells.

Lagunitas Creek from the Gallagher Wells site to the Coast Guard Wells supports several special status species, including:

- southwestern river otter (*Lontra canadensis sonorae* – a California Species of Concern)
- northwestern pond turtle (*Clemmys marmorata marmorata* – a California Species of Concern)
- California freshwater shrimp (*Syncaris pacifica* - federally endangered species)
- California red-legged frog (*Rana aurora draytonii* - federally threatened species and a California Species of Concern)
- Central California coast coho salmon (*Oncorhynchus kisutch* - federally endangered species)
- Central Coast steelhead trout (*Oncorhynchus mykiss irideus* - federally threatened species)
- Southern Oregon/California coastal chinook salmon (*Oncorhynchus tshawytscha* - federally threatened species)

According to the EIS/EIR prepared for the Giacomini Wetland Restoration Project, the riparian corridor along the creek likely supports a number of other special status species, including sharp-shinned hawk (*Accipiter striatus* – a California Species of Concern), Cooper's hawk (*Accipiter cooperi* – a California Species of Concern), yellow warbler (*Dendroica petechia brewsteri* – a California Species of Concern), willow flycatcher (*Empidonax traillii brewsteri* – nesting sites are State Endangered), yellow-breasted chat (*Icteria virens* – a California Species of Concern), and Least Bell's vireo (*Vireo bellii pusillus* – federally and state endangered species).²

Lagunitas Creek is designated as Critical Habitat for central Coast Coho Salmon (federally endangered) and Central Coast Steelhead Trout (*Oncorhynchus mykiss*) (federally threatened)

The reach from the Gallagher Wells site to the Coast Guard Well site is not optimal habitat for salmonid spawning nor winter rearing due to the low slope and high incidence of sand and fine particle deposition.³ However, occasional spawning could occur in this stretch.

The existing and new Gallagher Wells will pump water from surrounding gravels and indirectly from Lagunitas Creek through the permeable gravel strata in which the wells are located and which is contiguous to the streambed. This pumping would occur at the times that NMWD cannot use the Coast Guard Wells due to flooding or the potential risk of salt-water intrusion. Because this pumping will draw from subsurface water storage which is replenished by the stream surface flow (and to a lesser extent by local occurring infiltration of surface water) over a wide area, it is possible that pumping could reduce subsurface storage to the degree that surface flows would be affected. This would likely occur during the dry season when surface flows are already low. A reduction in the flow of Lagunitas Creek could have a significant impact on aquatic wildlife and fish in the stream between the Gallagher Wells site and the Coast Guard Wells site. There would be no impact downstream of the Coast Guard Wells site since NMWD currently pumps the same amount of water from wells at this site as it proposes to pump from the Gallagher Wells site. Therefore, as a worst case, impacts to streamflow would be limited to the approximately 1.7 mile-section of Lagunitas Creek between the two well sites. Much of this section of the creek is within the GGNRA.

The State has established minimum instream flows needed to support fish and wildlife in Lagunitas Creek. NMWD is prohibited from diverting water from Lagunitas Creek when:

- From May 1 through June 15 of any year wetter than a "dry year" (which is defined as any year in which total precipitation that occurs from the previous October 1 through April 1 does not exceed 28 inches as measured at MMWD's Kent Lake Precipitation Gauge), whenever there is less than 12 cfs in the creek as measured at the USGS Park Gauge (located in Samuel P. Taylor State Park);

² Data on special status species were taken from the *Draft Giacomini Wetland Restoration Project EIS/EIR*, November 2006.

³ J. Nelson and W. Wilson, 1993, citing studies done by B. Hecht, D. Kelley, and Entrix, Inc.

- From May 1 through June 15 of any dry year whenever there is less than 10 cfs in the creek as measured at the USGS Park Gauge;
- From June 16 through November 1 of any year wetter than a dry year whenever there is less than 8 cfs in the creek as measured at the USGS Park Gauge; and
- From June 16 through November 1 of any dry year whenever there is less than 6 cfs in the creek as measured at the USGS Park Gauge.

Water License 4324B requires NMWD to file a Dry Year Water Shortage Report following each dry year. That report must describe flow conditions in the creek as compared at the Park Gauge and the Gallagher Gauge and all NMWD diversions. A public workshop to receive public comment is required prior to adoption of the final report.

Under Water Right Order 95-17 MMWD is required to release water from Kent Lake to meet minimum flows at the USGS Park Gauge. These minimum flow requirements are the same as listed above. Some additional streamflow enters Lagunitas Creek downstream of the USGS Park Gauge, notably from Devil's Gulch, Cheda Creek, and Nicasio Creek, so streamflows past the Gallagher Wells site are higher than the flows required at the USGS Park Gauge. On April 21, 2008, the flows at the Park Gauge were about 16 cfs while they were about 18 cfs at the Gallagher Gauge. MMWD reports that their monitoring of fish populations indicates that their summer water releases have been beneficial for juvenile salmonids.

These same minimum flows would be required in the section between the Gallagher Wells and the Coast Guard Wells to ensure that pumping from the Gallagher Wells does not reduce the minimum required flows to a level that adversely affects fish and aquatic wildlife. Unless flows are maintained at these required levels, there could be an increase in water temperature and a loss of habitat, and this would be a potentially significant impact on biological resources. Recognizing this potential impact, NMWD proposes to relocate the existing gauging station downstream of the Gallagher Wells site. By monitoring the relocated Gallagher Gauge, NMWD will be able to tell whether pumping affects the streamflow and whether the minimum required flows are sustained. If the minimum flows are not maintained, then NMWD will request (as part of its Intertie Agreement) that MMWD release sufficient water to Lagunitas Creek to reestablish at least the minimum flows.

Alternatively, after reviewing the streamflow monitoring, the California Department of Fish and Game may conclude that the reduction in streamflow below the Gallagher Wells is so small that it does not significantly reduce habitat available to fish, and that additional releases from Kent Lake are not warranted, or at least not warranted at certain times of the year.

MMWD states that it takes about 12 hours for water released from Peter's Dam at Kent Lake to reach the Gallagher Wells site.⁴ Therefore, there could be a portion of a day

⁴ Dana Roxon, MMWD, personal communication, 4/25/08.

when flows might be reduced below the Gallagher Wells diversion before the make-up water reaches the site. If this flow reduction occurs at all, it would not be expected to significantly affect water temperature. There could be small decrease in habitat available (due to areas that are shallowly inundated being dewatered to have insufficient depth to support resident fish) for that portion of the day until the make-up water arrived.

Any reduction in streamflow between Gallagher Wells and the Coast Guard Wells would occur for about 12 hours after the start of any diversion period. These diversions would occur infrequently. The reduction in habitat, if any, would be minimal. This impact could be further reduced by monitoring the effects that diversion from Gallagher Wells has on streamflow during different times of the year and dry years compared to non dry years. Based on this monitoring plus predicting periods of high tides or when saltwater intrusion could be expected, NMWD can request that MMWD release water before the diversion begins to allow time for the make-up water to reach the Gallagher Wells site.

Downey Well

An excavator will be driven to the edge of the streambank (no equipment will enter the stream channel). There is an existing access road to the well site. NMWD annually uses this road to conduct maintenance of the well. To get near the well head, NMWD places 3-foot concrete blocks over the portion of this road nearest the streambank to allow access by heavy equipment. The concrete blocks are removed each year following completion of well maintenance. This same procedure would be used to allow access by the excavator, though because the excavator has a longer reach than the equipment used to maintain the well, fewer concrete blocks would need to be installed for well removal.

The entire 12-inch well casing will be filled with bentonite (clay) chips. The existing corrugated metal protection around the wellhead would be removed. Using a hoe ram attachment, the concrete surrounding the well head will be broken into 3-5 large pieces. Using a clam shell attachment to the excavator, the pieces of concrete will be removed from the stream bed. The well pipe will be cut off to be below the water level (about 2-4 feet would be cut off) and removed.

Because the wellhead is in the stream, it will be necessary to dewater the area immediately surrounding the wellhead. A final plan for well removal has not been completed. Discussions with a contractor contacted by NMWD indicate that the well will be isolated by installing of sandbags around the wellhead and pumping the water within the sandbags back to Lagunitas Creek. Once the area within the sandbags is dewatered, the wellhead and top 2 to 4 feet of pipe will be removed and the remaining pipe filled with gravel. The sandbags would then be removed.⁵

The disturbance of the area immediately surrounding the wellhead could result in some downstream siltation once the creek is returned to its normal course, but the amount of siltation would be expected to be insubstantial. Nevertheless, any increase in siltation of Lagunitas Creek due to well demolition would be a potentially significant impact. See

⁵ Mike Clementino, Maggiora Ghillotti, personal communication, 4/19/08.

the discussion under Checklist Item VIII(f) for a more detailed discussion of how well demolition might adversely affect groundwater quality, and the mitigation for that impact. That mitigation (Mitigation HWQ-1) also applies to the potential siltation impact discussed above.

Dedication of Water Rights

The proposed dedication of 212.7 acre feet (0.699 cfs) of Lagunitas Creek water that the District can currently divert to instream uses for the benefit of plants, fish, and wildlife using the creek is a beneficial impact of the project. This component of the project would not require any mitigation.

Other Beneficial Impacts

The project would reduce the need to pump at the Coast Guard Wells during high tides or other conditions where pumping could cause salt-water intrusion and contamination of the aquifer. The project would reduce the need for increased off-tide pumping (which is currently done to compensate for the times when high tides prohibit pumping). This would benefit fish downstream of the Coast Guard Wells by keeping more water in the stream. Finally, this additional diversion point removes the potential impact of increased periods of salt-water intrusion on NMWD's water supply. As such, NMWD would then have implemented one of the alternatives agreed to by NMWD and the National Park Service. This would permit the National Park Service to implement its planned Olema Marsh restoration, which will allow full implementation of the Giacomini Wetland Restoration Project. This restoration would have substantial benefits as described in the EIS/EIR prepared for that project.

Summary

The principal potential adverse impacts would be a short-term reduction of aquatic habitat for fish and aquatic wildlife in the approximately 1.8-mile reach of Lagunitas Creek between the Gallagher Wells site and the Coast Guard Wells site as a result of reduced streamflow, particularly during the summer months of dry years. However, this impact would be reduced by NMWD's proposed plan of additional releases of water to the creek from Kent Lake to ensure that the minimum required flows are maintained. The program of stream monitoring and water releases must be finalized and approved by the California Department of Fish and Game and the State Water Resources Control Board.

There are also potentially significant impacts resulting from demolition of the Downey Well. There are beneficial impacts resulting from dedication of water under one of the two Water Right Permits to instream uses.

Mitigation Measure BR-1

NMWD shall not cause substantial damage to the streambed or streambanks when conducting work within the stream channel. To meet this standard, NMWD shall obtain a Streambed Alteration Agreement (SAA) from the California Department of Fish and

Game to address all components of removing the Downey Well (including dewatering methods) and for installing piping for the relocated gauging station. NMWD shall abide by all conditions set forth in the SAA.

Mitigation Monitoring and Reporting

The conditions set forth in the SAA will be implemented whenever warranted throughout the construction phase. The contractor will be responsible for implementing the requirements. NMWD will ensure compliance.

Impact Significance After Mitigation

Conducting the work in the stream channel per the conditions of an approved SAA would reduce the impact to a less than significant level.

Mitigation Measure BR-2

NMWD shall not divert water from the Gallagher Wells to adversely affect fish and wildlife residing between the Gallagher Wells and the Coast Guard Wells. To meet this standard, prior to constructing any proposed project improvements, NMWD will prepare a final hydrologic design plan describing how and where streamflows will be monitored and how NMWD will maintain flow levels downstream of the Gallagher Wells site. This plan shall address at least the following:

- The location and operation of the relocated gauging station;
- The party responsible for monitoring the Gallagher gauging station;
- Final arrangements with MMWD regarding water releases when necessary;
- Details of how the water release will be initiated and terminated; and
- Prediction process for initiating and terminating water releases.

This plan shall be reviewed and approved by the California Department of Fish and Game. Once approved by this agency, NMWD will apply to the State Water Resources Control Board to make the requested changes to its Water Rights License and Permit.

Mitigation Monitoring and Reporting

The hydrologic design plan will be approved prior to any construction. Monitoring and maintaining streamflows will occur throughout the time that the Gallagher Wells are in use. NMWD is responsible for implementing the mitigation and for compliance. The California Department of Fish and Game will also monitor for compliance and may alter the required conditions for releases after reviewing the monitoring of streamflow data.

Impact Significance After Mitigation

Implementing this mitigation will ensure that changing the point of diversion would not adversely affect fish and aquatic wildlife. The impact would be reduced to a less than significant level.

- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? **Less than significant with mitigation incorporated.***

Two components of the proposed project would require work within the stream channel of Lagunitas Creek. Removing the existing well head of the Downey Well will require that an excavator, working from the top of the bank, pull the existing wellhead, as was described above. No riparian vegetation would be removed to abandon the well. The relocated gauging station would be constructed on the edge of the Gallagher Ranch pasture and would not require removal of riparian or vegetation other than annual grasses. The piping that would be installed in the creek to measure the flows would not require removal of any riparian vegetation.

During the periods when water was pumped from the Gallagher Wells it is possible that the pumping could reduce the groundwater aquifer to a level where riparian vegetation would be affected. However, the riparian vegetation at the well site area is almost entirely confined to the stream channel and adjacent banks. The stream channel is bounded on the west by Petaluma–Point Reyes Road and on the east by the pastureland on Gallagher Ranch. This riparian zone would be watered by the streamflow and underflow of the creek, and this streamflow and underflow is replenished by flows from upstream. The surface water flows will be maintained at the levels required by Water Right Order 95-17 and, if necessary, by NMWD requesting MMWD to release water to maintain the required minimum flows. These surface flows recharge the stream underflow so that underflow should continue to be available to provide necessary water for riparian vegetation in the area near the well site. Mitigation Measure BR-2 would apply to this impact. Given this mitigation, it is not expected that periodic pumping from the Gallagher Wells would adversely affect riparian vegetation between the Gallagher Wells site and the Coast Guard Wells site.

The project would have substantial benefits for Lagunitas Creek habitat, including: 1) reducing the potential salt-water contamination of the aquifer beneath the creek up to the Coast Guard Wells diversion point and reducing peak diversions from the creek during off-tide pumping episodes; 2) allowing the National Park Service to implement its planned Olema Marsh restoration project that would enhance wetland habitat; and 3) providing water under Water Right Permit 19724 for instream uses that would benefit fish and riparian habitat. These benefits are substantial and would outweigh what are expected to be minimal, if any, impacts on riparian habitat between the Gallagher Wells site and the Downey Well site or the Coast Guard Wells site.

- c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? **Less than significant with mitigation incorporated.***

The only wetlands that would be potentially affected are the streambed of Lagunitas Creek. Mitigation measures recommended for Checklist Item IV(a) apply to this impact. As described in the discussion of Checklist Items IV(a and b) above, the project would not adversely affect the streambed habitat. The project would benefit wetland habitat by allowing the National Park Service to implement its planned Olema Marsh restoration, which will allow full implementation of the beneficial Giacomini Wetland Restoration Project.

- d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?* **Less than significant impact.**

The project components would not cause any barrier to animal or fish movement or migration. Potential impacts to streamflows needed for fish and aquatic wildlife were discussed above under Checklist Item IV(a), and the mitigations recommended under that Checklist Item also apply to this impact.

- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?* **No impact.**

The project would not require cutting trees or removing other sensitive plants, and it would not conflict with local policies or ordinances protecting biological resources.

- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?* **No impact.**

The project construction activities would not conflict with any Habitat Conservation Plans, Natural Conservation Community Plans, or any approved local, regional, or State habitat conservation plans. The proposed dedication of certain water rights for instream flows for the protection, preservation, restoration and recovery of aquatic organisms, including but not limited to coho salmon and steelhead trout, is consistent with the Recovery Planning measures to be developed under the Memorandum of Understanding Among National Marine Fishery Service, California Department of Fish and Game, Army Corps of Engineers, Fish Net4C, the Counties of Mendocino, Sonoma, Marin, San Mateo, Santa Cruz and Monterey, and the County of Humboldt.

V. Cultural Resources

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</i>		x		
b. <i>Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</i>		x		
c. <i>Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>				x
d. <i>Disturb any human remains, including those interred outside of formal cemeteries?</i>		x		

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?* **Less than significant with mitigation incorporated.**

A Cultural Resources Survey was conducted for the project and is included in Appendix A of this Initial Study. That survey found no cultural resources in the area that would be affected by project construction. However, there is always the chance that buried archaeological resources are present and could be discovered while constructing the project. These resources could be damaged by project construction, and that would be a potentially significant impact.

Mitigation Measure CR-1

- If cultural resources are encountered during project construction, avoid altering the materials and their context until a cultural resources consultant has evaluated the situation.
- If applicable, a qualified archaeologist shall monitor subsequent excavations and spoils in the vicinity of the find for additional archaeological resources.
- If the archaeologist determines the discoveries are of importance, the resources shall be properly recovered and curated. The archaeologist shall prepare a summary outlining the methods followed and summarizing the results of the mitigation program. The report shall outline the methods followed, list and describe the resources recovered, map their exact locations and depths, and include other pertinent information. Identified cultural resources shall be recorded on DPR 523(A-J) historic recordation forms. NMWD shall submit the report to the Northwest Information Center and the California State Historic Preservation Officer.

Mitigation Monitoring and Reporting

The mitigation will be implemented whenever warranted throughout the construction phase. The contractor will be responsible for determining the presence of the initial cultural resource find. NMWD will be responsible for engaging the cultural resource specialist. The cultural resource specialist shall be responsible for properly reporting and recording the find(s).

Impact Significance After Mitigation

Assessing and curating any archaeological resources found during construction per Mitigation Measure CR-1 will reduce the impacts to potential archaeological resources to a less than significant level.

- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?* **Less than significant with mitigation incorporated.**

As described above, it is not expected that archaeological resources occur on the project site. However, it is always possible that archaeological or historical resources could be unearthed during project construction. Damaging such resources would constitute a significant adverse impact. Mitigation Measure CR-1 applies also to this impact, and this mitigation measure would reduce the impact to a less than significant level.

- c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature/?* **No impact.**

There are no known paleontological resources in the project site area, and it is not expected that project construction would affect such resources.

- d. *Disturb any human remains, including those interred outside of formal cemeteries?* **Less than significant with mitigation incorporated.**

See the discussion under Impact V(a). While there is no reason to suspect the presence of human remains on the project site, it is possible that currently unknown remains may occur.

Mitigation Measure CR-2

This mitigation incorporates the requirement established in Mitigation Measure CR-1 and adds the requirements that in the event that human remains are encountered, the contractor shall stop work in the area and NMWD shall contact the Marin County Coroner in accordance with Section 7050.5 of the State Health and Safety Code.

Mitigation Monitoring and Reporting

The mitigation will be implemented whenever warranted throughout the construction phase. The contractor will be responsible for determining the presence of human remains. NMWD will be responsible for contacting the County Coroner.

Impact Significance After Mitigation

The recommended mitigation will ensure that any unknown human remains found on the site will be accorded appropriate reburial or disposition. The impact will be reduced to a less than significant level.

VI. Geology and Soils

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</i>		x		
i. <i>Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</i>				
ii. <i>Strong seismic ground shaking?</i>				
iii. <i>Seismic-related ground failure, including liquefaction?</i>				
iv. <i>Landslides?</i>				
b. <i>Result in substantial soil erosion or the loss of topsoil?</i>		x		
c. <i>Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</i>		x		
d. <i>Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</i>		x		
e. <i>Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal systems where sewers are not available for the disposal of waste water?</i>				x

- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
- i. *Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. **Less than significant impact.***

- ii. *Strong seismic ground shaking?* **Less than significant with mitigation incorporated.**
- iii. *Seismic-related ground failure, including liquefaction?* **Less than significant with mitigation incorporated.**
- iv. *Landslides?* **Less than significant with mitigation incorporated.**

A geotechnical investigation of the proposed pipeline was conducted for NMWD by Geomatrix. Their complete report (*Phase I Geologic/Geotechnical Study for the Gallagher Well Pipeline, Point Reyes Station*) is included in Appendix B of this Initial Study. The following discussion under this criterion and the other criteria under Geology and Soils summarizes the more detailed discussion in the appended geotechnical study. The reader who requires a more thorough understanding of the geological setting and project impacts is directed to that study.

Geomatrix found that site conditions would pose a less than significant impact as regards surface rupture and landslides. Because the project site is within one to two miles of the San Andreas Fault, strong ground shaking can be expected from earthquakes on that fault. Such ground shaking could lead to liquefaction; lateral spreading, and ground failure, and this would be a potentially significant impact.

It is possible that a major earthquake could damage the well or cause liquefiable soils to clog the well. Finally, the gauging station could be damaged during an earthquake.

Mitigation Measure GS-1

The project shall be constructed to withstand the maximum probable earthquake and to withstand other geologic and soil constraints or hazards, including unstable slopes, differential compaction, liquefaction, and lateral spreading, and it shall avoid creating additional instabilities in areas where slopes may already be unstable. Prior to final design, a design-level geotechnical investigation and report shall be prepared by a qualified geotechnical consultant to specifically identify the extent of geologic constraints and slope instabilities along the pipeline route. The geotechnical investigation shall include site-specific evaluation of the slope stability subsurface conditions, through drilling, logging and sampling of representative borings along the collection system route. This design level investigation and report shall also identify expansive soils and seismic hazards from landsliding, liquefaction, and dynamic densification. Specific measures to be employed to reduce the potential for damaging slope instabilities and failures include design, construction and monitoring measures such as:

- Re-routing of the pipeline to avoid unstable areas;
- Construction of retaining walls and structures in areas of slope and bank instabilities that threaten the stability of the pipeline routes;
- De-watering of areas of slope instabilities to reduce potential for failure;

- Excavation and reconstruction of areas of slope instability, including the installation of subsurface drainage to reduce the potential for future failure;
- Incorporation of isolation (i.e., shutoff) valves at areas of potential problems; and
- Installation of flexible piping/couplings in areas of known instabilities.

The project shall be constructed consistent with the criteria as specified in the design recommendations set forth in the geotechnical report.

The project shall reduce the potential for damage to the collection/transmission line due to liquefaction and/or dynamic densification during a strong earthquake. The required design-level geotechnical investigation and report shall identify specific areas with liquefiable soils and determine appropriate specific design and construction measures to mitigate the potential hazard. The geotechnical investigation shall include drilling, logging, and sampling in areas of moderate and deep alluvial deposits to evaluate the potential for liquefaction, dynamic densification, lateral spreading and lurch cracking.

Mitigation Monitoring and Reporting

The recommended design study will be prepared during final design and recommendations in that study included in the final construction drawings for the project. A qualified geotechnical expert shall review the plans and specifications to ensure compliance. A qualified geotechnical expert shall observe and test site trenching, compaction of fill material, and slide repair to confirm that subsurface conditions are as expected and to adjust elements of the design, if warranted. The contractor will be responsible for implementing the actions. NMWD will determine final compliance.

Impact Significance After Mitigation

It is expected that compliance with the final design factors would allow the pipeline, well, and gauging station to withstand expected seismic activity. The impact would be reduced to a less than significant level.

- b. *Result in substantial soil erosion or the loss of topsoil?* **Less than significant with mitigation incorporated.**

Soil erosion can cause a variety of environmental impacts. Eroded soil contains nitrogen, phosphorus, and other nutrients. When carried into water bodies, these nutrients can trigger algal blooms that reduce water clarity, deplete oxygen, and create odors. Excessive deposition of sediments in streams may blanket fauna. The increased turbidity from the erosion may also reduce photosynthesis that produces food supply and natural aquatic habitats. Eroded soil could also be deposited in local drainageways, possibly interfering with the natural flow of storm waters, causing flooding where it would not otherwise occur, or accelerating channel erosion.

The pipeline would be completed in the Point Reyes-Petaluma Road right-of-way in areas with relatively level terrain, but in reasonably close proximity to Lagunitas Creek. The trenches for the pipeline would be excavated and the excavated dirt trucked away. The trench would be backfilled with imported aggregate, re-paved, and otherwise restored to match original conditions to avoid or minimize the potential for soil erosion to occur. The potential for erosion is relatively small, but considered potentially significant.

Excess material from the well drilling would be hauled away and would not be a significant source of erodible material. Installation of the pipes for the gauging station would require minimal work in the stream channel and would not include trenching. This project component would not be expected to cause erosion.

Mitigation Measure GS-2

The project shall avoid causing soil erosion. As a condition of County approval of the encroachment permit and approval for well closure, NMWD shall prepare and obtain County approval of an Erosion and Sediment Control Plan, including measures to minimize the impacts from erosion and sedimentation during construction of the pipeline and closure of the Downey Well. Plans for work within the County right-of-way (ROW) shall conform to all applicable County standards for control of erosion and sedimentation. The Erosion and Sediment Control Plan shall include application of erosion control measures including, but not limited to, the following:

- Require site construction best management practices, including restricting trenching and well demolition to the dry season, winterization, traffic control, and dust control; and
- Protect receiving drainage channels from sedimentation and retain sediment in the project area by using silt fencing, fiber roll sediment barriers, diversion dikes and swales, sediment basins, and sediment traps.

Mitigation Monitoring and Reporting

NMWD shall include these conditions in the construction contract. The contractor shall be responsible for compliance with these conditions. NMWD shall be responsible for determining final compliance.

Impact Significance After Mitigation

Implementation of these standard mitigation measures would reduce the chance of soil erosion to a less than significant level.

- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?* **Less than significant with mitigation incorporated.**

The Geomatrix report identified several geologic and soil constraints, including:

- Potential slope failure hazards due to Lagunitas Creek impinging on the fillslope that contains portions of Point Reyes-Petaluma Road;
- Potential lateral spreading could occur during a seismic event;
- A potentially unstable slope above Point Reyes-Petaluma Road approximately 500 feet south of the Gallagher Ranch bridge;
- Potentially unstable slopes where the road crosses alluvium and colluvium-filled tributary valleys; and
- Differential compaction in the fills beneath Point Reyes-Petaluma Road.

These are all significant constraints. Unless the pipeline is properly designed and constructed, these constraints could cause pipeline rupture or damage, and that would be a potentially significant impact. This potential impact is addressed by Mitigation Measure GS-1, which would reduce the impact to a less than significant level.

- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1974), creating substantial risks to life or property? **Less than significant with mitigation incorporated.***

There is potential of expansive soils on the pipeline route. The required geotechnical report will make a final determination of the presence of such soils and design the project accordingly.

Mitigation Measure GS-3

The required design-level geotechnical investigation and report shall identify potential areas of expansive soils and appropriate construction specifications. At a minimum, the following measures for pipeline construction shall be included:

- Trenches shall be backfilled with imported non-expansive fill soils beneath and around pipelines;
- Native soil backfill shall be confined to zones a minimum of one foot above the tops of pipes in non-paved areas; and
- Pavement areas shall be backfilled with an appropriate non-expansive pavement section.

If expansive clay soils occur in the construction areas, the required geotechnical report shall develop appropriate design and construction specifications. These would include, for example, over-excavation of expansive soils and replacement with non-expansive engineered fill. The geotechnical investigation shall include the drilling, logging and sampling of boreholes and laboratory testing of physical properties of soil.

Mitigation Monitoring and Reporting

The recommended design study will be prepared during final design and recommendations in that study included in the final construction drawings for the project. A qualified geotechnical expert shall review the plans and specifications to ensure compliance. The contractor will be responsible for implementing the actions. NMWD will determine compliance.

Impact Significance After Mitigation

It is expected that compliance with the final design factors would allow the pipeline, well, and gauging station to withstand expected seismic activity. The impact would be reduced to a less than significant level.

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative water disposal systems where sewers are not available for the disposal of waste water?*
No impact.

The project does not require construction of waste disposal systems.

VII. Hazards and Hazardous Materials

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</i>		x		
b. <i>Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</i>			x	
c. <i>Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i>				x
d. <i>Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</i>				x
e. <i>For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project result in a safety hazard for people residing or working in the project area.</i>				x
f. <i>For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</i>				x
g. <i>Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i>		x		
h. <i>Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</i>				x

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **Less than significant with mitigation incorporated.***

Construction of project facilities would involve well drilling, pipeline trenching, and removal of an existing wellhead. Trenching excavations would typically range in depth from about 3 to 5 feet. Although there are no known hazardous waste sites in locations planned for excavation work, there is always the possibility that such wastes might be discovered during trenching. If hazardous materials are encountered and exposed during construction, this could pose a public health or safety threat to workers and/or residents, or create the possibility of discharge and water quality impacts on Lagunitas Creek and Tomales Bay. This is a potentially significant impact.

Mitigation Measure H-1

The project construction documents shall include provisions that alert the contractor to the possibility of encountering buried hazardous materials during excavation work and require that, if such materials are encountered, the work in that area shall cease and immediate notification be given to the project engineer/inspector(s) and appropriate regulatory authorities.

Mitigation Monitoring and Reporting

NMWD shall include these conditions in the construction contract. The contractor shall be responsible for compliance with these conditions. NMWD shall be responsible for determining final compliance.

Impact Significance After Mitigation

Implementation of the recommended mitigation measures above would reduce the potential impacts associated with the uncovering of buried hazardous materials to a less than significant level.

- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? **Less than significant impact.***

The project includes construction of a well, pipeline, and gauging station and does not propose any transport, use, or disposal of hazardous materials. No hazardous materials will be stored on the site. During construction of the project, construction vehicles will use gasoline and diesel. These activities would be typical of any construction project and would not create any unusual hazardous conditions.

- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? **No impact.***

The project includes construction of a well, pipeline, and gauging station and does not propose any transport, use, or disposal of hazardous materials. No hazardous materials will be stored on the site, and there would be no potential for exposure of hazardous materials at nearby schools. In addition, the site is not within one-quarter mile of a school.

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? **No impact.***

There are no known hazardous material sites on or near the project site.

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project result in a safety hazard for people residing or working in the project area. **No impact.***

The site is not within the area of any airport land use plan. The County Airport at Gness Field is the only civilian airport facility in the county. Gness Field is located over thirteen miles to the east of the project site. Use of Gness Field would not pose a hazard to workers constructing the project.

- f. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? **No impact.***

The project is not within the vicinity of a private airstrip.

- g. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? **Less than significant with mitigation incorporated.***

Approximately 4,900 lineal feet of pipeline would be installed in the Point Reyes-Petaluma Road right-of-way. It is expected that it would take about two months to install this pipeline. Because the work would be done within or immediately adjacent to the road, construction would require lane closure(s). These lane closures could interfere with emergency response. See the more detailed discussion of lane closures under Checklist Item XV(a). Mitigation Measure T-1 applies to this impact and would reduce it to a less than significant level.

- h. *Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? **No impact.***

The project will not include the construction of residences or a business where people will work.

VIII. Hydrology and Water Quality

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Violate any water quality standards or waste discharge requirements?</i>		x		
b. <i>Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</i>			x	
c. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</i>		x		
d. <i>Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</i>				x
e. <i>Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</i>				x
f. <i>Otherwise substantially degrade water quality?</i>		x		
g. <i>Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</i>				x
h. <i>Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</i>			x	
i. <i>Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</i>				x
j. <i>Inundation by seiche, tsunami, or mudflow?</i>				x

- a. Violate any water quality standards or waste discharge requirements? **Less than significant with mitigation incorporated.**

Water quality within the area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB) which sets forth water quality objectives for the area in the *San Francisco Bay Region Water Quality Control Plan* (Basin Plan). The RWQCB is the local agency that issues wastewater discharge permits under the National Pollutant Discharge Elimination System (NPDES). The RWQCB requires construction stormwater permits for projects that disturb one acre or more. The project would disturb less than 0.5 acre and would not need to obtain a construction stormwater permit.

As discussed previously under Impact VI(b), the project could result in soil erosion and sedimentation of Lagunitas Creek. Mitigation Measure GS-2 will reduce soil erosion impacts to a level that is less than significant thereby reducing impacts to water quality to a less than significant level.

The project would further the Basin Plan objective of providing water for plants, fish, and wildlife by permanently dedicating 212.7 acre feet (0.699 cfs) of Lagunitas Creek water that the District can currently divert to instream uses (i.e., for the benefit of plants, fish, and wildlife using the creek). Reduction in off-tide pumping at higher rates would also benefit the Lagunitas Creek fishery by keeping more water in the stream.

- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?* **Less than significant impact.**

During the times when the Gallagher Wells are used, there would be a withdrawal of water from the local aquifer or gravel basin. The only other user of the local aquifer is the Gallagher Ranch. The next nearest residential use is about one mile downstream of the well site. The existing Gallagher Well is about 150 feet from the private well serving the Gallagher Ranch. Use of the NMWD wells could deplete the groundwater in the area and adversely affect this private well. This is a potentially significant impact. However, the purchase agreement for the existing well with the owners of Gallagher Ranch provides that NMWD will provide reimbursement for the cost of added power costs for additional pumping or make-up water to a level of beneficial use prior to installation of the District's well. A similar contingency would be added to purchase of the site for the additional well. Thus, this impact would be mitigated by the purchase agreement, and no mitigation is required.

- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?* **Less than significant with mitigation incorporated.**

The project would not alter the drainage pattern of the area. The pipeline would be constructed in the road right-of-way and would not change area drainage patterns. Removal of the Downey Well would slightly change how water flows across the well site (because the 6-foot diameter metal pipe that protects the top of the well would be removed). However, this would be considered a beneficial impact since it would return streamflow conditions to a more natural state. This change would not cause erosion or siltation. The small piping used to gauge streamflows would not significantly alter streamflow past the gauging station.

Removal of the Downey Well could result in siltation. A final plan for well removal has not been completed. Discussions with a contractor contacted by NMWD indicate that the well will be isolated by installation of sandbags around the wellhead and pumping the water within the sandbags back to Lagunitas Creek. Once the area within the sandbags is dewatered, the entire 12-inch well casing would be filled with bentonite (clay) chips, and the wellhead and top 2 to 4 feet of pipe will be removed. The sandbags would then be removed. The disturbance of the area immediately surrounding the wellhead could result in some downstream siltation once the creek is returned to its normal course, but the amount of siltation would be expected to be insubstantial. Any siltation impacts or other impacts to streamflow would be mitigated by the conditions set forth in the required Streambed Alteration Agreement; see Mitigation Measure BR-1.

- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?* **No impact.**

The project would not alter the existing drainage pattern of the area as described above under Impact VIII(c). The only increase in impervious surface will be the footprint of the very small gauging station, and this would not measurably increase runoff.

- e. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?* **No impact.**

As discussed in Checklist Item VIII(d), the project would not increase impervious surface in the watershed. As such, there would be no project-generated pollution from future runoff.

- f. *Otherwise substantially degrade water quality?* **Less than significant with mitigation incorporated.**

Unless the Downey Well is carefully demolished and abandoned, there is the potential for surface water from Lagunitas Creek traveling through the abandoned well shaft and entering groundwater below the creek. This assumes that the well is tapping a groundwater aquifer that is separated by an impermeable layer from Lagunitas Creek underflow. However the well casing will be filled with bentonite (clay) chips), which should prevent surface water entering a groundwater basin and potentially contaminating that aquifer.

Other than this potential contamination impact and the potential impacts from soil erosion, as discussed previously under Impact VI(b), the project will not include features that will affect water quality. The project would benefit water quality in Lagunitas Creek by permanently dedicating 212.7 acre feet (0.699 cfs) of Lagunitas Creek water that the District can currently divert to instream uses.

Mitigation Measure HWQ-1

NMWD shall not allow pollution of a groundwater aquifer beneath the Downey Well Site. To accomplish this requirement, NMWD shall develop a final well demolition and abandonment plan under the guidance of a C57 licensed well driller. The well-driller shall examine the surface and subsurface conditions of Lagunitas Creek and the aquifer beneath the creek and identify the demolition and abandonment procedures necessary to protect water quality in the creek and the gravel basin or aquifer. The driller shall determine the need to divert the stream during demolition; the need to pump before or during construction; the choice of materials to fill the well; the need to cap the well to prevent movement of surface water to a groundwater aquifer; and any other requirements established by the County of Marin Department of Environmental Health Services.

The plan shall be reviewed and approved by the California Department of Fish and Game, California Department of Water Resources, and the Marin County Environmental Health Services Division of the Community Development Agency.

Mitigation Monitoring and Reporting

NMWD shall have the plan prepared and approved prior to obtaining the Well Abandonment Permit. The C57 well driller shall be responsible for compliance with these conditions. NMWD and Marin County Environmental Health Services Division of the Community Development Agency shall be responsible for determining final compliance.

Impact Significance After Mitigation

The mitigation measure was developed with input from the Marin County Environmental Health Services Division.⁶ Implementation of the recommended mitigation measures above would reduce the potential impacts associated with groundwater contamination to a less-than-significant level.

⁶ Scott Callow, Environmental Health Services Division, personal communication, 4/18/08.

- g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? **No impact.***

The project does not include the construction of housing.

- h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows? **Less than significant impact.***

The project would remove an existing obstacle in the stream channel (the Downey Well). The small gauging station would be elevated above the 100-year elevation. The small footprint of this gauging station would not affect flood flows, plus its size would be approximately the same as the wellhead that is being removed.

- i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? **No impact.***

The project does not include the construction of residences or businesses and would not subject people to the risk of flooding.

- j. Inundation by seiche, tsunami, or mudflow? **No impact.***

The project area would not be affected by tsunami, seiche, or substantive mudflows.

IX. Land Use and Planning

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Physically divide an established community?</i>				X
b. <i>Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</i>				X
c. <i>Conflict with any applicable habitat conservation plan or natural community conservation plan?</i>				X

- a. *Physically divide an established community?* **No impact.**

The project is distant from the community of Point Reyes Station, plus the facilities are primarily belowground. The project would not physically divide a community.

- b. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?* **No impact.**

The project site is within the Coastal Zone of Marin County. The Marin County Unit II Local Coastal Plan (LCP classifies the site as C-APZ-60 Coastal – Agricultural Production Zone, 60 acre minimum parcel size). Water facilities like wells are an allowed conditional use in this land use classification. As noted in the discussion of Agricultural Resources, the proposed well would not significantly affect agricultural production on the Gallagher Ranch or in the Coastal Zone of the County. Allowing the well would appear consistent with the LCP and the County Code. The County will need to review the project and confirm this conclusion prior to deciding whether to approve a Coastal Permit and use permit for the well.

- c. *Conflict with any applicable habitat conservation plan or natural community conservation plan?* **No impact.**

There is no adopted habitat conservation plan or natural community conservation plan for the area that would be affected by the project.

X. Mineral Resources

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?</i>				x
b. <i>Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</i>				x

- a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?* **No impact.**

There are no identified mineral resources within the project area. The project will not directly or indirectly affect any known mineral resources.

- b. *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?* **No impact.**

The *Marin Countywide Plan* does not identify a mineral resource recovery site near the project site.

XI. Noise

<i>Would the project result in:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</i>		x		
b. <i>Exposure of persons to or generation of excessive groundborne vibration of groundborne noise levels?</i>				x
c. <i>A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</i>				x
d. <i>A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</i>		x		
e. <i>For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</i>				x
f. <i>For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</i>				x

- a. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
Less than significant with mitigation incorporated.

The project will not generate noise once construction is completed. The project does not include construction of residences or places of employment. As such, it will not place people in locations where they would be exposed to excessive noise levels. Construction of the project will generate noise due to the use of heavy construction equipment. Construction of the entire project will take about 26 weeks.

The principal equipment required for pipeline construction work along the Point Reyes-Petaluma Road right-of-way is anticipated to include (a) backhoe/excavator, (b) front-end loader, (c) dump truck(s), (d) water truck, (e) hand-held mechanical compaction equipment, and (f) paving equipment. This construction work, which would install about 4,900 lineal feet of pipeline, is expected to take up to three months. Peak noise would

be expected to be in the 80 to 88 decibels (dBA) range at a distance of 50 feet from the noise source. There are no residences located along the pipeline route, so residents or other sensitive receptors would not be affected.

Demolition of the Downey Well will take 2 days. The nearest residence is several hundred feet distant. It is possible that the demolition might be audible, but the noise generated would not be substantial and would only last for portions of 2 days.

Drilling the well would require use of a well rig plus other heavy equipment. Maximum noise levels during construction are expected to be about 75 to 85 decibels (dBA) at 50 feet (these are noise levels generated by this type of heavy equipment). Noise levels decrease by about 6 dBA for each doubling of the distance between the noise source and the receptor. The residence on the Gallagher Ranch is located about 400 to 800 feet from the potential well site. Noise levels would be expected to be between 50 to 65 decibels during well drilling. This noise would only occur for a few days, nevertheless, limits on the hours of operation is an appropriate mitigation.

The *Marin Countywide Plan* specifies that “during all phases of construction, measures should be taken to minimize the exposure of neighboring properties to excessive noise levels from construction-related activity.” In addition, Marin County reserves the right to set hours for construction-related activities involving the use of machinery, power tools or hammering. The hours of construction would be determined by the type of construction, site location and noise sensitivity of nearby land uses and would be specified in the conditions of approval for the project.

Mitigation Measure N-1

Construction of the well shall be limited to the hours of 7:00 a.m. to 5:00 p.m. on weekdays. No work shall be allowed on Saturdays, Sundays, or holidays.

Mitigation Monitoring and Reporting

The construction hours will be included in the final construction specifications for the project. NMWD will periodically monitor start and stop work times to ensure compliance.

Impact Significance After Mitigation

The mitigation measure ensures that construction noise would not bother the residences near the well site outside of normal working hours nor on weekends and holidays. This would reduce the impact to a less than significant level.

- b. *Exposure of persons to or generation of excessive groundborne vibration of groundborne noise levels?* **No impact.**

Project construction is not expected to generate substantial groundborne noise or vibrations, especially since the nearest residence is 400 to 800 feet from where the well will be drilled.

- c. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?* **No impact.**

Once project construction is completed, the project will not generate noise.

- d. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?* **Less than significant with mitigation incorporated.**

As described above under Impact XI(a), project construction will generate short-term noise. However, as described under that impact, it is expected that the impact will be less than significant with the incorporation of limits on when construction can occur.

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?* **No impact.**

The project site is thirteen miles from the nearest public airport.

- f. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?* **No impact.**

The project is not near a private airstrip, and the project does not include housing or employment where people would be susceptible to noise.

XII. Population and Housing

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</i>			X	
b. <i>Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</i>				X
c. <i>Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</i>				X

- a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?* **Less than significant impact.**

NMWD has sufficient water rights and supplies from the existing Coast Guard Wells to serve the projected buildout of the West Marin Service Area, as that buildout is described in the EIR prepared for the new Marin Countywide Plan.⁷ The Gallagher Wells will be used to supply water during high tide and drought conditions where pumping of the Coast Guard Wells increases the risk of saltwater intrusion, or in flood conditions where the Coast Guard Wells are inundated. As such, the Gallagher Wells increase the reliability of the water system.

It could be argued that if this new well was not developed and the existing and new Gallagher Wells were not connected to the water system that NMWD might not be able to reliably meet water demand of existing as well as new customers, and that lacking system reliability, the County might not approve new development. However, it is speculative that NMWD would be unable to supply needed water from existing wells (perhaps conducting additional off-tide pumping and/or using additional storage to allow pumping under conditions when saltwater intrusion might occur). In addition, the existing rights and supplies, as supplemented by the Gallagher Wells, help NMWD to reliably meet the projected buildout of the service area. The wells would not provide water that would induce additional development beyond what is allowed and projected for in the Marin Countywide Plan. The Countywide Plan EIR states that water connections would increase from 776 connections in 2005 to a maximum buildout of 1,075 connections in 2030. The plan estimates that there would be the addition of as many as 292 new dwelling units. At 2.5 persons per unit, this would equal 730 additional people, or less than 30 people per year. This would not be considered substantial population growth, and it is consistent with the Countywide Plan. The project would not induce growth beyond that allowed under the Countywide Plan. The impact is less than significant.

- b. *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?* **No impact.**

The project sites do not contain housing, and the project will not require that residences be demolished or removed.

- c. *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?* **No impact.**

The project sites do not contain housing, and no people will be displaced during project construction or operation.

⁷ Chris DeGabriele, North Marin Water District, personal communication, 1/11/08.

XIII. Public Services

<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Fire protection?</i>				X
<i>Police protection?</i>				X
<i>Schools?</i>				X
<i>Parks?</i>				X
<i>Other public facilities?</i>				X

- a. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

*Fire protection? **No impact.***

The project components are not susceptible to fire. They will not require response from the Marin County Fire Department.

*Police protection? **No impact.***

Pipelines, wells, and gauging stations are not projects requiring police response. The project will not substantially increase the demand for police protection.

*Schools? **No impact.***

The project does not include the construction of housing or new employment opportunities. There will be no direct impact on schools.

*Parks? **No impact.***

The project will not require new or physically altered parks.

Other public facilities? **No impact.**

The project will not create a demand for improvements to other public facilities.

XIV. Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</i>				X
b. <i>Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</i>				X

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?* **No impact.**

The project does not include the construction of new housing nor employment opportunities. The project will not create any direct demand for recreational facilities.

- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?* **No impact.**

The project does not include recreational facilities nor require the construction or expansion of such facilities.

XV. Transportation/Traffic

<i>Would the project result in:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?)</i>		x		
b. <i>Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?</i>			x	
c. <i>Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</i>				x
d. <i>Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</i>				x
e. <i>Result in inadequate emergency access?</i>				x
f. <i>Result in inadequate parking capacity?</i>				x
g. <i>Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?</i>				x

- a. *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? **Less than significant with mitigation incorporated.***

Construction of the project would consist of four phases: (1) drilling of a new well (three weeks of work), (2) installation of the pipeline along Point Reyes-Petaluma Road (two months of work), (3) demolition of the Downey Well (two days), and 4) installation of the relocated gauging station (two days). The pipeline installation would require traffic control on Point Reyes-Petaluma Road, typically limiting vehicle passage to a single lane over a distance of about 0.1 mile during construction hours. The pipeline installation may also require traffic in both directions to stop for a short time (e.g., 5 to 10 minutes). Construction of the new well and gauging station, and demolition of the Downey Well, would not require closure of Point Reyes-Petaluma Road.

The project would generate traffic during these construction phases, including heavy trucks transporting construction equipment, pipe, and other supplies. The project would also generate trips by workers and agency overseers. It is projected that over the approximately 3-month construction period, the project would generate approximately 5 to 10 worker trips per day and 3 to 6 heavy truck trips per day. It is expected that most of these trips would be via Point Reyes-Petaluma Road connecting with other County roads to Highway 101 via Petaluma, Novato, or Sir Francis Drake Boulevard. However, aggregate or other supplies might be supplied via Nicasio Valley Road to Point Reyes-Petaluma Road.

The impact would be less than significant because the number of trips would not cause a permanent decrease in the level of service on any State highway or County road or at any intersections along those highways or roads. In addition all intersections along Point Reyes-Petaluma Road that might be affected by project construction traffic operate at LOS B or better.

As noted above, the pipeline that would connect the Gallagher Wells to the existing Downey Well pipeline would be constructed within or on the shoulder of Point Reyes-Petaluma Road. Approximately 4,900 lineal feet of pipeline would be installed along this road. It is expected that it would take two months to install this pipeline. Because the work would be done within or immediately adjacent to the road, construction would require lane closure(s), as described above. These lane closures would cause an inconvenience to local residents, workers, and recreational travelers. The closures would disrupt bicycle use of the road and could interfere with emergency response.

NMWD would be required to replace disturbed pavement in Point Reyes-Petaluma Road to the County's satisfaction. This requirement would be established in the required Encroachment Permit. This would ensure that the impact of construction-caused pavement damage was reduced to a less than significant level.

The short-term impact of lane closures would be a potentially significant impact.

Mitigation Measure T-1

NMWD shall develop and implement a traffic control plan for construction operations. A traffic control plan will be required by the County of Marin prior to construction in order to obtain approval for an encroachment permit for work within the Point Reyes-Petaluma right-of-way. The traffic control plan shall also be provided to the Marin County Office of Emergency Services and the Marin County Fire Department for review and approval. Requirements of the plan relative to minimizing impacts on emergency access and evacuation plans include the following:

- Contact information and protocol to halt work and temporarily allow through traffic in the case of an emergency; and
- Inventory and procedures for placing steel plates over trenches to allow the temporary safe passage of traffic.

Mitigation Monitoring and Reporting

The plan will be developed as part of the application for an Encroachment Permit. The plan shall be implemented by the contractor during pipeline construction. NMWD will periodically monitor to ensure compliance.

Impact Significance After Mitigation

These mitigation measures would reduce the impact from disruption or interference of an emergency plan or evacuation plan to a less-than-significant level.

- b. *Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?* **Less than significant impact.**

See the discussion under Impact XV(a) above. Construction-generated traffic will consist of an average of about 8-16 two-way trips per day for about 60 days. This would not result in any permanent change in the level of service on Point Reyes-Petaluma Road or any other public streets.

- c. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?* **No impact.**

The project is over thirteen miles from the nearest public airport and will not cause any change in air traffic patterns.

- d. *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* **No impact.**

Once construction is completed, the project would not affect local roadways or intersections. See the discussion under Checklist Item XV(a) about traffic disruptions during pipeline construction.

- e. *Result in inadequate emergency access?* **No impact.**

The project does not require emergency access, and, thus, would not affect emergency access.

- f. *Result in inadequate parking capacity?* **No impact.**

The project does not require parking.

- g. *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?* **No impact.**

The project would not conflict with any plans or policies adopted by the County of Marin to encourage alternative means of transportation such as bicycles. See the discussion under Checklist Item XV(a) about short-term traffic disruptions that would potentially affect bicycle use during pipeline construction.

XVI. Utilities and Service Systems

<i>Would the project:</i>	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</i>				X
b. <i>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</i>		X		
c. <i>Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</i>		X		
d. <i>Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</i>				X
e. <i>Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</i>				X
f. <i>Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?</i>			X	
g. <i>Comply with federal, state, and local statutes and regulations related to solid waste?</i>			X	

- a. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? **No impact.***

The project will not generate wastewater and thus not exceed wastewater treatment requirements of the Regional Water Quality Control Board.

- b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **Less than significant with mitigation incorporated.***

Water diverted from the Gallagher Wells would replace water diverted from the Coast Guard Wells during times of high tides, drought conditions, or flooding. Water would be treated at the existing NMWD treatment facility for manganese and iron removal. Expansion of the water treatment plant is not required. The specific effects of this water project are assessed and mitigated in this document, and mitigations are identified where warranted.

- c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **Less than significant with mitigation incorporated.***

There are 17 highway drainage culverts crossing Point Reyes-Petaluma Road in the section where the new pipeline would be constructed. These drainage culverts receive runoff flows from the hills and tributary streams originating in the hills on the north side of the road. The contributing watershed areas are small. The culverts range in size from 15 to 30 inches in diameter. Some of these culverts may have deteriorated and may need to be replaced during pipeline installation. Depending upon their condition and proximity to the pipeline, the culverts could be cut or crushed by excavating or compaction equipment, and this could impede drainage flow unless properly repaired. This is a potentially significant impact. The actual crossings of culverts that do not need to be replaced can be accomplished by using a steel offset or lowering the pipeline trench to clear the culvert by at least 12 inches.

Mitigation Measure U-1

The project shall avoid disturbing or impeding the flow of water in drainage culverts. Potential impacts on the flow conditions in existing road drainage culverts from the construction of the proposed pipeline along Point Reyes-Petaluma Road can be mitigated by developing specific plans for each pipeline crossing that include the following measures, as applicable:

- Locate and survey each drainage crossing for use in preparation of plans and specifications;
- Provide a protective sleeve around the pipeline where the pipeline crosses over the top of the drainage culvert;

- Provide a minimum vertical separation distance of at least 0.5 feet between the pipeline and drainage culvert or as otherwise required by the County of Marin;
- Consult with the County of Marin and develop plans that conform with all County of Marin requirements regarding pipeline placement and design in the vicinity of drainage culvert crossings;
- Provide for replacement or repair of any drainage culverts damaged as a result of project construction; and/or
- Allow for the use of horizontal directional drilling methods.

The plans and specifications shall be submitted for review and approval by the County of Marin.

Mitigation Monitoring and Reporting

Plans for each culvert crossing will be developed as part of the final design plan. Implementation will be the responsibility of the contractor. NMWD and the County of Marin will be responsible for final monitoring.

Impact Significance After Mitigation

Implementation of the above mitigation measure would reduce the potential impact on existing drainage facilities from pipeline construction to a less-than-significant level.

- d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? **No impact.***

The project is a water delivery facility. It does not increase the demand for water.

- e. *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? **No impact.***

The project does not generate wastewater and thus does not use any capacity in any wastewater treatment and disposal facility.

- f. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? **Less than significant impact.***

All excess material removed from the well and pipeline trench would be disposed of at an approved location for receiving clean fill. The small amount of waste material from demolishing the Downey Well (about one pickup load) would be transported to the

County landfill. The NMWD contractor will be required to dispose of any waste material per County and State requirements at an acceptable disposal site. The small amount of waste that might end up in a landfill would not be expected to significantly reduce the capacity of that landfill.

- g. *Comply with federal, state, and local statutes and regulations related to solid waste?*
Less than significant impact.

Excess excavated materials and any other waste will be disposed of in compliance with applicable regulations related to solid waste.

XVII. Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. <i>Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</i>		x		
b. <i>Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</i>		x		
c. <i>Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</i>		x		

- a. *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?* **Less than significant with mitigation incorporated.**

The project would not significantly affect vegetation, terrestrial wildlife, or cultural resources at any of the sites. Potential sedimentation of Lagunitas Creek can be reduced to a less than significant level by mitigation measures recommended in this report. With implementation of recommended mitigation measures, the project would not reduce streamflows in Lagunitas Creek, and therefore would not adversely affect fish or aquatic wildlife living downstream of the Gallagher Wells. The abandonment of the Downey Well would be done in a manner that would avoid groundwater contamination.

The project would have beneficial impacts on fish and other biological resources by permanently dedicating a water right to divert water to instream uses. It would further benefit biological resources by removing the constraint on the National Park Service to implement its planned Olema Marsh restoration, which will allow full implementation of the beneficial Giacomini Wetland Restoration Project. The project also protects the groundwater from salt-water intrusion in the Coast Guard Wells area by avoiding pumping at Coast Guard Wells during periods of high tide and low flows in Lagunitas Creek

Other project components that could be expected to cause some degradation of the environment include short-term air quality and noise impacts. All these impacts can be reduced to a less than significant level by implementing the mitigation measures recommended in this report. It is concluded that by implementing the mitigation measures recommended in this Initial Study, the project would not significantly degrade the environment and would have substantive beneficial impacts for biological resources.

- b. *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?* **Less than significant with mitigation incorporated.**

As described in Section 6.0 of this Initial Study, there are two projects in the Point Reyes Station area that have been approved but not constructed. One is a 5-lot subdivision and the other is reuse of a historic building in downtown Point Reyes Station. Neither of those projects would contribute any impact to the section of Lagunitas Creek or the proposed well site affected by the proposed project. The proposed project would not have any impact on the resources in Point Reyes Station that might be affected by construction of these two other projects except that they would use water provided by NMWD. However, NMWD would provide them with water whether or not the proposed project was approved and constructed. The proposed project does not contribute to any increased demand for water. There would be some potential for cumulative air quality and traffic impacts during the construction phase of the proposed project. However, the project's increment, after mitigation, would not be cumulatively considerable. Inclusion of recommended mitigations reduces the project's contribution to any possible cumulative impacts to a less than significant level.

The proposed project will not increase the water supply available to NMWD. NMWD is allowed to take its maximum allowed diversion from its existing Coast Guard Wells (in

addition to two other permitted diversion points). The District has adequate capacity from these wells to serve projected buildout in the area as described in the 2007 Marin Countywide Plan. Therefore, the project would not induce any development in the service area. Allowed development under the new Countywide Plan could occur with or without the project.

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* **Less than significant with mitigation incorporated.**

As discussed in previous sections of this Initial Study, project construction could generate air pollution and noise which could adversely affect workers and nearby residents. The mitigation measures recommended to control dust and noise would reduce these impacts to a less than significant level. The project, including recommended mitigation measures, would not have an adverse effect on human beings. The project would have the beneficial effect of ensuring water reliability during periods of high tides, flooding, and salt-water intrusion allowing NMWD to serve customers in its service area.

8.0 DETERMINATION OF SIGNIFICANT EFFECT

On the basis of this Initial Study, I find that the proposed project would not have a significant effect on the environment. A Mitigated Negative Declaration will be prepared.

Drew McIntyre
North Marin Water District

Date

9.0 BIBLIOGRAPHY AND PERSONS CONTACTED

Bibliography

ABAG

1995. *The San Francisco Bay Area, On Shaky Ground City Maps.*

Bay Area Air Quality Management District

1985. *Air Quality and Urban Development; Guidelines for Assessing Impacts of Projects and Plans.*

California EPA Division of Water Rights

2008. *Policy for Maintaining Instream Flows in Northern California Coastal Streams.*

California State Storm Water Quality Task Force

1993. *California Storm Water Best Management Practices Handbook.*

Etlinger, Eric and Andrew, Gregory

2006. *Lagunitas Creek Habitat Typing Survey 2003 Analysis.*

Marin, County of

1981. *Marin County Unit II Local Coastal Plan.*

2007. *Marin Countywide Plan.*

Marin County Community Development Agency

2008. *PROPDEV 44 - An Inventory of Proposed Development Projects in Marin County as of September 2008.* Prepared by the Community Development Agency in cooperation with the planning departments of the Cities and Towns of Marin County.

National Marine Fisheries Service

1996. *Coastal Salmon Conservation Working Guidance for Comprehensive Salmon Restoration Initiatives on the Pacific Coast.*

National Park Service

2006. *Draft EIS/EIR for Giacomini Wetland Restoration Project.*

2007. *Final EIS/EIR for Giacomini Wetland Restoration Project.*

USDA, Soil Conservation Service

1979. *Soil Survey of Marin County, California.*

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