CALIFORNIA COASTAL COMMISSION
725 FRONT STREET, SUITE 3 00
SANTA CRUZ, CA 95060
VOICE (831) 427- 4863
FAX (831) 427- 4877

W 13a

Appeal Filed:	10/04/2011
49th Day:	Waived
Staff:	J. Manna - SF
Staff Report:	8/29/2012
Hearing Date:	9/12/2012

APPEAL STAFF REPORT: SUBSTANTIAL ISSUE DETERMINATION

Appeal No.:	**A-2-SON-11-037**
Applicant:	**Bodega Bay Public Utilities District**
Appellants:	Bodega Bay Concerned Citizens
Local Government:	Sonoma County
Local Decision:	Approved with Conditions by the Sonoma County Board of Supervisors on September 27, 2011 (Coastal Development (CDP) Application Number PLP09-0057).
Location:	1677, 1681, 1685, 1705, and 1707 Bay Flat Road, Bodega Bay, Sonoma County (APNs 100-060-12, 100-060-004, 100-060-010, 100-060-015, 100-060-016).
Project Description:	Construction of a 100 foot-deep municipal water well, transmission piping, and an 80 square-foot chlorination facility.
Staff Recommendation:	No Substantial Issue.

SUMMARY OF STAFF RECOMMENDATION

On September 27, 2011, the Sonoma County Board of Supervisors approved a coastal development permit (CDP) (PLP09-0057) to construct a new approximately 100-foot-deep municipal water well, transmission piping, and an 80-square-foot chlorination facility located at 1677, 1681, 1685, 1705, and 1707 Bay Flat Road, in the community of Bodega Bay (see Exhibit 1 for the project location). The Appellants contend that the approved project is inconsistent with certified local coastal program (LCP) policies regarding environmentally sensitive habitat areas, "sanctuary preservation areas," and wetlands because 1) a portion of the proposed development would be located within 100 feet of a wetland near the connection point at Bay Flat Road; 2) monitoring required by the approved project is not adequate to address potential impacts from salinity intrusion on the riparian and marsh vegetation; 3) operation of the well and chlorination facility could have indirect and/or direct impacts on potential foraging and dispersal habitat for sensitive species on nearby parcels.

After reviewing the local record, Commission staff has concluded that the approved project does not raise a substantial issue with respect to the project's conformance with the Sonoma County LCP because the project alternative chosen has the fewest coastal resource impacts, and the impacts that remain are not significant. Specifically, the appeal contentions are addressed as follows: 1) the portion of the proposed development located within 100 feet of wetlands (transmission piping connecting to an existing water main) would be located under an existing paved road which separates the wetland area from a residential area and the LCP allows for a reduced setback in this circumstance; 2) the County's conditions of approval require pumping to be reduced and/or suspended if a biological review indicates a significant shift in plant community composition as a result of salinity intrusion; and 3) potential impacts on wetlands and other habitats have been avoided and minimized through the project siting and design as well as through construction best management practices.

As a result, staff recommends that the Commission determine that the appeal contentions do not raise a substantial LCP conformance issue, and that the Commission decline to take jurisdiction over the CDP for this project. The single motion necessary to implement this recommendation is found below.

TABLE OF CONTENTS

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission determine that Appeal Number A-2-SON-11-037 raises **no substantial issue** with respect to the grounds on which the appeal has been filed under Section 30603. I recommend a **yes** vote.*

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion would result in a finding of No Substantial Issue and adoption of the following resolution and findings. If the Commission finds No Substantial Issue, the Commission would not hear the application de novo and the local action would become final and effective. The motion passes only by an affirmative vote by a majority of the Commissioners present.

Resolution:

The Commission finds that Appeal Number A-2-SON-11-037 does not present a substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act regarding consistency with the Certified Local Coastal Plan and/or the public access and recreation policies of the Coastal Act.

II. FINDINGS AND DECLARATIONS

A. PROJECT LOCATION AND DESCRIPTION

The project as approved by the Sonoma County Board of Supervisors includes construction of a new approximately 100-foot-deep municipal water well, transmission piping, and an 80-square-foot chlorination facility. The well would be located at 1681 Bay Flat Road and the chlorination structure would be located at 1707 Bay Flat Road in the community of Bodega Bay (see Exhibit 1 for the project location). The purpose of the well would be to allow the Bodega Bay Public Utilities District (BBPUD) to be in compliance with the safe drinking water standards that require water supply to be able to match peak demands without reliance on storage, as required by the California Department of Public Health. Title 22 of the California Code of Regulations requires the water to be disinfected, and so the chlorination facility is also proposed. A new six-inch pipe would be installed along the driveway that serves the proposed well and would connect to the existing BBPUD water main at Bay Flat Road. An additional pipe would be installed from the well to the chlorination structure (see Exhibit 2 for the project plan).

The approved development is located in a residential neighborhood, zoned Rural Residential (RR), and Geologic Hazard (G) at the north end of Bodega Harbor in the community of Bodega Bay. In addition, the project site is adjacent to an area known as the Rail Ponds wetland area. The Rail Ponds wetland area, originally a coastal marsh connected to Bodega Harbor, was cut off from the shoreline by the development of Westshore Road in 1963. The Rail Ponds are now

brackish with dense marsh vegetation, and are tidally influenced by an existing connection to Bodega Harbor. The Rail Ponds are fed fresh water by groundwater inputs and salt water by the tidal flow entering through culverts under Westshore Road from Bodega Harbor. The larger area of Bodega Harbor is recognized as an important bird area and the Rail Ponds provide habitat to a number of shorebird and waterfowl species making it a known birding location. There are also smaller wetlands areas, other than the Rail Ponds, located in the vicinity of the approved project on APNs 100-060-099 and 100-060-015. The approved well and chlorination facility would be located more than 100 feet from these wetlands as noted in Exhibit 3.

B. SONOMA COUNTY CDP APPROVAL

On September 27, 2011, the Sonoma County Board of Supervisors approved CDP PLP09-0057 to allow construction a new approximately 100-foot-deep municipal water well, transmission piping, and an 80-square-foot chlorination facility. The Commission received the County's notice of final local action on October 3, 2011 (Exhibit 4). The Commission's ten-working day appeal period commenced on October 4, 2011, the next working day following the receipt of the County's notice of final local action on October 3, 2011, and ran through 5 pm on October 17, 2011.

One valid appeal of the local government action was filed by Bodega Bay Concerned Citizens (Exhibit 5). The appeal was received by the Commission on July 27, 2011 and was deemed filed in a timely manner on the first day of the appeal period, October 4, 2011. In the appeal, the Appellants indicated that it would be supplemented with additional information relevant to the same contentions it had raised. The Appellants filed a supplement to their appeal on October 17, 2011, the last day of the appeal period. This supplemental document did not raise new contentions, instead readdressing the same LCP inconsistency issues that had been raised in their initial appeal document (Exhibit 6).

C. APPEAL PROCEDURES

Coastal Act Section 30603 provides for the appeal to the Coastal Commission of certain CDP decisions in jurisdictions with certified LCPs. The following categories of local CDP decisions are appealable: (a) approval of CDPs for development that is located (1) between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tide line of the sea where there is no beach, whichever is the greater distance, (2) on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet of the top of the seaward face of any coastal bluff, and (3) in a sensitive coastal resource area; or (b) for counties, approval of CDPs for development that is not designated as the principal permitted use under the LCP. In addition, any local action (approval or denial) on a CDP for a major public works project (including a publicly financed recreational facility and/or a special district development) or an energy facility is appealable to the Commission. This approved development is appealable because it is located between the first public road and the sea, portions of the approved development are located within 100 feet of a wetland, and the approved development is not designated as the principally permitted use in the Rural Residential zoning district of the certified LCP.

The grounds for appeal under Section 30603 are limited to allegations that the development does not conform to the certified LCP or to the public access policies of the Coastal Act. Section 30625(b) of the Coastal Act requires the Commission to conduct a de novo CDP hearing on an appealed project unless a majority of the Commission finds that "no substantial issue" is raised by such allegations.[1] Under Section 30604(b), if the Commission conducts a de novo hearing and ultimately approves a CDP for a project, the Commission must find that the proposed development is in conformity with the certified LCP. If a CDP is approved for a project that is located between the nearest public road and the sea or the shoreline of any body of water located within the coastal zone, Section 30604(c) also requires an additional specific finding that the development is in conformity with the public access and recreation policies of Chapter 3 of the Coastal Act. This project includes components that are located between the nearest public road and the sea, and thus this additional finding would need to be made if the Commission were to approve the project following a de novo hearing.

The only persons qualified to testify before the Commission on the substantial issue question are the Applicant, persons who made their views known before the local government (or their representatives), and the local government. Testimony from other persons regarding substantial issue must be submitted in writing. Any person may testify during a de novo CDP determination stage of an appeal.

D. SUMMARY OF APPEAL CONTENTIONS

The appeal of the Bodega Bay Concerned Citizens contends that the approved project is inconsistent with certified LCP policies regarding environmentally sensitive habitat areas, "sanctuary preservation areas," and wetlands. The Appellants claim that nearby wetlands would be adversely impacted by the installation and operation of the well and chlorination facility. The Appellants contend that, because this is a shallow well, the removal of water from the site at a maximum projected rate of 152 gpm (gallons pumped per minute) at 18 hour intervals could have a significant effect on the freshwater supply needed to sustain nearby wetlands and Rail Ponds. Specifically, the Appellants contend that: 1) a portion of the proposed development would be located within 100 feet of wetlands near the connection point at Bay Flat Road; 2) monitoring required by the approved project does not include mitigation requirements to address potential impacts from potential salinity intrusion on the riparian and marsh vegetation; 3) operation of the well and chlorination facility could have indirect and/or direct impacts on

[1] The term "substantial issue" is not defined in the Coastal Act or in its implementing regulations. In previous decisions on appeals, the Commission has generally been guided by the following factors in making substantial issue determinations: the degree of factual and legal support for the local government's decision; the extent and scope of the development as approved or denied by the local government; the significance of the coastal resources affected by the decision; the precedential value of the local government's decision for future interpretations of its LCP; and, whether the appeal raises only local issues as opposed to those of regional or statewide significance. Even when the Commission chooses not to hear an appeal, Appellants nevertheless may obtain judicial review of a local government's CDP decision by filing a petition for a writ of mandate pursuant to the Code of Civil Procedure, Section 1094.5. In this case, for the reasons discussed further below, the Commission exercises its discretion and determines that the development approved by the County does not raise a substantial issue with regard to the Appellants' contentions.

potential foraging and dispersal habitat for sensitive species on nearby parcels. Please see Exhibit 5 for Bodega Bay Concerned Citizens appeal contentions.

E. SUBSTANTIAL ISSUE DETERMINATION

Sanctuary Preservation Areas and Wetlands

The Local Coastal Program covering Sonoma County states that*:*

> *"Sanctuary Preservation areas are the most environmentally sensitive areas along the coast. They correspond to "Environmentally Sensitive Habitat Areas" as defined in the 1976 Coastal Act Sections 30107.5 and 30240. No development other than nature trails and resource dependent uses shall be allowed within such areas. There shall be no significant disruption of habitat values."*

According to County approval documents, the proposed well, piping, and chlorination facilities would be located adjacent to a designated "sanctuary preservation area." Sanctuary preservation areas described in the area of Bodega Bay within the Sonoma County LCP include freshwater marshes and riparian areas on the north end of Bodega Harbor, and ponds, such as the Rail Pond wetland area. As stated above, the LCP prohibits disruption of the habitat values of Sanctuary Preservation Areas.

Sonoma County LCP Environmental Resource Management policies related to development in and around wetlands state:

> *"18. Prohibit filling, grading, diking, dredging, and construction in wetlands, except under special conditions delineated in the Coastal Act Section 30233. All projects must maintain or enhance the functional capacity of the wetland or estuary….*
>
> *25. Prohibit construction of agricultural, commercial, industrial and residential structures within 100 feet of wetlands.*
>
> *26. Between 100 and 300 feet of wetlands, prohibit construction of agricultural, commercial, industrial and residential structures unless an environment assessment finds the wetland would not be affected by such construction."*

However, the LCP also includes exceptions to the wetlands and sensitive habitat setback policies contained in Attachment "M" and "J" of the certified LCP Administrative Manual, allowing a reduced buffer size in limited circumstances. Please see Exhibit 7 for the details of these policies.

As stated above, all projects in wetlands must maintain or enhance the functional capacity of wetlands and other sensitive habitats. In addition, Environmental Resource Policy 25 prohibits construction of certain identified types of structures (i.e., agricultural, commercial, industrial and residential) within 100 feet of wetlands, and Policy 26 prohibits construction of these same types

of structures past 100 feet from a wetland and up to300 feet away unless an environmental assessment finds that the wetland would not be affected. However, as described in Attachment "M" and "J" of the certified LCP Administrative Manual, as seen in Exhibit 7, certain exceptions to these requirements are allowed. The approved pipeline, which would be located underneath the existing paved road and the existing paved driveway, is within 100 feet of the Rail Ponds wetland area. The approved well and chlorination facility are setback over 100 feet from the Rail Ponds wetland area and wetlands on nearby parcels. The Appellants claim that the impacts to nearby Sanctuary Preservation areas and wetlands resulting from the construction and operation of the well and chlorination facility are inconsistent with the LCP policies protecting these resources.

Proximity to Wetlands

The Appellants claim that the construction and operation of the well and chlorination facility would have impacts to nearby wetlands, including the Rail Pond wetland area and wetlands on the surrounding parcels not addressed by the County's approval. To clarify the location of the project in relation to nearby wetlands, Commission staff requested additional information from the project Applicant, including a map of the project area illustrating the location of all wetlands areas, with the development overlay. On June 19, 2012 the Applicant's consulting engineers (Brelje & Race) submitted a map of the project area highlighting all wetlands in the area and their proximity to the proposed development (See Exhibit 3). Field studies conducted by the Applicant's environmental consultants (WRA) to the immediate north of the project area on the edge of parcel 100-060-010 revealed riparian vegetation approximately 110 feet north of the approved well site with no bed or bank feature, allowing them to conclude that this area is not a wetland. However, the environmental consultants did observe standing water on parcel 100-060-015 and in the Rail Pond wetland area, allowing them to conclude that these areas are wetlands. They also approximated the location of a wetland on private parcel 100-060-009. As illustrated in Exhibit 3, the well and chlorination facility would be setback over 100-feet from all observed wetlands. However, the approved 6" water pipeline and pipeline connection point in the middle of Bay Flat Road would be located within approximately 50 feet of the Rail Pond wetland area. This pipeline would be located beneath the existing paved road and driveway at the site.

The County's findings of approval acknowledge that the project's underground transmission piping connecting the project's well to the District's existing water main at Bay Flat Road, would be located within 100 feet of a wetland.[2] However, they also noted that the LCP provides

[2] The County did not evaluate whether such piping constituted an agricultural, commercial, industrial or residential structure, as these are the types of developments specifically required to be set back from wetlands 100 feet per Environmental Resource Policy 25. In this case, the development in question is utility piping that doesn't necessarily meet any of those criteria. As such, it is not clear that Policy 25 applies in this case. However, such a finding could lead to LCP interpretation issues with respect to some range of projects deemed not to fit into these categories inconsistent with the LCP's stated objectives for wetland protection. Thus, the Commission here evaluates the proximity issue with respect to the piping in the same way that the County did with respect to Policy 25. Regardless, as discussed below, exceptions to wetland and habitat buffers can be made in this case.

exceptions to the wetlands setback under certain circumstances, including development that is located within an existing road and when the topography is such that it is highly unlikely that the development could affect wetlands. The referenced LCP exceptions are contained in Attachment "M" and "J" of the certified LCP Administrative Manual (Exhibit 7). Attachment "M" contains criteria for establishing wetland and other habitat buffer areas, and states that the buffer shall be a minimum of 100 feet unless it can be demonstrated that 100 feet is not necessary to protect the resources of the habitat area. Standards for determining the appropriate buffer width include: (1) biological significance of adjacent lands; (2) sensitivity of species to disturbance; (3) susceptibility of the parcel to erosion; (4) use of natural topographic features; (5) use of existing cultural features; (6) lot configuration and location of existing development, and; (7) type and scale of the development proposed.

The County concluded that the reduced buffer width is appropriate given subsection (4) use of natural topographic features and (5) use of existing cultural features, which state:

> *4. Hills and bluffs adjacent to environmentally sensitive habitat areas should be used, where feasible, to buffer habitat areas. Where otherwise permitted, development should be located on the sides of hills away from environmentally sensitive habitat areas. Similarly, bluff faces should not be developed, but should be included in the buffer area.*
>
> *5. Cultural features (e.g., roads and dikes) should be used, where feasible, to buffer habitat areas. Where feasible, development should be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the environmentally sensitive habitat area.*

The County concluded that because the pipeline would go under the developed flat road, existing topography and cultural features would buffer the wetland habitat, meeting standards (4) and (5). While the County did not analyze the remaining standards, and it would have been appropriate to do so, this lack of analysis does not rise to the level of substantial issue, especially because an analysis of the remaining standards shows that the buffer reduction is consistent with the LCP. Below is an analysis of the remaining standards for a reduced buffer width.

Standard (1) Biological significance of adjacent lands states:

> *Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. That is, functional relationships may exist if species associated with such areas spend a significant potion of their life cycle on adjacent lands. The degree of significance would depend upon the habitat requirements of the species in the habitat areas (e.g., nesting, feeding, breeding or resting). This determination requires the expertise of an ecologist, wildlife biologist, ornithologist, or botanist who is familiar with the particular type of habitat involved. Where a significant functional relationship exists, the land supporting this relationship should also be considered to be part of the environmentally sensitive habitat areas, and the buffer area should be measured from the edge of these lands and be sufficiently wide to protect these*

> *functional relationships. Where no significant functional relationships exist, the buffer should be extended from the edge of the wetland, stream or riparian habitat (for example) which is adjacent to the proposed development (as opposed to the adjacent area which is significantly related ecologically).*

As stated above, lands adjacent to sensitive habitat are important to that sensitive habitat if species in the sensitive habitat spend a significant portion of their life cycle in the adjacent lands. As the adjacent land in this case is an existing paved road, it is unlikely that species are spending a significant portion of their life cycle in this area. Since the pipeline would be located under the road, operation of the well would not result in a significant increase in activities in this area, and any use of the area (i.e., the road) by species would be unaffected. Finally, construction best management practices required by the County's conditions of approval mitigate any impacts caused by species entering these areas during construction.

Standard (2) sensitivity of species to disturbance states:

> *The width of the buffer area should be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination should be based on the following:*
>
> *a) Nesting, feeding, breeding, resting or other habitat requirements of both resident and migratory fish and wildlife species*
>
> *b) An assessment of the short-term and long-term adaptability of various species to human disturbance*

The buffer distance should take into account how sensitive species, especially wildlife, may react to development and presence of human activity. Again, as noted, since the pipeline would be located under the road, operation of the well would not result in an increase in human activities in this area other than during construction. Construction best management practices contained in the County's approval should appropriately address potential short term impacts during construction. In addition, this area is already located in close proximity to development, being adjacent to a road, so species are already exposed to a certain level of human activity on a daily basis.

Standard (3) susceptibility of parcel to erosion states:

> *The width of the buffer area should be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetation cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.*

The pipeline would be located under an existing road with minimal slope. The installation and operation of the pipeline, as it is connecting to an existing water main, would not change the potential for erosion at the site.

Standard (6) lot configuration and location of existing development states:

> *Where an existing subdivision of other development is largely built out and the buildings are a uniform distance from a habitat area, at least that same distance will be required as a buffer area for any new development permitted. However, if that distance is less than 100 feet, additional mitigation measures (e.g., planting of native vegetation which grows locally) should be provided to ensure additional protection. Where development is proposed in an area which is already undeveloped, the widest and most protective buffer area feasible should be required.*

The area north of Bay Flat Road contains residential development and the road acts as a buffer of sorts separating the wetland from this development. The road itself is development located adjacent to the wetland. The construction of the pipe would occur within this already developed area and not any closer to the wetland than the road itself.

Standard (7) type and scale of development states:

> *The type and scale of the proposed development will, to a large degree, determine the size of the buffer area necessary to protect the environmentally sensitive habitat area. For example, due to domestic pets, human use and vandalism, residential developments may not be as compatible as light industrial developments adjacent to wetlands, and may therefore require wider buffer areas. However, such evaluations should be made on a case-by-case basis depending upon the resource involved, and the type and density of development on adjacent lands.*

Construction of a 6’’ pipeline under an already developed paved road and connection to an existing water main is consistent with the development currently in this area and is not of inappropriate type or scale.

Further, Attachment “J” allows the Director to waive the 100-foot wetland setback requirement in rural communities and urban service areas if (a) other developed lots or roads exist between the proposed development and the wetland; and (b) topography is such that it is highly unlikely that development could affect the wetland. Although the County’s findings of approval did not explicitly state that it was waiving the 100-foot setback requirement pursuant to this provision, Bay Flat Road does lie between the wetland and the proposed development, and therefore, the LCP allows for a reduced setback in this case.

Further, to avoid any potential indirect impacts to wetlands that could be caused by constructing the pipeline within 100 feet of the Rail Pond wetland area, the County’s conditions of approval require best management practices to be implemented to prevent accidental filling and/or erosion

and sedimentation. Construction activities and vegetation removal would also be conducted outside of the monarch butterfly overwintering period and during the non-nesting bird season. If these construction period limitations cannot be met, a preconstruction survey would be preformed to identify necessary buffer areas and a qualified biologist would be retained to monitor construction activities. Finally, allowing the well to connect to an existing water main on Bay Flat Road would prevent unnecessary development and additional piping in the area.

Thus, the appeal contention related to the proximity of the pipeline to the Rail Pond wetland area does not raise a substantial issue of conformance with LCP policies protecting wetlands and other habitats, including Environmental Resource Policies 18, 25, and 26, and certified Administrative Manual Attachments J and M.

Hydrological Impacts

In its findings for approval, the County concluded that the well would not likely impact existing wetland habitats and that the baseline conditions would not likely change as a result of the project. The County relied on a series of technical studies in its findings, including an assessment of groundwater resources that determined the project would not significantly deplete groundwater supplies or interfere substantially with groundwater recharge as well as a study prepared to analyze the salinity and total dissolved solids of the northern rail pond which concluded that the pond "is primarily influenced by the harbor with some groundwater influence…". The study also stated that: "High variability of TDS levels exist in the rail pond due to significant tidal influence. Pumping at a rate of 150 gpm from the proposed well will not influence the salinity in the rail pond to levels that do not already occur on a daily basis." Further, the County's biologist, in reviewing the northern rail pond study together with the Biological Resources Assessment that was prepared for the project observed that, "Since the study results show that the site has salinity comparable to seawater, on high tide, this eliminates the potential for sensitive freshwater species and appears to validate the findings of the WRA Biological Resources Assessment dated March 2010. In addition, I now concur with WRA statement with regard to effects on the plant community that the normal baseline conditions will not likely change as a result of this proposed project. ("perhaps slightly increasing salinity in warmer, dry summer months and slightly decreased salinity in cooler, wetter winter months to which the existing plant community has adapted.") Since this is the case, I think this potential indirect impact would be less than significant" (see County's findings of approval in Exhibit 4). Moreover, in Special Condition #8 of the CDP approval, the County required a monthly well monitoring program for 5 years to ensure that the functional capacity of the northern Rail Pond wetland area is maintained. The condition requires that if monitoring indicates an increase in the root zone pore water salinity levels of the northern Rail Pond at or above 5 parts per thousand above the salinity level established by the baseline data, a biological review shall be conducted. If the biological review identifies adverse impacts to the wetlands, the District must reduce pumping to a level that avoids these impacts, or, if necessary to avoid impacts, the District must suspend pumping entirely.

The Appellants have submitted information and letters from scientists that contest these findings. For example, Peter Baye, Ph.D., in a letter dated September 23, 2011, brings up the issue of acute, short-term salinity intrusion, which he believes the County did not adequately address in its approval. He states that the monitoring required by Special Condition #8 would not have any

mitigating effect on the impact of acute, short-term salinity intrusion on riparian woodland and fresh-brackish perennial marsh vegetation. The letter states that salt-sensitive mature perennial and woody riparian vegetation can be killed in a matter of days or weeks by brief and rapid subsurface salinity pulses affecting their root zones during the summer growing season. He states that the County's required monitoring program, and any subsequently triggered reduction in pumping that would be required if salinity levels are increased, does not correct damage that could already have occurred to this vegetation before or during detection by the proposed monitoring methods. However, in a previous letter, dated June 12, 2011, Baye also states that: "There is clear evidence that past drought cycles have resulted in dieback of salt-sensitive tule marsh, and tule and bulrush have re-expanded in wet years" (see Exhibit 5). It seems likely that such history of natural cycles of diebacks and re-expansion of salt-sensitive marsh at this site is accurate given the location of the site and its tidal influence, and it is likely that any vegetation impacted by pumping during dry periods would similarly re-expand when conditions are returned to normal, and the County's Special Condition #8 requires pumping to be reduced or suspended if pore water salinity increases, thereby allowing natural conditions to be quickly restored if these potential impacts occur.

Nonetheless, to better understand these issues, Commission staff requested additional analyses from the Applicant of the hydrology of the freshwater, non-tidal wetlands located on parcels 100-060-009 and 100-060-015 north of Bay Flat Road, and of the Rail Ponds, with special attention to: (1) the mechanisms producing the observed salinity of the pore water in the root zone in the Rail Ponds, and; (2) the effect of changes in the volume of ground water discharge on the hydrological characteristics of both the Rail Ponds and the wetlands north of Bay Flat Road. In response, the Applicant provided further hydrological analysis including observations from monitoring wells in the tidally influenced areas, including four wells on the north bank between the northern Rail Pond and Bay Flat Road and one on the south bank between the northern Rail Pond and Westshore Road, at two different depths (see Exhibit 8). It was observed that the levels of salinity were driven by the position of the well relative to the harbor shoreline and the depth of the sample. The Commission's Senior Ecologist, Dr. John Dixon, found these results to be an accurate characterization of the general spatial pattern of shallow (less than or equal to 18 inches) soil pore water salinity in the area and determined that these monitoring wells, which would be used for compliance with the County's Special Condition #8 would be appropriate for monitoring any changes that may result from the approved use of the well.

The Applicants state that the maximum probable net impact from the installation and operation of the Bay Flat well is a decrease of 20 gpm of ground water outflow to the Rail Pond, but that it is likely the actual impact would be significantly less than this estimate, especially during non-drought years. The Commission's Staff Geologist reviewed the hydrological analysis and concluded that as long as there is a positive pressure gradient (greater than 0 gpm) of freshwater flow to the monitored habitat, the pore waters should remain essentially fresh, as is the case under existing conditions. Therefore, it is unlikely for any impacts to salinity in pore waters to occur, except during drought years, when such impacts may already occur naturally. Further, any threat of direct deep salt water intrusion would occur at the well first, and would therefore likely be identified by the district due to water quality issues well before it could impact any vegetation, even deep rooted vegetation. Therefore, impacts from deep salt water intrusion are not a concern, but there are potential minimal impacts from reduced freshwater flows. These

potential impacts are addressed by the County's requirement for shallow monitoring wells, which would provide a good indication of pore water salinity. As discussed above, the County's condition requires annual well monitoring and biological assessment reports, using data from monthly monitoring, for the first five years of the project and contingency measures in the event that root zone pore water salinity is at or above five parts per thousand (ppt) above the salinity level established by baseline data.

The Commission's Senior Ecologist, Dr. John Dixon, agrees that the impact to hydrology, mainly changes to pore water salinity, is the only potential concern here. After review of Special Condition # 8, Dr. Dixon recommends that the County's Special Condition could be made more conservative to avoid any impacts to wetland vegetation. Improved monitoring techniques suggested include the use of conductivity meters in the wells and increased monitoring of the well in the dry season. BBPUD has agreed to these recommended monitoring measures to help avoid any potential impacts to the nearby sanctuary preservation areas by acute salt water intrusion. Specifically, BBPUD has agreed to increase the frequency of monitoring to twice a month for the first two years and will use a conductivity meter for the well monitoring. In addition, the district has agreed to replace any reduction in vegetation resulting from the well at a ratio of 1:1. Therefore, the Appellant's contentions that the County's approval, including the required monitoring program, is not adequate to address potential hydrological impacts does not raise a substantial issue with LCP policies protecting biological resources, including Environmental Resource Policy 18 and Sanctuary Preservation Areas on Page III-4.

Indirect and Direct Impacts to Species

In addition, the Appellant's raise issues about potential impacts to special status species, such as the California Red Legged Frog (CRLF), claiming that the County did not address these issues in its approval findings. Baye's June 12, 2011 letter states that the project area is located less than 1 mile from one known breeding habitat (seasonal to perennial freshwater ponds on the landward edge of Bodega Dunes) and riparian and stream pool habitat of Johnson Gulch. Baye states that the riparian and freshwater marsh vegetation near the project site (including *Typha* sp. and *Juncus effuses, J. arcticus, Salix* spp.) indicates the presence of foraging habitat and moisture refuges mid-way in a potential dispersal corridor between known breeding habitats, and within upland dispersal distances known for this species. He indicates that potential indirect project impacts to this species may include reduction in the seasonal duration of near-surface soil saturation in spring, and summer soil moisture (wetland conditions, hydration and moisture refuge habitat), and direct impacts to potential foraging or dispersal habitat from accidental spills from the chlorination facility. Baye also states that other special-status species could be present and potentially impacted, such as Tidewater goby (*Eucyclogobius newberryi*) and Point Reyes bird's beak (*Chloropyron maritimum* ssp. *palustre*; syn. *Cordylanthus maritimus* ssp. *palustris*), and that these potential impacts were not addressed by the County's approval findings and were not fully analyzed by the Applicant's biological assessment (WRA Biological Resources Assessment, March 2010).

The County's Mitigated Negative Declaration quotes the WRA study and states that all of the wildlife found in the project area vicinity are commonly found species such as California Quail and Mule Deer, which are not protected under State and Federal Law; and that the study indicated no special status plant or wildlife species were observed, and no critical habitat is

present. The only species identified by the Applicant's biologists and the County as having a moderate potential to occur onsite are rufous hummingbird, monarch butterfly and other nesting birds. As stated above, the County's conditions of approval require that construction activities and vegetation removal be conducted outside of the monarch butterfly overwintering period and during the non-nesting bird season to mitigate for any potential impacts. In addition, the project would be located more than 100 feet from riparian vegetation and wetlands, which is the only potential dispersal habitat for CRLF, except for the above-described small portion of the pipeline under the road, which would be setback from the marsh consistent with LCP requirements, and would avoid indirect impacts to habitat for the reasons discussed above, in the "Proximity to Wetlands" section.

In addition, further discussions with the Applicant revealed that the chlorination facility would use only dry chlorination materials and therefore risks to sensitive habitats from potential chemical spills are greatly minimized. In addition, as illustrated in Exhibit 3, the well and chlorination facility would be more that 100 feet away from any wetland area and because of the County's conditions of approval specifying construction standards for the chlorination structure to include a secondary containment basin to contain accidental spills, it is highly unlikely that it would have direct impacts on nearby areas that could potentially act as habitat for sensitive species, as claimed by the Appellants. Finally as indicated in the Applicant's engineering report (Assessment of Groundwater Resources by Todd Engineers, July 2008), the cone of depression for each well after 18 hours of continuous pumping extends a distance of approximately 107 feet. All of the wetlands identified in the project area are beyond this distance, and therefore, any potential reduction in water level caused by the approved project would not impact these wetlands. Therefore, the Appellant's claim that there would be direct and indirect impacts to sensitive species foraging and dispersal habitat does not raise to the level of substantial issue with LCP policies protecting sensitive habitats, including Environmental Resource Policy 18 and Sanctuary Preservation Areas on Page III-4.

F. CONCLUSION

When considering a project that has been appealed to it, the Commission must first determine whether the project raises a substantial issue of LCP conformity, such that the Commission should assert jurisdiction over a de novo CDP for such development. The Commission is guided in its decision of whether the issues raised in a given case are "substantial" by the following five factors: the degree of factual and legal support for the local government's decision; the extent and scope of the development as approved or denied by the local government; the significance of the coastal resources affected by the decision; the precedential value of the local government's decision for future interpretations of its LCP; and, whether the appeal raises only local issues as opposed to those of regional or statewide significance. In this case, these five factors, considered together, support a conclusion that this project does not raise a substantial issue of LCP conformance.

First, the approved pipeline development would occur along existing developed roads, and connect to existing water mains. Thus, the extent and scope of this project weigh in favor of a finding of no substantial issue. Secondly, all of the approved development would be further than 100 feet away from sanctuary preservation and wetland areas, except for a portion of the

approved pipeline, which would be underneath existing roadways. Finally, monitoring requirements imposed by the County, and the County's requirement to reduce or suspend pumping if adverse biological impacts are identified, safeguard against potential impacts associated with the salt water intrusion to the pore waters of the Rail Pond wetland area. Thus, there are no significant coastal resources affected by the decision. Therefore, given that the facts support the County's action and the County's analysis did not result in the approval of a project with significant coastal resource impacts, the Commission finds the appeal does not raise a substantial issue of conformance with the LCP.

Lastly, while issues related to the impact of wells on wetland areas are regional and statewide, the decisions made here are site and LCP specific and therefore do not raise issues of regional or statewide significance. Given these considerations, the Commission finds that when all five substantial issue factors are weighed together, the appeal contentions do not raise a substantial LCP conformance issue and thus the Commission declines to take jurisdiction over the CDP for this project.

Exhibit 1 (A-2-SON-11-037)

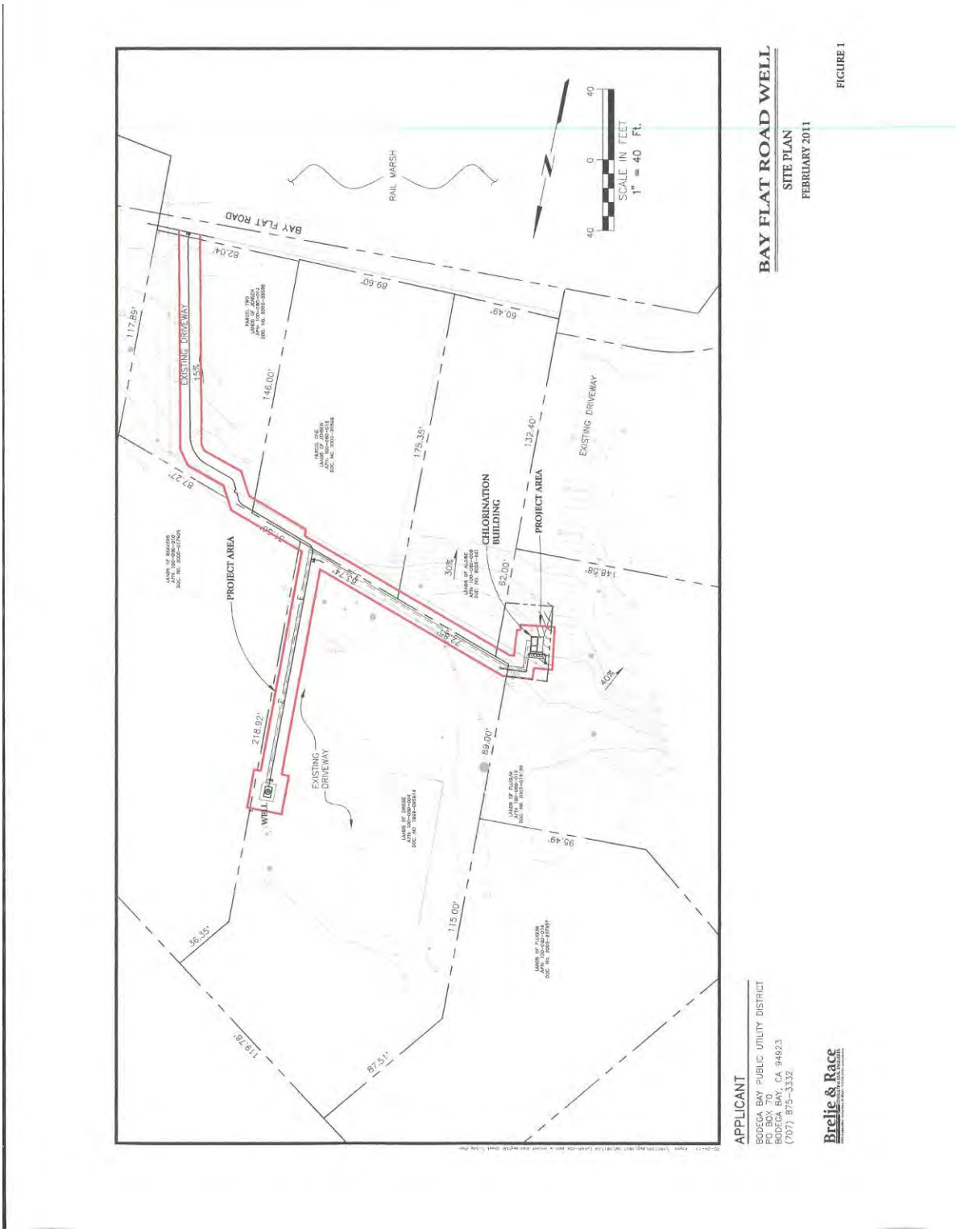


Exhibit 2 (A-2-SON-11-037)

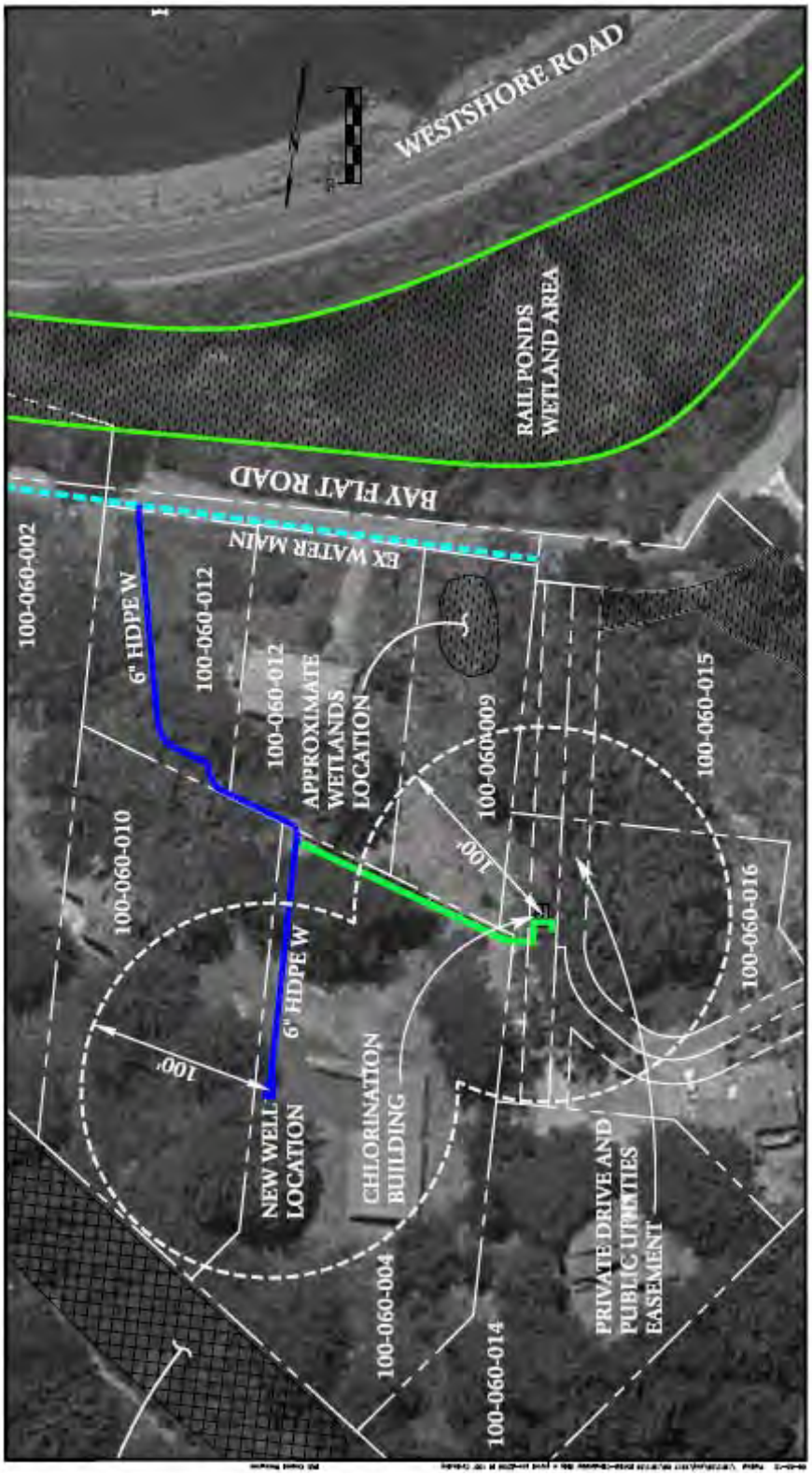


Exhibit 3 (A-2-SON-11-037)

STATE OF CALIFORNIA— NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., *Governor*

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
(415) 904-5260 FAX (415) 904-5400
www.coastal.ca.gov

NOTIFICATION OF APPEAL PERIOD

DATE: October 4, 2011

TO: Dave Hardy, Supervising Planner
County of Sonoma, Permit and Resource Management
Department – Planning Division
2550 Ventura Avenue
Santa Rosa, CA 95403

FROM: Ruby Pap, District Supervisor RP

RE: **Application No. 2-SON-10-151**

Please be advised that on October 3, 2011 our office received notice of local action on the coastal development permit described below:

Local Permit #: **PLP09-0057**

Applicant(s): **Bodega Bay Public Utilities District, Attn: Janet Mantua**

Description: **To construct of a new approximately 100-foot deep municipal water well, transmission piping, and 80 square foot chlorination facility**

Location: **1677, 1681, 1685, 1705, 1707 Bay Flat Road, Bodega Bay (Sonoma County) (APN(s) 100-060-12, 100-060-04, 100-060-10, 100-060-15, 100-060-16)**

Unless an appeal is filed with the Coastal Commission, the action will become final at the end of the Commission appeal period. The appeal period will end at 5:00 PM on October 17, 2011.

Our office will notify you if an appeal is filed.

If you have any questions, please contact me at the address and telephone number shown above.

cc: Bodega Bay Public Utilities District, Attn: Janet Mantua

Notice of Final Action on a Coastal Permit

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

2-SON-10-051

Date: September 29, 2011

File:	PLP09-0057
Applicant:	Bodega Bay Public Utilities District c/o Janet Mantua
Address:	P O Box 70
City, State, Zip:	Bodega Bay CA 94923
Planner:	Dave Hardy

This notice is being distributed to the Coastal Commission and those who requested notice. The following project is located within the Coastal Zone. A project decision has been completed.

Project Description: Request for a Use Permit and Coastal Permit to construct a new approximately 100-foot deep municipal water well, transmission piping, and 80 square foot chlorination facility.

Project Location: 1677, 1681, 1685, 1705, and 1707, Bay Flat Road, Bodega Bay

Assessor's Parcel Number: 100-060-012, -004, -010, -015, and -016

_X_ APPROVED by the Board of Supervisors on September 27, 2011.

Conditions of Approval: See enclosed.

Findings: The project, as described in the application and as conditioned, conforms with the plans, policies, requirements and standards of the Sonoma County Local Coastal Program as outlined in the enclosed Sonoma County Board of Supervisors Resolution #11-0532.

_X_ Appealable. The decision may be appealed in writing to the Sonoma County Board of Supervisors within ten (10) calendar days. The decision of the Board of Supervisors is appealable to the State Coastal Commission within ten (10) working days.

Address:
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

#50
Resolution No. 11-0532
County of Sonoma
Santa Rosa, CA 95403

September 27, 2011
PLP09-0057 David Hardy

Resolution of the Board of Supervisors of the County of Sonoma, State of California, Certifying Review and Consideration of the Information Contained in the Mitigated Negative Declaration Adopted by the Bodega Bay Public Utilities District as Lead Agency, Adopting a Subsequent Mitigated Negative Declaration and Mitigation Monitoring Program, and Approving a Use Permit and Coastal Permit for a New Municipal Water Well, Underground Transmission Piping, and Chlorination Structure on Property Located at 1681, 1707, 1705, 1685, and 1677 Bay Flat Road, Bodega Bay; APNs 100-060-012, -004, -010, -015, and -016; Zoned RR (Rural Residential), B7 (Frozen Lot Size), G (Geologic Hazard Combining), CC (Coastal Combining); Supervisorial District No. 5.

Resolved, that the Board of Supervisors ("the Board") of the County of Sonoma ("the County") hereby finds and determines as follows:

Section 1.
Application and Project.

1.1 Bodega Bay Public Utilities District ("the District") filed Application PLP09-0057 with the Sonoma County Permit and Resource Management Department ("PRMD") requesting a use permit and coastal permit ("the Use Permit and Coastal Permit") for a new municipal water well, underground transmission piping, and chlorination structure on property located at 1681, 1707, 1705, 1685, and 1677 Bay Flat Road, Bodega Bay, APN's 100-060-012, -004, -010, -015, and -016 ("Project Site"); zoned RR (Rural Residential, B7 (Frozen Lot Size), G (Geologic Hazard Combining), CC (Coastal Combining) ("the Project").

Section 2.
Procedural History.

2.1 Acting as lead agency under the California Environmental Quality Act ("CEQA"), the District had its engineers, Brelje and Race Engineers ("Brelje and Race"), prepare a mitigated negative declaration for the Project ("the Mitigated Negative Declaration"). On June 19, 2008, the Mitigated Negative Declaration was completed, noticed, and made available for public review. On August 20, 2008, the District's Board of Directors adopted the Mitigated Negative Declaration, approved the Project, and issued a notice of determination for the Project.

2.2 On June 9, 2009, the District submitted Application PLP09-0057 to PRMD. On July 2, 2009, PRMD staff issued an incomplete letter advising the District that the Project, as proposed, was inconsistent with the Local Coastal Plan because the Project's chlorination structure was located adjacent to a designated sanctuary-preservation area.

2.3 On April 7, 2010, the District revised the Project to relocate the Project's chlorination structure from 1665 Bay Flat Road to 1707 Bay Flat Road in order to avoid locating the Project's chlorination structure within 100 feet of the adjacent designated sanctuary-preservation area or within 100 feet of the wetlands located approximately 45 feet to the east of the District's water main in Bay Flat Road. On August 31, 2010, PRMD staff determined that Application PLP09-0057 was complete for processing

2.4 Acting as a responsible agency under CEQA, PRMD staff evaluated the District's proposed change in the location of the Project's chlorination structure and determined, pursuant to State CEQA Guidelines section 15162, that subsequent environmental review was required for the change, that a subsequent mitigated negative declaration was the appropriate environmental document to analyze the change, and that PRMD staff would be responsible for preparing the subsequent mitigated negative declaration ("the Subsequent Mitigated Negative Declaration"). Consistent with CEQA and the State CEQA Guidelines, PRMD staff further determined that the Subsequent Mitigated Negative Declaration was only required to address the proposed change in the Project and not re-evaluate the environmental impacts already analyzed in the Mitigated Negative Declaration that would not change with the relocation of the Project's chlorination structure. Nevertheless, to address concerns raised by neighbors after the

District's adoption of the Mitigated Negative Declaration, additional analyses and studies were prepared by the District and have been provided with the Subsequent Mitigated Negative Declaration for informational purposes. These additional analyses and studies clarify and confirm the conclusions of the Mitigated Negative Declaration that the Project will not have any significant impacts on the environment that will not be mitigated to a level of less than significant with identified mitigation measures.

2.5 On July 20, 2010, neighbors adjacent to the Project Site ("the Beavers") requested that the County assume the role of lead agency for the Project. On September 17, 2010, PRMD staff administratively determined that the County's assumption of the role of lead agency for the Project was not warranted and that the County would continue to act as a responsible agency. On September 24, 2010, the Beavers appealed PRMD's administrative determination.

2.6 On December 14, 2010, the Board took original jurisdiction over the Project, as requested by the District.

2.7 On March 4, 2011, the Beavers withdrew their appeal of PRMD's administrative determination that the County would continue act as a responsible agency for the Project.

2.8 On June 3, 2011, PRMD staff completed the Subsequent Mitigated Negative Declaration. Thereafter, PRMD staff set the Subsequent Mitigated Negative Declaration and the Project for a public hearing before the Board ("the Board hearing"), gave notice of the Board hearing and the intent to adopt the Subsequent Mitigated Negative Declaration, and made the Subsequent Mitigated Negative Declaration available for public and agency review.

2.9 Prior to the Board hearing, PRMD staff prepared a memorandum to the Board describing the Project and analyzing Project issues. The memorandum requested that the Board conduct the Board hearing and recommended that at the conclusion of the hearing the Board adopt the Subsequent Mitigated Negative Declaration and approve the Project. Attached to the memorandum were the Subsequent Mitigated Negative Declaration, the Mitigated Negative Declaration, and other relevant documents. The memorandum was distributed to the Board and made available to the public.

2.10 On July 12, 2011, the Board conducted the Board hearing. At the hearing, the Board heard and received all relevant testimony and evidence presented orally or in writing regarding the Mitigated Negative Declaration, the Subsequent Mitigated Negative Declaration, and the Project. All interested persons were given the opportunity to hear and be heard. At the conclusion of public testimony, the Board closed the hearing, considered and discussed the environmental effects of the Project as shown in the Mitigated Negative Declaration, the adequacy of the Subsequent Mitigated Negative Declaration, and the merits of the Project, and, on a 3-1-1 straw vote, determined to certify its review and consideration of the information contained in the Mitigated Negative Declaration, adopt the Subsequent Mitigated Negative Declaration, and approve the Project. County Counsel and PRMD staff were directed to return to the Board with a resolution reflecting the consideration and actions of the Board.

2.11 During preparation of the resolution directed by the Board, County Counsel and PRMD staff discovered that while notice of the Board hearing had been given by posting and mailing, it had not been given by publication as required by the Coastal Zoning Ordinance. County Counsel determined that the Board hearing would therefore have to be re-noticed and reopened. PRMD staff then re-noticed the Board hearing for September 27, 2011, in full compliance with the Coastal Zoning Ordinance and applicable state law.

2.12 Prior to the reopening of the Board hearing, PRMD staff prepared a memorandum to the Board describing the Project and analyzing Project issues. The memorandum requested that the Board reopen the Board hearing and recommended that at the conclusion of the hearing the Board adopt the Subsequent Mitigated Negative Declaration and approve the Project. Attached to the memorandum were a draft resolution, draft conditions of approval, and other relevant documents. The memorandum was distributed to the Board and made available to the public.

2.13 On September 27, 2011, the Board reopened the Board hearing. At the reopened hearing, the Board heard and received all relevant testimony and evidence presented orally or in writing regarding the Mitigated Negative Declaration, the Subsequent Mitigated Negative Declaration, and the Project. All interested persons were given the opportunity to hear and be heard. At the conclusion of public testimony, the Board closed the reopened hearing, again considered and discussed the environmental effects of the Project as shown in the Mitigated Negative Declaration, the adequacy of

the Subsequent Mitigated Negative Declaration, and the merits of the Project, and again determined to certify its review and consideration of the information contained in the Mitigated Negative Declaration, adopt the Subsequent Mitigated Negative Declaration, and approve the Project, thereby confirming the Board's straw vote on July 12, 2011.

2.14 The Board has had an opportunity to review this resolution and hereby finds that it accurately sets forth the intentions of the Board regarding the Mitigated Negative Declaration, the Subsequent Mitigated Negative Declaration, and the Project.

2.15 The Board's decisions herein are based upon the testimony and evidence presented to the County orally or in writing prior to the close of the Board hearing on September 27, 2011 ("the record of these proceedings"). Any information submitted after the close of the Board hearing was deemed late and not considered by the Board.

Section 3.
CEQA Compliance.

3.1 The Board finds that for the purposes of CEQA the District is the lead agency for the Project and the County is a responsible agency. The Board further finds that in carrying out its responsibilities as a responsible agency it must consider both the Mitigated Negative Declaration and the Subsequent Mitigated Negative Declaration.

3.2 The Board finds that the Mitigated Negative Declaration was not challenged within the prescribed statutory period after its adoption and is therefore conclusively presumed to be legally adequate. The Board certifies that it has reviewed and considered the environmental effects of the Project as shown in the Mitigated Negative Declaration in compliance with CEQA and the State CEQA Guidelines, and has reached its own independent conclusions on whether and under what conditions to approve the Project. The Board further finds that as a responsible agency, when considering alternatives and mitigation measures for a project, it has a more limited role than the lead agency, that is, the Board has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of a project that it decides to carry out, finance, or approve. To comply with that requirement for the Project, the Board has included in the conditions of approval imposed herein all of the mitigation measures identified in the Mitigated Negative Declaration that are within the responsibility and jurisdiction of the County. The Board further finds, based upon the

record of these proceedings, that none of the conditions requiring preparation of a subsequent environmental impact report for the Project have occurred. There has been no change in the Project or the Project circumstances that would result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects, and no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the Mitigated Negative Declaration was adopted, has been presented. As discussed in Section 3.3 below, the only subsequent environmental document that is required for the Project is the Subsequent Mitigated Negative Declaration.

3.3 The Board concurs with PRMD staff's determinations that subsequent environmental review is required for the proposed relocation of the Project's chlorination structure and that the Subsequent Mitigated Negative Declaration is the appropriate environmental document to analyze the change. The relocation of the Project's chlorination structure is a minor change in the Project that further avoids the Project's potential for impacts to wetlands, does not result in any new or substantially more severe significant impacts, and requires only minor additions or changes to the Mitigated Negative Declaration to make it adequate for the Project as revised. The Board also concurs with PRMD staff's determination that the Subsequent Mitigated Negative Declaration is only required to address the change in the Project and not re-evaluate the environmental impacts already analyzed in the Mitigated Negative Declaration that would not change with the relocation of the Project's chlorination structure. The Board certifies that the Subsequent Mitigated Negative Declaration has been prepared, noticed, made available for public and agency review, and considered, together with comments received during the public review process, in compliance with CEQA and the State CEQA Guidelines, and finds that the Subsequent Mitigated Negative Declaration reflects the independent judgment and analysis of the Board. The Board further finds that the Subsequent Mitigated Negative Declaration represents a good faith effort to provide full and adequate disclosure of the environmental impacts of the relocation of the Project's chlorination structure. The Board further finds, based upon the record of these proceedings, that there is no substantial evidence before it that the relocation of the Project's chlorination structure will have a significant effect on the environment. Changes or alterations have been required in, or incorporated into, the Project through the conditions of approval imposed herein that avoid or substantially lessen the potentially significant environmental effects of the relocation of the Project's chlorination structure identified in the Subsequent Mitigated Negative Declaration.

Those changes or alterations are within the responsibility and jurisdiction of the District and have been adopted by the District or have been agreed to by the District and should be adopted by the District.

3.4 The Board makes the following additional findings regarding the Mitigated Negative Declaration and the Subsequent Mitigated Negative Declaration:

(a) The majority of the comments and studies presented to the County by opponents of the Project address the adequacy of the Mitigated Negative Declaration rather than the adequacy of the Subsequent Mitigated Negative Declaration. The County's analysis in the Subsequent Mitigated Negative Declaration is appropriately limited to the change in the Project that has occurred since the Project was approved by the District, that is, the relocation of the Project's chlorination structure from 1665 Bay Flat Road to 1707 Bay Flat Road. Comments and studies regarding the effect of well construction and pumping on groundwater and biological resources in the vicinity of the Project and on the northern rail pond in particular should have been, and could have been, raised as comments on the Mitigated Negative Declaration. Opponents of the Project did not timely challenge the District's adoption of the Mitigated Negative Declaration and approval of the Project. The Board finds that comments and studies regarding the effects of well construction and pumping are time-barred under CEQA.

(b) The Subsequent Mitigated Negative Declaration determined that relocation of the Project's chlorination structure could potentially impact two special status species, by disturbing breeding habitat for the rufous hummingbird and roosting habitat for the monarch butterfly. Although neither species has been found on-site, they have been found in the vicinity of the Project and suitable habitat occurs on-site. The Mitigated Negative Declaration already included a mitigation measure for avoidance of nesting birds (Mitigation Measure BR1), and the Subsequent Mitigated Negative Declaration imposes a mitigation measure for avoidance of monarch butterfly nesting sites (Mitigation Measure 4.a); both measures have been incorporated into the conditions of approval imposed herein and have been agreed to by the District. With implementation of Mitigation Measures BR1 and 4.a, the Board finds that any potential impact to special status species associated with the relocation of the Project's chlorination structure would be reduced to less than significant.

(c) The Subsequent Mitigated Negative Declaration determined that relocation of the Project's chlorination structure from 1665 Bay Flat Road to 1707 Bay Flat Road would result in the Project's chlorination structure being more than 100 feet from any wetlands. Although no impacts to wetlands or riparian features are anticipated to occur as a result of the relocation of the Project's chlorination structure, the Subsequent Mitigated Negative Declaration imposes a standard construction mitigation requiring best management practices to avoid accidental filling and/or erosion and sedimentation to wetlands and riparian features (Mitigation Measure 4.c(1)). Mitigation Measure 4.c(1) has been incorporated into the conditions of approval imposed herein and has been agreed to by the District. With implementation of Mitigation Measure 4.c(1), the Board finds that any potential impact to wetlands and riparian habitat associated with the relocation of the Project's chlorination structure would be reduced to less than significant.

3.5 To ensure that the mitigation measures and project revisions identified in the Subsequent Mitigated Negative Declaration are implemented, the Board is required by CEQA and the State CEQA Guidelines to adopt a program for monitoring or reporting on the revisions the Board has required in the Project and the measures the Board has imposed to mitigate or avoid significant environmental effects. The mitigation monitoring program for the relocation of the Project's chlorination structure ("the Mitigation Monitoring Program") is set forth in the conditions of approval imposed herein. The Mitigation Monitoring Program will be implemented in accordance with all applicable requirements of CEQA and the State CEQA Guidelines.

Section 4.
Local Coastal Program Consistency.

4.1 The Local Coastal Program for the County ("the Local Coastal Program") consists of the Local Coastal Plan, Coastal Zoning Ordinance, and Coastal Administrative Manual.

4.2 The Board finds that the Project is consistent with the Local Coastal Program for the following reasons:

(a) The Project Site has a Rural Residential land use designation in the Local Coastal Plan and a RR (Rural Residential) zoning designation in the Coastal Zoning

Ordinance. The Project's municipal water well, underground transmission piping, and chlorination structure are permitted secondary uses in the Local Coastal Plan's Rural Residential land use category and are allowed in the Coastal Zoning Ordinance's RR zoning district with a use permit.

(b) The Project complies with the Local Coastal Plan's Public Services Policy No. 1 regarding expansion of public works capacities in that the Project is intended to bolster existing supplies to meet State standards to serve existing and previously planned development at peak periods. The Project does not propose to add to the District's projected allocation of 2,025 connections, of which 1,893 are currently committed.

(c) The Project, as conditioned, complies with the Local Coastal Plan's Public Services Policy No. 6 regarding groundwater monitoring in that the Use Permit and Coastal Permit require groundwater monitoring and reporting to PRMD as part of PRMD's ongoing groundwater monitoring efforts.

(d) The Project complies with the Local Coastal Plan's Land Use Policy No. 25 relating new development to water capacities in that the Project is not intended to increase capacity for new development, and does not propose an increase in the number of available water meters from the District. The District bases its allocations on an assumption of 300 gallons per day per residential unit allowed under the development policies of the Local Coastal Plan. The District estimates that it can serve the equivalent of 2,025 homes with existing supplies. The latest District status report of water system connections indicates that the District has 1823 connections currently and commitments for another 70. So, under its own limitations, the District has only 132 connections to give out without pursuing additional supplies and the storage required, and there are approximately 60 vacant lots left in the Bodega Harbour subdivision, some potential residential development, and some potential commercial development.

(e) With certain exceptions, the Local Coastal Program requires a 100-foot setback from wetlands for all development. Neither the Project's well nor its chlorination structure are currently proposed within 100 feet of any wetlands. The Project's underground transmission piping connecting the Project's well to the District's existing water main in Bay Flat Road, however, would be located within 100 feet of wetlands near the connection point at Bay Flat Road. The Local Coastal Program provides an exception to the wetlands setback requirement for development that is

located within an existing road when the topography is such that it is highly unlikely that the development could affect wetlands. Since the construction and installation of the Project's underground transmission piping would occur solely within existing roadways and would avoid sensitive habitats, there would be no direct impact to wetland features, provided that standard best management practices are implemented during construction of the piping as required by the conditions of approval imposed herein.

(f) In the biological resources assessment for the Project prepared by WRA Environmental Consultants ("WRA"), dated March 2010 ("the WRA Biological Resources Assessment"), WRA evaluated the Project with the Project's chlorination structure located at 1707 Bay Flat Road (i.e., the revised location). WRA determined that the 1707 Bay Flat Road site would result in the Project's chlorination structure being located more than 100 feet from any wetlands.

(g) In correspondence dated January 17, 2011, responding to a claim by neighbors that wetlands and/or riparian habitat exists within 100 feet of the Project's well, WRA determined that the habitat north of the Project's well is over 100 feet from the well and does not meet the definition of a wetland or riparian habitat. WRA further determined that the Project's well is approximately 80 feet from the bottom of the slope located to the north. WRA further determined that the bottom of the slope does not contain surface water or a shallow ground water table, which would have been expected if the area was functioning as a wetland. WRA's determinations confirm that the Project's well would not be located within 100 feet of any wetlands.

(h) The Local Coastal Plan's Environmental Resources Management Policy No. 18 prohibits construction in wetlands and further provides that, "All projects must maintain or enhance the functional capacity of the wetland or estuary." The Project has some potential to affect the amount of fresh groundwater that flows to the northern rail pond and thus to change the pond's biotic habitat. However, based on the following, the Project will maintain the functional capacity of the northern rail pond.

(1) In an assessment of groundwater resources for the Dunes and Roppolo well fields prepared by Todd Engineers ("Todd"), dated July 2008 ("the Todd Assessment of Groundwater Resources"), Todd determined that the Project would not significantly deplete groundwater supplies or interfere substantially with groundwater

recharge. To address concerns raised by neighbors, Todd provided two additional reports dated March 23, 2010, and July 13, 2010, to clarify and support the prior analysis.

(2) The distance-drawdown analysis in the Todd Assessment of Groundwater Resources indicates the maximum water level drawdown in the immediate vicinity of the Project's well will be relatively small, ranging from 8.6 to 24.3 feet. Todd's Assessment of Groundwater Resources further indicates that the well's water level in the aquifer will be allowed to recover to static or near-static conditions (i.e., 0 feet of water level drawdown) on a daily basis.

(3) In addition to the Todd Assessment of Groundwater Resources, Brelje and Race prepared a further analysis, dated February 23, 2010, of the salinity and total dissolved solids ("TDS") in the northern rail pond ("the Brelje and Race Northern Rail Pond Study"). The Brelje and Race Northern Rail Pond Study determined that the northern rail pond "is primarily influenced by the harbor with some groundwater influence...High variability of TDS levels exist in the rail pond due to the significant tidal influence. Pumping at a rate of 150 gpm from the proposed well will not influence the salinity in the rail pond to levels that do not already occur on a daily basis."

(4) The WRA Biological Resources Assessment considered the Brelje and Race Northern Rail Pond Study and concluded that:

> "Reports prepared by Todd Engineers (2008 and 2010) and Brelje and Race Engineers (2010) were reviewed regarding potential impacts to the northern rail pond from well pumping. The reports each conclude that the amount of fresh water removed by well pumping in relationship to the amount flowing through the aquifer system was not significant and would not significantly change the existing fresh water-saline balance of the northern rail pond. We agree with those conclusions. In order for a significant change in salinity to occur, well pumping would need to reduce the amount of ground water outflow so that fresh water seepage ceases. The degree of pumping needed to create this condition would have to be constant to cause a change in vegetation community types. Once pumping ceased the dune well field would quickly recharge and fresh water influence would once again return. Continuous pumping is not anticipated and, as explained in the Todd reports, there is sufficient water in the aquifer

to allow continued flows to the rail pond under proposed pumping rates. Therefore, any potential impacts to the existing plant community from the amount of well pumping that is described for the project will be less than significant and no mitigation is needed."

(5) The Brelje and Race Northern Rail Pond Study and the WRA Biological Resources Assessment were reviewed by a PRMD staff environmental specialist/biologist. In an e-mail dated July 2, 2010, the PRMD staff environmental specialist/biologist observed that, "Since the study results show that the site has salinity comparable to seawater, on high tide, this eliminates the potential for sensitive freshwater species and appears to validate the findings of the WRA Biological Resources Assessment dated March 2010. In addition, I now concur with WRA statement with regard to effects on the plant community that the normal baseline conditions will not likely change as a result of this proposed project, ("perhaps slightly increasing salinity in warmer, dry summer months and slightly decreased salinity in cooler, wetter winter months to which the existing plant community has adapted.") Since this is the case, I think this potential indirect impact would be less than significant."

(6) The conditions of approval imposed herein require annual well monitoring for the initial five years of the Project. To ensure that the functional capacity of the northern rail pond is maintained, the conditions of approval imposed herein further require that if the annual well monitoring (or monthly samples) indicates an increase in the root zone porewater salinity levels of the northern rail pond at or above 5 parts per thousand or above the salinity level established by baseline data, a biological review shall be conducted. If the biological review indicates a significant shift in the plant community composition of the northern rail pond beyond seasonal variation or baseline conditions, or other potentially significant impacts on the biological function of the northern rail pond, the District must reduce or suspend pumping of the well and evaluate and implement methods to reduce the porewater salinity of the northern rail pond to levels below 5 parts per thousand, or below the salinity level established by baseline monitoring.

(i) The Local Coastal Plan's Environmental Resources Management Policy No. 19 requires minimizing construction on land adjacent to wetlands during maximum seasons of breeding bird activity (March 1 to July 1). To ensure compliance with this requirement, Mitigation Measure BR1 of the Mitigated Negative Declaration, which is

incorporated into the conditions of approval imposed herein, requires avoidance and buffering of nests of migratory and special status bird species for construction work conducted March through August.

(j) In a geotechnical consultation prepared by RGH Geotechnical Consultants ("RGH"), dated October 22, 2009 ("the RGH Geotechnical Consultation"), RGH indicated the proposed sites for the Project's well and chlorination structure are located in an Alquist-Priolo Earthquake Fault Zone for the San Andreas fault system. The level of risk for surface rupture for the two sites is considered high. The RGH Geotechnical Consultation indicates the Project's chlorination structure is exempt from the special fault study required in delineated fault zones due to the absence of human occupancy. However, the chlorination structure has been relocated farther away from wetlands in the vicinity of the Project, thereby reducing the risk to wetlands and associated biological species if an accidental spill were to occur as a result of surface rupture. Moreover, the RGH Environmental Consultation recommends specific construction standards for the Project's chlorination structure as one or more large earthquakes (Magnitude 6.7 or greater) are predicted to occur within the next 30 years and the Project Site is subject to seismic shaking. Specifically, the Project's chlorination structure is recommended to include a secondary containment basin built into the floor to contain any accidental chlorine solution spills that might occur. In addition, only a week's supply of dry calcium hypochlorite tablets would be stored on-site. The conditions of approval imposed herein require the District to incorporate these recommendations into the plans for the Project's chlorination structure.

4.3 The Board finds that the establishment, maintenance, and operation of the Project, as approved herein, will not be detrimental to the health, safety, peace, comfort, or general welfare of persons residing or working in the neighborhood or to the general welfare of the area.

Section 5.
Evidence in the Record.

5.1 The findings and determinations set forth in this resolution are based upon the record of these proceedings. References to specific statutes, ordinances, regulations, reports, or documents in a finding or determination are not intended to identify those sources as the exclusive bases for the finding or determination.

Now, Therefore, Be it Further Resolved, that based upon the foregoing findings and determinations and the record of these proceedings, the Board hereby certifies, declares, and orders as follows:

1. The foregoing findings and determinations are true and correct, are supported by substantial evidence in the record of these proceedings, and are adopted as hereinabove set forth.

2. The information contained in the Mitigated Negative Declaration has been reviewed and considered by the Board, and the Subsequent Mitigated Negative Declaration is adopted. PRMD is directed to file a notice of determination in accordance with CEQA and the State CEQA Guidelines.

3. The Project is approved, subject to the conditions of approval set forth in Exhibit "A," attached hereto and incorporated herein by this reference.

4. The Mitigation Monitoring Program is adopted as set forth in Exhibit "A." PRMD is directed to undertake monitoring in accordance with the Mitigation Monitoring Program to ensure that required mitigation measures and project revisions are complied with during project implementation.

5. The Board designates the Clerk of the Board as the custodian of the documents and other materials that constitute the record of the proceedings upon which the Board's decisions herein are based. These documents may be found at the office of the Clerk of the Board of Supervisors, 575 Administration Drive, Room 100A, Santa Rosa, CA 95403.

Supervisors:

Brown: Aye Rabbitt: Aye Zane: No McGuire: Aye Carrillo: No

Ayes: 3 Noes: 2 Abstain: 0 Absent: 0

SO ORDERED.

SONOMA COUNTY BOARD OF SUPERVISORS

Final Conditions of Approval
Exhibit A

Date:	September 27, 2011	**File No.:**	PLP09-0057
Applicant:	Bodega Bay Public Utilities District c/o Janet Mantua	**APN:**	100-060-012, -004, -010, -015, and -016
Address:	1677, 1681, 1685, 1705, and 1707, Bay Flat Road, Bodega Bay		

Project Description: Request for a Use Permit and Coastal Permit to construct a new approximately 100-foot deep municipal water well, transmission piping, and 80 square foot chlorination facility.

Prior to commencing the use, evidence must be submitted to the file that all of the following non-operational conditions have been met.

1. Within five working days after project approval, the applicant shall pay a mandatory Notice of Determination filing fee of $50.00 (or latest fee in effect at time of payment) for County Clerk processing, and $2,044.00 (or latest fee in effect at time of payment) because Subsequent Mitigated Negative Declaration was prepared, for a total of $2,094.00 made payable to Sonoma County Clerk and submitted to PRMD. If the required filing fee is not paid for a project, the project will not be operative, vested, or final and any local permits issued for the project will be invalid (Section 711.4(c)(3) of the Fish and Game Code.) NOTE: If the fee is not paid within five days after approval of the project, it will extend time frames for CEQA legal challenges.

BUILDING:

2. The applicant shall apply for and obtain building related permits from the Permit and Resource Management Department (PRMD). The necessary applications appear to be, but may not be limited to, site review, building permit, and grading permit.

3. Prior to initiation of the approved use, the project shall comply with the accessibility requirements set forth in the most recent California Building Code (CBC), as determined by the PRMD Building Division. Such accessibility requirements shall apply to all new construction and remodeling and, where required by the CBC, to retrofitting of the existing structure.

HEALTH:

"The conditions below have been satisfied BY _____ DATE _____

PRIOR TO DRILLING PERMIT AND VESTING THE USE PERMIT:

4. Portable toilets and portable hand-washing facilities shall be placed and maintained for employees as needed on the project site, but in no case shall they be serviced less than once per three days when 24 hour operations are conducted, and once per seven days when only daytime operations are conducted. Permitee shall provide an accessible portable restroom on the job site where required by Federal, State or local law, including but not limited to, requirements imposed under OSHA, the Americans with Disabilities Act or Fair Employment and Housing Act. The portable restroom shall be removed after completion of construction activity.

OPERATIONAL REQUIREMENTS:

Noise:

5. Noise shall be controlled in accordance with the following as measured at the exterior property line of any affected residential or sensitive land use:

TABLE NE-2:Maximum Allowable Exterior Noise Exposures

Hourly Noise Metric[1], dBA	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L50 (30 minutes in any hour)	50	45
L25 (15 minutes in any hour)	55	50
L08 (5 minutes in any hour)	60	55
L02 (1 minute in any hour)	65	60

[1] The sound level exceeded n% of the time in any hour. For example, the L50 is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level. The L02 is the sound level exceeded 1 minute in any hour.

6. If noise complaints are received from nearby residents, and they appear to be valid complaints in PRMD's opinion, then the applicant shall conduct a noise study to determine if the current operations meet noise standards and identify any additional noise mitigation measures if necessary. A copy of the noise study shall be submitted to the Project Review Health Specialist within sixty days of notification from PRMD that a noise complaint has been received. The owner/operator shall immediately implement any additional mitigation measures needed to meet noise standards.

7. Prior to operation, any new water well serving this project shall be fitted with a water meter to measure all groundwater extracted for this use.

8. a. Groundwater Monitoring. The location of the wells, and groundwater elevations and quantities of groundwater extracted for this use shall be monitored quarterly and reported to PRMD in January of the following year pursuant to section WR-2d of the Sonoma County General Plan and County policies. Annual monitoring fees shall be paid at the rate specified in the County Fee Ordinance.

   b. Rail Pond Monitoring. Prior to the construction of the water supply well, the District shall install monitoring wells to monitor groundwater depth and salinity. One well will be located on the north side of Bay Flat Road at sufficient depth to measure groundwater. Additional monitoring wells shall be placed to measure groundwater salinity and groundwater depth within and below the root zone elevation of the Rail Pond.

   Monitoring wells to measure groundwater salinity and depth within and below the root zone elevation at the rail pond shall be installed vertically in the ground to a depth of about 4 feet with about 1-foot rising above ground (or as needed to be above high tides). The wells shall be located at the following general locations: 1) the edge of the rail pond in salt marsh plant community; 2) the edge of the rail pond in freshwater plant community; 3) landward of #2, south of Bay Flat Road; and, 4) landward of #3, north of Bay Flat Road. The exact monitoring well locations shall be approved by PRMD in advance of placement.

   Each well shall be constructed using 2-inch white PVC pipe with slotted sides in the below ground portion that allows free movement of water in and out of the well. The above ground portion is solid pipe that prevents rain, tidal influence and other substances from getting into the well and will be equipped with a locking cap.

   Sampling will be conducted monthly. For initial baseline data, samples will be taken every two weeks for the first three months in order to determine fluctuation in salinity and groundwater levels, if any. All sampling and ongoing monitoring shall be conducted by a qualified biologist or hydrologist.

   Groundwater levels in the wells shall be measured and recorded. Salinity shall be sampled within the root zone (soil porewater) of plants (approximately 6-inches below the surface) using a salinity refractometer and recorded. Sampling will be scheduled to take place at highest tide (according to tide tables), and a water sample from the rail pond and from the

waters of Bodega Bay shall also be taken and recorded. If surface water in the rail pond contacts the well, it shall also be measured for salinity and recorded.

c. Biological Assessment. Prior to construction of the water supply well, the applicant shall conduct an assessment and inventory of the plant species using fixed line transects within and at the edges of the Rail Pond to establish the baseline condition of species composition, species richness, and plant community structure. To complement the salinity monitoring wells, the Rail Pond vegetation community will be monitored using a belt transect or similar method that will measure potential changes in plant community composition. The transect will be completed by a qualified biologist bi-annually during February and August during the entire five-year monitoring period.

d. Reporting and Mitigation. Annual well monitoring and biological assessment reports shall be prepared for the initial five years of the project, and shall be conducted for at least 8 months prior to operation of the well. The hydrologic monitoring reports shall include all measurements made, and an evaluation of whether water levels and Rail Pond salinities adequately emulate pre-project hydrologic conditions. The monitoring report shall be prepared by a qualified biologist, registered engineer or hydrologic professional and shall be submitted to PRMD Project Review Division. If the monitoring report is prepared by a registered engineer or hydrologic professional, the water monitoring report shall be reviewed by the biologist conducting the vegetation community monitoring for comment and analysis.

If, during any time within the five year monitoring period, the annual well monitoring reports (or monthly samples) indicates an increase in root zone porewater salinity levels at or above 5 parts per thousand (ppt) or above the salinity level established by baseline data, a biological review will be conducted. The biological review shall be prepared at the District's expense. The report shall assess the biological conditions influenced by pumping along with other factors that may have influenced the biological diversity of the rail ponds. If the biological review indicates a significant shift in the plant community composition beyond seasonal variation or baseline conditions, or other potentially significant impacts on the biologic function of the Rail Pond, then the district shall reduce or suspend pumping to evaluate methods to reduce porewater salinity to levels below 5 ppt, or below the salinity level established by baseline monitoring, subject to review and approval by PRMD. Recommendations will be made for review and consideration by PRMD and the Board of Supervisors.

9. Required water meters shall be calibrated, and copies of receipts and correction factors shall be submitted to PRMD Project Review at least once every five years.

TRANSPORTATION AND PUBLIC WORKS:

"The conditions below have been satisfied" BY _____ DATE _____

10. The developer shall obtain an Encroachment Permit from PRMD prior to constructing any improvements within County road right-of-way.

PLANNING:

"The conditions below have been satisfied BY _____ DATE _____

11. This Use Permit and Coastal Permit allows for the construction of a new 100-foot deep municipal water well, transmission piping, and 80 square foot chlorination structure. The permitted hours of operation are 24 hours a day, seven days a week. The use shall be operated in accordance with the proposal statement and site plan located in File No. PLP09-0057 as modified by these conditions.

12. The applicant shall comply with all the mitigation measures, and mitigation monitoring located in the Mitigated Negative Declaration dated June 19, 2008, prepared by Brelje & Race Engineers and approved by the Bodega Bay Public Utility District Board of Directors on August 20, 2008.

Those measures are incorporated herein as Conditions of Approval and are identified as follows (BBPUD Mitigation Measure ___).

PRE- CONSTRUCTION CONDITIONS:

13. Mitigation Measure 4.a. When feasible, construction activities and vegetation removal should be conducted between April 1 through September 30, which is outside of the monarch butterfly over-wintering period. If work must be conducted during the wintering period (October 1 through March 31), then a pre-construction survey for monarch butterfly roosts shall be performed by a qualified biologist within two weeks of the onset of activities in and within 100 feet of the Project Area. If an active roost is found, an exclusion buffer should be placed around the roost tree at the discretion of a qualified biologist.

    Mitigation Monitoring: If construction or vegetation removal occurs during the wintering period for monarch butterflies (October 1 through March 31) a qualified biologist shall be retained to monitor and conduct preactivity surveys; monitor construction activities that could directly impact sensitive wildlife; and if necessary, ensure any active roosts are adequately buffered.

14. If possible, construction work should be conducted during the non-nesting season (September through February) to avoid impacts to nesting migratory and special status bird species. Implementation of this measure will reduce impacts on nesting special status bird species to a level of less than significant.

    If work must be conducted during the nesting season (March through August), pre-construction nesting bird surveys shall be conducted 30 days prior to beginning that construction work. If active raptor nests are found during preconstruction surveys, a 500-foot no-disturbance buffer will be created around active raptor nests during the breeding season or until it is determined that all young have fledged. A 100-foot buffer zone will be created around the nests of other special-status birds (Migratory Bird Act). These buffer zones may be modified in coordination with California Department of Fish & Game based on conditions at work locations at the time of nest identification.

    If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. (BBPUD Mitigation Measure BR1).

15. Design of the well vault and chlorination facility shall include noise attenuation to ensure that noise associated with those facilities shall be minimized. At a minimum, noise shall be reduced to comply with General Plan standards. (BBPUD Mitigation Measure N1).

16. The project plans and specifications shall provide for the following:

    a. All equipment and vehicles used for construction will be maintained in proper mechanical condition with engine mufflers installed.

    b. The contractor shall locate stationery construction equipment, such as generators and/or air compressors, as far as possible from sensitive residential property boundaries. Such equipment shall be turned off when not in use.

    c. Construction activities shall be restricted to the hours between 7:00 a.m. and 6:00 p.m., Monday through Friday. Noise generating construction activities shall be prohibited on Saturdays, Sundays, and legal holidays. Should special circumstances necessitate performance of construction work outside the hours and days specified herein, the contractor may request and the District may approve such work. (BBPUD Mitigation Measure N2).

17. The project plans and specifications shall provide that in the event prehistoric-era or historic-era archaeological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. Prehistoric-era archaeologic site indicators could include chipped chert and obsidian tools and tool manufacture waste flakes, grinding implements such as mortars and pestles, and locally darkened soil containing the previously mentioned items as well as fire

altered stone and dietary debris such as bone and shellfish fragments. Historic-era archaeologic site indicators could include items of ceramic, glass and metal, and features such as structural ruins, wells and pits containing such artifacts. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional archaeologist immediately after the find. Such archaeologist shall conduct an evaluation of significance of the site, and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from the District. (BBPUD Mitigation Measure CR1).

18. The project plans and specifications shall provide that in the event paleontological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact the District. The District shall contact a qualified professional geologist or paleontologist immediately after the find. Such consultant shall conduct an evaluation of significance of the site, and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from the District. (BBPUD Mitigation Measure CR2).

19. The project plans and specifications shall provide for the following:

    The construction staging and work areas shall be identified by the contractor and approved by the District's Project Manager prior to the delivery of construction equipment or materials, and prior to construction. The staging and work areas shall have designated temporary parking area(s) for construction personnel. (BBPUD Mitigation Measure T1).

20. All structural, architectural and mechanical details shall be designed to resist earthquake ground shaking and shall conform to all the recommendations listed in the Geotechnical Consultation prepared by RGH Consultants, Jared Pratt, Certified Engineering Geologist, Eric Chase, Geotechnical Engineer, October 22, 2009.

21. The applicant shall provide evidence to the Project Planner that all recommendations listed in the Geotechnical Consultation shall be incorporated into the building plans for the chlorination structure which is subject to review and approval by PRMD Building Division prior to issuance of a building permit.

22. At the time of submitting a building permit application, the applicant shall submit to PRMD a Condition Compliance Review fee deposit (amount to be determined consistent with the ordinance in effect at the time). In addition, the applicant shall be responsible for payment of any additional compliance review fees that exceed the initial deposit (based upon hours of staff time worked) prior to final inspection being granted.

23. This "At Cost" entitlement is not vested until all permit processing costs are paid in full. Additionally, no grading or building permits shall be issued until all permit processing costs are paid in full.

DURING CONSTRUCTION:

24. Contractors shall be required to maintain through movements for all emergency service vehicles and personnel on affected roadways during all hours. Emergency service providers shall be notified of proposed construction that affects roadways by the contractor.

25. The contractor shall be required to maintain traffic flow on local roadways during non-working hours, and to minimize traffic restrictions during working hours. The contractor shall be required to follow traffic safety measures in accordance with the current Caltrans *Manual of Traffic Controls for Construction and Maintenance Work Zones*. (BBPUD Mitigation Measure T2).

26. Mitigation Measure 4.c(1). Best Management Practices (BMPs) shall be implemented during project construction to prevent accidental filling and/or erosion and sedimentation. BMPs include, but are not limited to: installation of construction fencing along the project boundaries in areas

within 100 feet of a wetland to clearly mark the work area and prevent work outside of the construction area. In addition, silt fencing shall be installed along the project boundary if rain is forecast within 10 days of construction activities that would occur within 100 feet of a wetland.

Mitigation Monitoring: BMP'S shall be shown on all building plans to protect boundaries within 100 feet of a wetland the wetland shall be identified on project building plans and the plans shall be reviewed approved by PRMD prior to issuance of the building permit and prior to construction.

27. Construction activities shall be restricted to the hours between 7:00 a.m. and 6:00 p.m., Monday through Friday. Noise generating construction activities shall be prohibited on Saturdays, Sundays, and legal holidays. Should special circumstances necessitate performance of construction work outside the hours and days specified herein, the contractor may request and the District may approve such work. (BBPUD Mitigation Measure N2).

28. The following Feasible Control Measures, as described by the Bay Area Air Quality Management District, shall be implemented during construction to minimize fugitive dust and emissions:

    a. Water all active construction areas at least twice daily.

    b. Cover all trucks hauling soils or demolition materials.

    c. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at the construction site. Sweep daily if visible soil materials are carried onto adjacent streets.

    d. Minimize vehicle idle times and turn off construction equipment when not in use.

    e. Replant vegetation on disturbed areas as quickly as possible. (BBPUD Mitigation Measure AQ1).

29. If human remains are encountered during grading, excavation or trenching, all construction activity shall cease and the contractor shall immediately contact the District and the Sonoma County Coroner's Office. If the remains are determined by the Coroner's Office to be of Native American origin, the Native American Heritage Commission shall be contacted and the procedures outlined in CEQA §15064.5 (d) and (e) shall be implemented by the District or its designee. (BBPUD Mitigation Measure CR3).

30. Installation of piping may alter surface drainage conditions that could result in erosion or slope instability. Erosion control measures that follow Best Management Practices shall be incorporated into the project plans and specifications. The Bay Area Regional Water Quality Control Board publishes an Erosion and Sediment Control Field Manual which describes such practices. As a specific example, the project shall preserve existing vegetation where possible; utilize straw waddles and straw bale barriers to prevent erosion into storm drains or waterways. Additionally, disturbed sand stabilizing vegetation shall be replaced along pipeline alignments. (BBPUD Mitigation Measure GS1).

ONGOING OPERATIONAL CONDITIONS:

31. This use shall be constructed, maintained, and operated in conformance with all applicable county, state, and federal statutes, ordinances, rules, and regulations. A violation of any applicable statute, ordinance, rule or regulation shall be a violation of the Use Permit, subject to revocation.

32. Any proposed modification, alteration, and/or expansion of the use authorized by this Use Permit/Coastal Permit shall require the prior review and approval of PRMD or the Board of Zoning Adjustments, as appropriate. Such changes may require a new or modified Use Permit/Coastal Permit and additional environmental review.

33. The Director of PRMD is hereby authorized to modify these conditions for minor adjustments to respond to unforeseen field constraints provided that the goals of these conditions can be safely

achieved in some other manner. The applicant must submit a written request to PRMD demonstrating that the conditions is infeasible due to specific constraints (e.g. lack of property rights) and shall include a proposed alternative measure or option to meet the goal or purpose of the condition. PRMD shall consult with affected departments and agencies and may require an application for modification of the approved permit. Changes to conditions that may be authorized by PRMD are limited to those items that are not adopted standards or were not adopted as mitigation measures or that were not at issue during the public hearing process. Any modification of the permit conditions shall be documented with an approval letter from PRMD, and shall not affect the original permit approval date or the term for expiration of the permit.

The owner/operator and all successors in interest, shall comply with all applicable provisions of the Sonoma County Code and all other applicable local, state and federal regulations.

34. This permit shall be subject to revocation or modification by the Board of Zoning Adjustments if: (a) the Board finds that there has been noncompliance with any of the conditions or (b) the Board finds that the use for which this permit is hereby granted constitutes a nuisance. Any such revocation shall be preceded by a public hearing noticed and heard pursuant to Section 26-92-120 and 26-92-140 of the Sonoma County Code.

In any case where a Use Permit has not been used within two (2) year after the date of the granting thereof, or for such additional period as may be specified in the permit, such permit shall become automatically void and of no further effect, provided however, that upon written request by the applicant prior to the expiration of the two year period the permit approval may be extended for not more than one (1) year by the authority which granted the original permit pursuant to Section 26-92-130 of the Sonoma County Code.

1677 Bay Flat Road

STATE OF CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., Governor

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
(415) 904-5260 FAX (415) 904-5400
www.coastal.ca.gov

COMMISSION NOTIFICATION OF APPEAL

DATE: October 4, 2011

TO: Dave Hardy, Supervising Planner
County of Sonoma, Permit and Resource Management Department -- Planning Division
2550 Ventura Avenue
Santa Rosa, CA 95403

FROM: Ruby Pap, District Supervisor

RE: **Commission Appeal No. A-2-SON-11-037**

Please be advised that the coastal development permit decision described below has been appealed to the California Coastal Commission pursuant to Public Resources Code Sections 30603 and 30625. Therefore, the decision has been stayed pending Commission action on the appeal pursuant to Public Resources Code Section 30623.

Local Permit #:	PLP09-0057
Applicant(s):	Bodega Bay Public Utilities District, Attn: Janet Mantua
Description:	To construct of a new approximately 100-foot deep municipal water well, transmission piping, and 80 square foot chlorination facility
Location:	1677, 1681, 1685, 1705, 1707 Bay Flat Road, Bodega Bay (Sonoma County) (APN(s) 100-060-12, 100-060-04, 100-060-10, 100-060-15, 100-060-16)
Local Decision:	Approved
Appellant(s):	Bodega Bay Concerned Citizens
Date Appeal Filed:	10/4/2011

The Commission appeal number assigned to this appeal is A-2-SON-11-037. The Commission hearing date has not yet been established for this appeal. Within 5 working days of receipt of this Commission Notification of Appeal, copies of all relevant documents and materials used in the County of Sonoma's consideration of this coastal development permit must be delivered to the North Central Coast District office of the Coastal Commission (California Administrative Code Section 13112). Please include copies of plans, relevant photographs, staff reports and related documents, findings (if not already forwarded), all correspondence, and a list, with addresses, of all who provided verbal testimony.

A Commission staff report and notice of the hearing will be forwarded to you prior to the hearing. If you have any questions, please contact Ruby Pap at the North Central Coast District office.

cc: Bodega Bay Public Utilities District, Attn: Janet Mantua

Exhibit 5 (A-2-SON-11-037)

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5260 FAX (415) 904-5400

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: Bodega Bay Concerned Citizens

Mailing Address: P. O. Box 815

City: Bodega Bay, CA Zip Code: 94923 Phone: 707-875-2297

RECEIVED

JUL 27 2011

CALIFORNIA COASTAL COMMISSION NORTH COAST DISTRICT

SECTION II. Decision Being Appealed

1. Name of local/port government:

County of Sonoma

2. Brief description of development being appealed:

Installation of a new water well, chlorination structure and required trenching located in a Sanctuary Preservation area, Environmentally Sensitive Habitat Area (ESHA) and CCC protected area adjacent to Bay Flat Road within the Coastal Zone, Bodega Bay. The project is adjacent to the historic Rail Ponds located between Westshore Rd. and Bay Flat Road, an area of great importance as a bird migration route, with significant wetlands throughout the site.

3. Development's location (street address, assessor's parcel no., cross street, etc.):

Location of the actual well site is situated at 1681 Bay Flat Road. Other properties affected by this project are at 1707 Bay Flat Road, 1677 Bay Flat Road and 1705 Bay Flat Road.

4. Description of decision being appealed (check one.):

☐ Approval; no special conditions

☒ Approval with special conditions:

☐ Denial

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-2-SON-11-037

DATE FILED: 10/4/11

DISTRICT: North Central Coast

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 2)

5. Decision being appealed was made by (check one):

☐ Planning Director/Zoning Administrator

☒ City Council/Board of Supervisors

☐ Planning Commission

☐ Other

6. Date of local government's decision: TENATIVE APPROVAL 7-12-2011 FINAL APPROVAL 8-23-2011

7. Local government's file number (if any): PLP09-0057

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:

Bodega Bay Public Utilities District
P. O. Box 70
Bodega Bay, CA 94923

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

(1) Margaret C. Briare
P. O. Box 998
Bodega Bay, CA 94923

(2) Rose M. Zoia
50 Old Courthouse Square, Suite 401
Santa Rosa, CA 95404

(3) Peter R. Baye, Ph.D.
P. O. Box 65
Annapolis, CA 95412

(4) Greg Kamman
Kamman Hydrology & Engineering, Inc.
7 Mt. Lassen Drive, Suite B-250
San Rafael, CA 94903

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 3)

SECTION IV. Reasons Supporting This Appeal

PLEASE NOTE:

- Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section.
- State briefly **your reasons for this appeal**. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)
- This need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

There has been failure to adequately assess the environmental impacts of this project on the part of the applicant, Bodega Bay Public Utilities District, and the County of Sonoma. The original Mitigated Negative Declaration was prepared by the applicant in June, 2008, and an application for a Coastal Permit was also received by the County of Sonoma at that time.

The original MND and permit application did not contain sufficient information with regard to the environmental aspects of the project and the possible impacts this project would have on the area, leading to a rejection by the County of Sonoma. Now, three years later, the project has again been presented to the County of Sonoma and a Subsequent Mitigated Negative Declaration was prepared for the Board of Supervisors by the Permit & Resource Management Department of Sonoma County. The project was tentatively approved by straw vote (3-1-1) on July 12, 2011, with final approval being sought on August 23, 2011 despite the preponderence of evidence against the project.

The Local Coastal Plan covering Sonoma County lists this area as a Sanctuary Preservation Area:
"Sanctuary Preservation areas are the most environmentally sensitive areas along the coast. They correspond to "Environmentally Sensitive Habitat Areas" as defined in the 1976 Coastal Act Sections 30107.5 and 30240. No development other than nature trails and resource dependent uses shall be allowed within such areas. There shall be no significant disruption of habitat values." (pg. 20)

In addition, the applicants and their agents have consistently denied the presence of important wetlands evident in the area, wetlands that will be severely impacted by the installation of this well. As this is proposed to be a shallow well (only 75 to 100 ft. deep), the removal of water from this site at the projected rate of 152 gpm at 18 hr. intervals will have a significant effect on the freshwater supply needed to sustain the area and the threatened wetlands and Rail Ponds.

We are enclosing technical reports prepared for us by experts in the field which were presented at the hearing before the Board of Supervisors. They include: Dr. Peter R. Baye, Botanist and Coastal Ecologist, Greg Kamman of Kamman Hydrology & Engineering, Inc. and Richard Grassetti of Grassetti Environmental Consulting regarding his review of CEQA documents for the project. These documents speak to the necessity of preserving this area...one of the few remaining areas of its kind along the Sonoma Coast as it is a designated Globally Important Bird Sanctuary.

We are preparing to submit much more information to you in the coming weeks. Time does not allow for complete submittal at this time. Additional information is being compiled and will be sent to you at the earliest convenience, along with additional photographs of the area.

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 4)

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Margaret C. Briare
Signature of Appellant(s) or Authorized Agent

Date: July 25, 2011

Note: If signed by agent, appellant(s) must also sign below.

Section VI. Agent Authorization

I/We hereby authorize Margaret C. Briare Bodega Bay Concerned Citizens to act as my/our representative and to bind me/us in all matters concerning this appeal.

Margaret C. Briare
Signature of Appellant(s)

Date: July 25, 2011

Enclosures:

1. Review of Biological Resources, Impacts and Mitigation dated June 12, 2011 by Dr. Peter R. Baye.
2. Memorandum prepared by Greg Kamman of Kamman Hydrology & Engineering, Inc. dated March 1,2011 (Initial review).
3. Review of CEQA Documents for Bay Flat Road Well Installation Project prepared by Richard Grassetti of Grassetti Environmental Consulting on March 8, 2011.
4. Photographs of the area P1, P2, P3, P4, P5, P6, and P7.
   Note: A power point presentation is being prepared to be sent with later documentation.

BODEGA BAY CONCERNED CITIZENS

P. O. Box 815
Bodega Bay, CA 94923

RECEIVED
JUL 27 2011
CALIFORNIA
COASTAL COMMISSION

July 25, 2011

Charles Lester, Senior Deputy Director
CALIFORNIA COASTAL COMMISSION
North Central Coast District Office
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Dear Mr. Lester,

We are hereby forwarding and our Appeal From Coastal Permit Decision of Local Government with regard to approval of the installation of a new well, chlorination structure and required trenching and pipe installation within a Sanctuary Preservation Area.

Applicant: Bodega Bay Public Utilities District
Address of Project: 1681 Bay Flat Road, Bodega Bay, Ca.
County of Sonoma File No. PLP09-0057

This proposed project and its approval by the County of Sonoma is not in accordance with the provisions and policies of the LCP for this area and goes against the standards of the Coastal Act and CEQA. In addition, necessary permits from other agencies (U. S. Army Corps of Engineers, Department of Fish & Game, Regional Water Quality Control Board, etc.) have not yet been applied for. Despite all the evidence gathered in opposition to this project, the County of Sonoma is allowing the applicant to move forward with the project and are prepared to issue a Coastal Permit and Use Permit.

We are submitting this appeal at this time due to the urgency of the situation. The applicant has chosen to apply condemnation proceedings against the affected property owners for the necessary easements and access/egress needed for the project. One of these owners, Linda Kepner, has recently contacted you as to the disposition of her property; a portion of which the California Coastal Commission holds jurisdiction over for the protection of that area. [See report from Kamman Hydrology & Engineering enclosed with this appeal]. The applicant is planning to install a chlorination shed adjoining her property which will contain hazardous materials for the purification of the well water and they will need her property for access and delivery of these materials to the site. Important wetlands have been identified approximately 50 ft. from this installation and at the entrance downhill from the site of the shed. [See report by Dr. Peter R. Baye enclosed with this appeal.] In addition, the applicant is seeking waivers from the required buffer zones.

Should you require more information immediately, we can be contacted at our address shown on the above or by phone at 707-875-2297 and are available online at briarepach@aol.com.

Thank you for your consideration. Additional information is forthcoming and we look forward to hearing from you in the very near future.

Sincerely,

Margaret C. Briare

Margaret Briare, Representative
BODEGA BAY CONCERNED CITIZENS

CC: Peter Douglas, Executive Director
Ruby Pap, District Supervisor

Peter R. Baye, Ph.D.
Botanist, Coastal Ecologist
P.O. Box 65,
Annapolis, California 95412

(415) 310-5109

baye@earthlink.net

Efren Carrillo, Chair. and Supervisors
Sonoma County Board of Supervisors
575 Administration Drive, Room 100 A
Santa Rosa, CA 95403

June 12, 2011

Cynthia Demidovich
Sonoma County Permit and Resource Management Department
22550 Ventura Avenue
Santa Rosa, CA 95403

Via email

SUBJECT: Bay Flat Well Subsequent Mitigated Negative Declaration dated June 3, 2011; Bodega Bay Public Utilities District Bay Flat Road Well Project: review of biological resources, impacts and mitigation

To the Board of Supervisors, Sonoma County:

Please consider my comments on the proposed mitigated negative declaration for the Bay Flat Well Project in Bodega Bay. The focus of my comments are on direct, indirect, and cumulative impacts to wetlands ecology, wetland-dependent wildlife, and special-status species, with emphasis on significant environmental resources that were omitted in the PRMD and BBPUD Mitigated Negative Declarations, or erroneous conclusions about significant impacts and mitigations.

In January to March 2011, I prepared a detailed technical memorandum on the original 2008 Mitigated Negative Declaration (prepared by the project proponent, BBPUD) and all subsequent supplemental environmental documents through 2010, for Bodega Bay Concerned Citizens, represented by Rose Zoia, based on multiple field investigations and review of all technical documents available on the project through 2010. The full text of that technical memorandum is presented as an attachment below, and the relevant main findings and conclusions relevant to the current PRMD subsequent mitigated negative declaration (MND) are summarized briefly below in the body of this letter. I have thoroughly reviewed the PRMD subsequent mitigated negative declaration to ensure that

my comments on the deficiencies of the original MND and supplemental environmental analyses still apply.

My qualifications to provide expert comments on environmental impact assessments of coastal wetlands and special-status species include the following:

- Ph.D (ecology, botany), Department of Plant Sciences, University of Western Ontario, Canada (1990)
- 32 years professional experience in applied coastal ecology, with emphasis on central and northern California coast since 1991;
- senior biologist and principal author of administrative draft endangered species recovery plan for tidal marsh ecosystems of Central and Northern California, U.S. Fish and Wildlife Service;
- senior environmental scientist, U.S. Army Corps of Engineers, Regulatory Branch, San Francisco District (1991-1997)

My principal findings relevant to the current MND are summarized as follows:

1. California red-legged frogs (*Rana draytonii*, federally listed threatened species; CRLF) *occupy and apparently breed in the freshwater marsh of the Roppolo well field approximately 0.6 miles SW of the project site.* I confirmed this in January-March 2011 by direct observations. No CRLF surveys were included in the *MND and supporting documents, which erroneously dismissed the possibility of occurrence by neglecting inspection of obvious freshwater wetlands in the project vicinity.* Suitable dispersal corridors for CRLF exist connecting the Roppolo well field freshwater marsh to a small freshwater marsh with suitable potential breeding and foraging freshwater marsh habitat that occurs directly below the proposed chlorination shed location, on the north side of Bay Flat Road, adjacent to a private residence. This freshwater marsh and suitable CRLF habitat was not identified in any of the previous environmental documents. It is distinct from the Rail Ponds fringing freshwater marsh, willow-waxmyrtle swamp, and brackish marsh gradient. The neglect of this tule-cattail marsh and open water habitat in previous assessments is striking and significant. A chlorine spill during a rainfall event could contaminate this marsh and cause significant impacts to wetlands, wildlife, and threatened CRLF. The MND does not address the potentially significant impact of groundwater drawdown during critical drought years on the integrity of this CRLF habitat or potential mortality of tadpoles. The MND contains no mitigation specific to this wetland.

2. Increased well pumping during critical drought years may cause significant dieback of salt-sensitive freshwater marsh vegetation and habitat along the north side of the Rail Ponds, and potentially irreversible dieback of willow-waxmyrtle swamp maintained by shallow freshwater groundwater seepage that prevents salinity intrusion from tidal water

infiltration. There is clear evidence that near-surface freshwater seepage from shallow groundwater on the north side of the rail ponds maintains a pronounced freshwater-brackish marsh gradient on the north (landward) side of the rail ponds. This fresh-brackish wetland gradient is associated with yellow rail and black rail habitat. The fresh-to-brackish marsh vegetation is *rooted in the upper 20 to 30 cm of soil, and is supported by freshwater seepage in this shallow surface zone.* The porewater salinity of this rooting zone, *not the open tidal water salinity of the rail ponds*, is what matters to the integrity of the marsh habitat. The seaward side of the rail ponds, with no significant freshwater seepage influence, is effectively salt marsh dominated by tidal water column salinity infiltrating soil porewater in the marsh root zone. There is clear evidence that past drought cycles have resulted in dieback of salt-sensitive tule marsh, and tule and bulrush have re-expanded in wet years. This narrow fringing marsh is apparently very sensitive to fluctuation in near-surface freshwater seepage gradients. The previous analyses both 2008 and current MNDs failed to analyze impacts of groundwater pumping specifically on porewater salinity in this shallow rooting zone, and made completely erroneous conclusions about the lack of potential significant impacts by focusing on open water column salinity in the pond itself. Marsh vegetation is not rooted in the water column, and is only indirectly influenced by tidal water. Previous analyses failed to identify ecologically accurate and meaningful sensitive receptors and processes that control salinity impacts in these wetlands, and presented unreliable and likely incorrect conclusions for CEQA.

In conclusion, the subsequent MND by PRMD repeats the principal fallacies and omissions of the previous MND, and may result in potentially significant impacts in the absence of adequate analysis and mitigation.

Respectfully submitted,

Peter Baye

Peter Baye
baye@earthlink.net

cc: Rose Zoia
Richard Grassetti, GECONS
Greg Kamman, KHE Inc.

ATTACHMENT
TECHNICAL MEMORANDUM – BODEGA BAY FLAT WELL WETLAND IMPACT ASSESSSMENT - PETER R. BAYE, 2011

I reviewed the following documents in detail:

Sonoma County PRMD

Bodega Bay Public Utility District. 2008. Notice of Intent to Adopt a Mitigated Negative Declaration. PPBUD, Bodega Bay, CA, June 19, 2008. 1 p. (contact: Ron Huls)

Bodega Bay Public Utility District. 2008. Mitigated Negative Declaration – Bay Flat Road Well. June 19, 2008. 49 pp. & 9 pp. mitigation and monitoring plan. BBPUD Bodega Bay, CA (contact: Ron Huls)

Brelje & Race, Consulting Engineers. 2010. Memorandum – Bodega Bay Public Utility District Bay Flat Road Well Project, B&R File No. 1817.06, Audust 18, 2010.

RGH Consultants. 2009. Letter report, Geotechnical consultation regarding seismic design considerations for proposed chlorination shed, Bay Flat Road Project at 1665 Bay Flat Road, Bodega Bay. Project No. 1148.26.06.1, October 22, 2009 (received Sonoma Co. PRMD April 7, 2010).

Sonoma County Permits and Resource Management Department (PRMD) 2009. Cynthia Demidovich, Planner, letter to Bodega Bay Public Utility District, Janet Mantua, re: PLP09-0057, 1665 Bay Flat Road, Bodega Bay, notification of incomplete application. July 2, 2009.

Sonoma County Permits and Resource Management Department (PRMD) 2010. Rich Stabler, Environmental Specialist/Biologist. Memorandum, PLP09-0057, 1665 Bay Flat Road, Bodega Bay, Installation of water supply wells. June 7, 2010, to PRMD Project Review Section, attn: Cynthia Demidovich.

Sonoma County Permits and Resource Management Department (PRMD) 2010. Rich Stabler, Environmental Specialist/Biologist, email to Cynthia Demidovich, July 2, 2010 re: Bay Flat Road Rail Pond TDS Salinity Study.

Wetlands Research Associates. 2010. Biological Resources Assessment – Bodega Bay Flat Road Well Project, Bodega Bay Sonoma County. Prepared for: Justin Witt, Brejle & Race, Santa Rosa. March 2010.

My qualifications to provide technical peer review for environmental impact assessments of coastal wetlands and special-status species include the following:

- Ph.D (ecology, botany), Department of Plant Sciences, University of Western Ontario, Canada (1990)
- 32 years professional experience in applied coastal ecology, with emphasis on central and northern California coast since 1991;
- senior biologist and principal author of administrative draft endangered species recovery plan for tidal marsh ecosystems of Central and Northern California, U.S. Fish and Wildlife Service;
- senior environmental scientist, U.S. Army Corps of Engineers, Regulatory Branch, San Francisco District (1991-1997)

The principal findings of my technical review are summarized below, and are explained in detail under specific subject headings for special-status species and wetlands.

1. Principal findings

1.1 Riparian habitat impacts. The Mitigated Negative Declaration (MND) presents invalid, incorrect, and unsupported conclusions that "the project will not affect any riparian habitat or other sensitive natural community" ("no impact"), and fails to address potential significant indirect and cumulative impacts to riparian woodland and scrub (willow-waxmyrtle swamp) bordering both sides of Bay Flat Road directly below the project site. The MND fails to define or evaluate a reasonable project effects (assessment) area, and improperly confines its environmental assessment scope to "project footprint" and direct impacts to riparian habitat or other sensitive natural communities. The project is likely to cause potentially significant indirect, long-term, cumulative impacts to riparian woodland and scrub communities, including those within a Sanctuary Preservation Area identified in the Local Coastal Plan (Environmental Map 9, according to PRMD (2009).

1.2. Wetland impacts. The MND presents an invalid, incorrect, and unsupported conclusion that "the project will not impact any wetland areas" ("no impact"). The MND improperly confines its environmental assessment scope to "project footprint" and direct impacts to wetlands and fails to define or assess a reasonable project effects (assessment) area. The MND fails to disclose or assess potentially significant impacts to sensitive freshwater nontidal marshes and tidally influenced fresh-brackish marshes within the likely project effect area (indirect hydrologic impacts area and potential hazardous spill area) below the project site, including those within a Sanctuary Preservation Area identified in the Local Coastal Plan (Environmental Map 9, according to PRMD (2009).

1.3. Fish, wildlife, and special-status species impacts. The MND presents an invalid and unsupported conclusion that the "operation of the project would not alter existing conditions" with respect to movement of native resident or migratory fish and wildlife species, including cumulative impacts to biological resources. The MND fails to disclose or assess potentially significant impacts to suitable habitat for multiple special-status wildlife, plant, and fish species within the project effects area, as well as the presence of special-status species within habitats corridors (within dispersal of the project site from confirmed populations) that overlap with the project site itself. Special-status species that

may occur within contemporary geographic range and suitable habitat observed within the proper project biological assessment area (effects area) include state and/or federally state-listed protected species such as California red-legged frog, tidewater goby, Myrtle's silverspot butterfly, northern salt marsh (Point Reyes) bird's-beak, and species of concern including Humboldt Bay salt marsh owl's-clover, coastal marsh milkvetch, Marin knotweed, Bolander's water-hemlock, Franciscan thistle, and Sonoma alopecurus. None of these species were assessed in the MND, the few that were addressed in the 2010 Biological Resources Assessment (WRA 2010) were assessed only for presence within the project (footprint) area, and were not evaluated within a biologically defined assessment area.

1.4. Substrate salinity impacts to fringing wetlands of rail ponds. Potential significant salinity intrusion impacts to tidal influenced freshwater marsh, fresh-brackish marsh, and willow-waxmyrtle swamp (riparian woodland/scrub) were inaccurately assessed in post-MND analyses. The threshold for significant salinity intrusion impacts is infiltration of seawater into marsh soil porewater within the active root zone of salt-sensitive freshwater marsh and swamp vegetation during summer months (particularly during spring tides) and critical drought years. This threshold was not addressed at all by analysis of average groundwater drawdown or water column salinity of the rail pond. The reduction of freshwater seepage outflows in the high marsh zone by 45-65 gpm during summer months of critical drought years would indeed "severely reduce or eliminate" freshwater marsh and riparian woodland along the landward (north) edge of the rail pond, as initially assessed by PRMD (PRMD 2010).

1.5. Potential hazardous materials spills reaching wetland and special-status species habitats. The MND incorrectly asserted that the project site and proposed storage shed for caustic chorine (hypochlorite solution) does not occur within an Alquist-Priolo fault zone; this was flatly contradicted by a geotechnical consultation (RGH 2009) that confirms the site occurs directly in an Alquist-Priolo fault zone and is subject to high risk of surface rupture, ground shaking, high liquefaction hazard with unpredictable impacts, and foundation failure. The potential for catastrophic spillage of hypochlorite solution due to either seismic impacts or accidental release could directly cause significant impacts to freshwater swamp and marsh located on the north side of Bay Flat Road below the proposed chlorination shed location. These freshwater perennial wetlands include suitable breeding and foraging habitats of federally listed (threatened) California red-legged frogs, which are known to occupy highly similar habitats less than 0.7 miles from the project site which are linked by seasonal wetland and upland dispersal corridors bordering Bay Flat Road

2. Analysis

2.1 Environmental assessment area. A systemic CEQA defect of the MND's assessment of ecological impacts was the arbitrary limitation of assessment to direct impacts within the project area (footprint), and the failure to address potentially significant indirect or cumulative impacts, particularly those associated with foreseeable and recurrent natural processes such as critical drought years and San Andreas earthquake fault activity. The MND did not evaluate any indirect or cumulative biological impacts, or discuss any biological impacts beyond the project "footprint"

or site (BBPUD 2008, p. 25), despite the obvious presence of sensitive nontidal freshwater and tidal fresh to brackish wetlands directly below the project site.

A similar systemic CEQA defect is evident in the post-MND Biological Resources Assessment (WRA 2010), which referred repeatedly to the "Project Area" (WRA 2010, p.4- 6) as well as the "site" (WRA 2010, p. 1), and identified a crudely mapped "Study Area" on a location map (USGS quadrangle), but provided no physical or biological explanation, definition, or geographic description of a biological assessment area. Biological assessment areas must be defined by the geographic scope of potential direct, indirect, and cumulative impacts of a project. The biological assessment area for this project must include at least all aquatic, wetland and riparian habitats which may be influenced by changes in surface or subsurface flows (groundwater seepage) of water or hazardous materials that are caused by project construction, operation, or maintenance.

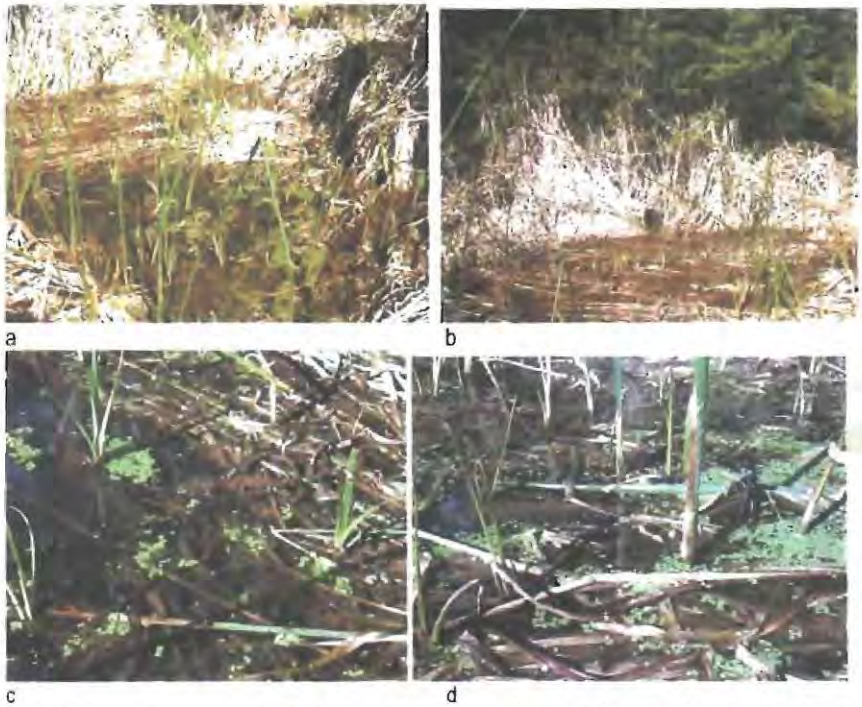
2.2 Wetland and riparian habitats.

The MND failed to disclose the presence of sensitive coastal wetland and riparian habitats directly below the project site that are hydrologically connected to the site, and it failed to classify or describe them in terms of dominant vegetation, hydrogeomorphic type, or habitat suitability for wildlife. The subsequent Biological Resources Assessment failed to accurately describe the distribution and composition of wetlands in the immediate project vicinity or relate them to the project in terms of topography and wetland hydrology.

Non-tidal perennial freshwater marsh and permanently flooded to saturated riparian scrub (swamp) occurs on the north side of Bay Flat Road below the project site, and tidally influenced (culvert-choked) fringing freshwater to brackish marsh and freshwater riparian scrub occur around the "Rail Pond" on the south side of Bay Flat Road. The Rail Pond is a basin with tidally choked flows (damped tidal range, approximately half or less of the tidal range of adjacent Bodega Harbor), enclosed by Westshore Road, connected to Bodega Harbor by a culvert. These wetlands are either within or closely connected to a Sanctuary Preservation Area identified in the Local Coastal Plan (Environmental Map 9, according to PRMD (2009).

I examined the roadside nontidal freshwater perennial marsh and riparian scrub wetland below the project site north of Bay Flat Road on January 25, 2011, and again on March 4, 2011. This marsh is not shown in relation to the project site in the MND, Brelje & Race, or WRA documents, and so cannot confirm its precise location in relation to the project boundaries as represented in those documents. The marsh occurs at the foot of the north side of the steeply sloped private drive leading to the proposed well and chlorination shed sites, and is bounded by the pad fill for the residence on Bay Flat Road. A periwinkle-dominated (*Vinca major*) canyon lies above the marsh. The marsh was shallowly flooded on both dates by at least 2-5 cm of freshwater, measured by refractometer at 0 ppt. Dominant plant species were all obligate freshwater wetland species indicative of perennial soil saturation or flooding, and also included floating aquatic vegetation that is intolerant of dewatering at any time of year. Dominant to locally abundant plant species in the marsh were small-fruited sedge (*Scirpus microcarpus*), broadleaf cattail (*Typha latifolia*), California tule (*Schoenoplectus californicus*), with frequent floating mats of duckweed (*Lemna* sp.), and colonies of horsetails (*Equisetum telmataeia*), water-parsley (*Oenanthe sarmentosa*), willow-herb (*Epilobium ciliatum* ssp. *watsonii*) and non-native calla lily (*Zantedeschia aethiopica*) and abundant matted saturated leaf litter. Cover of standing

leaf litter and vegetation was variable, ranging from 100% closed cover (no open water surface or saturated floating litter) to predominantly open water and flooded or saturated matted leaf litter. The nontidal marsh drained through a culvert under Westshore Roadto the adjacent Rail Pond. The upper edge of the marsh was bordered by dense riparian wetland scrub in saturated and flooded soil composed of waxmyrtle (*Myrica californica*) and willow (*Salix lasiolepis*), with patches of chain fern (*Woodwardia fimbriata*). This woody assemblage may be identified as willow-waxmyrtle swamp, corresponding with widespread vegetation assemblages in coastal fens and dune slacks of the Central and North Coast. A few tree frog calls were detected late morning on the January 25 site visit.



Non-tidal freshwater marsh and willow-waxmyrtle swamp (riparian habitat), north side of Bay Flat Road below or adjacent/contiguous with project site. (a) emergent tules, cattail, sedge, and shallow water. (b) waxmyrtle canopy over tule and cattail marsh with shallow flooding. (c) floating aquatic duckweed in flooded sedge freshwater marsh marsh, and (d) duckweed floating in flooded tule-cattail marsh. This obvious freshwater wetland was not identified or assessed in the MND, WRA, or PRMD documents cited.

I examined two distinct riparian woodland assemblages bordering or within the project area also on January 25 and March 4, 2011. One occurs as a riparian corridor in the dune canyon east of the project site, and includes the area examined by Peter Warner (undated letter) and WRA (WRA

2010). The dune canyon riparian woodland was dominated by two species in the canopy layer, mature and decadent large willow (*Salix* sp., likely all *S. lasiolepis*) and California blackberry (*Rubus ursinus*; not the non-native invasive R. *armeniacus*). The ground layer was dominated pleurocarpous mosses (unidentified) and by thick willow leaf litter and duff, grading into the A horizon of dark organic-stained sandy soil with high organic matter content to a depth greater than 10 cm. The depth of dark, organic-stained and organic-rich soil indicates frequent long-duration past episodes of soil saturation and chronically high moisture content, consistent with the dominance of two wetland indicator species. Unlike the riparian scrub bordering Bay Flat Road, this riparian scrub stand appears to be associated with subsurface groundwater rising to near surface depths in winter, and infrequent, intermittent flooding, rather than persistent near-surface soil saturation. A large stick nest, likely of a dusky-footed wood-rat, was observed at the oblique trunk of a large old willow. The upper end of the dune canyon riparian woodland corridor terminates as a rush meadow (*Juncus lescurii* or *J. arcticus* ssp. balticus) below a dry European beachgrass (*Ammophila arenaria*) steep dune slope, indicating a seasonal to perennial freshwater seep source of shallow groundwater. According to a local resident, the depressions in the lower dune canyon are flooded for days to weeks during rainy winter months and become muddy, which is consistent with the soil conditions and topography I observed. A second patch of mesic riparian scrub, dominated by California blackberry in the shrub layer, occurs along Bay Flat Road on the north side of the driveway leading to the Beavers residence.

a

b

Peter R. Baye Ph.D.
Coastal Ecologist, Botanist
baye@earthlink.net
(415) 310-5109

c d

Riparian woodland of the dune canyon east of the Beaver residence. (a, b) mature willow and California blackberry dominate canopy. (c) stick nest in riparian thicket, likely wood-rat nest; (d) thick duff layer, dark organic-stained, organic-rich sand in canyon floor, indicating prevalent seasonally wet to mesic soil conditions.

The wetland complex of the Rail Pond consists of willow-waxmyrtle swamp (a type of woody riparian habitat), freshwater, fresh-brackish, and brackish marsh, and mudflat. These wetlands are within a Sanctuary Preservation Area identified in the Local Coastal Plan (Environmental Map 9, according to PRMD (2009). The willow-waxmyrtle swamp extends from supratidal (above tidal influence) to upper intertidal range, where it intergrades with fresh-brackish tidally influenced rush and tule marsh. The canopy of the fringing willow-waxmyrtle swamp is again dominated by arroyo willow (*Salix sp.* likely *lasiolepis*) and waxmyrtle (*Myrica californica*) in the canopy layer, and the ground layer is dominated variously by slough sedge (*Carex obnupta*), Baltic rush (*Juncus arcticus* ssp. *balticus*), scouring-rush (*Equisetum hyemale* ssp. *affine*), water-parsley (*Oenanthe sarmentosa*), and patches of invasive non-native Cape ivy (*Delairea odorata*) in the ground layer and sub-canopy. The willow-waxmyrtle swamp vegetation is robust, not decadent, and shows no indicators of salt injury or dieback even in the ground layer. The seaward edge of the willow-waxmyrtle assemblage ground layer, however, is littered with dried debris of marine eelgrass (*Zostera marina*) and other tidal jetsam, indicating episodic or periodic flooding of this vigorous salt-intolerant vegetation by extreme high tides. Fresh and decomposed eelgrass litter from adjacent Bodega Harbor is also abundant in the mid- and lower intertidal zone of the Rail Pond. The fringing tidal marsh at the north (landward) edge of the Rail Pond is dominated by two species, California tule (*Schoenoplectus californicus*) and Baltic rush (*Juncus arcticus* ssp. *balticus*). This is ecologically significant because both dominant species of the landward fringing marsh of the Rail Pond are highly intolerant of marine salinity in soil porewater of their root zones during the growing season.

a b

c d

Fresh and fresh-brackish marsh vegetation gradients in the rail pond. (a, b) willow-waxmyrtle swamp (riparian habitat) bordering upper tidal Baltic rush and tule marsh, north side of rail pond below freshwater marsh seepage and surface (culvert) discharges from north side of Bay Flat Road; (c) contrast between north, landward wetland fringe (salt-sensitive tule, willow, waxmyrtle; left) and south, seaward wetland fringe (salt-tolerant saltgrass, pickleweed, jaumea), Rail Pond, view to NE; (d) W end of rail pond, bordering steep upland dune slope instead of freshwater marsh seepage source, showing fringing marsh shift from salt-sensitive tules (right) to threesquare bulrush (more brackish tolerant) in the lowest vegetated intertidal zone above mudflats.

In contrast, the fringing tidal marsh at the south (seaward) end of the rail pond, bordering the Westshore Road berm, is dominated by salt marsh and brackish marsh vegetation. The narrow fringing marsh bordering the bay-connecting culvert is dominated by few highly salt-tolerant salt marsh species, saltgrass (*Distichlis spicata*), fleshy jaumea (*Jaumea carnosa*), with minor amounts of pickleweed (*Sarcocornia pacifica*). With increasing distance from the culvert tidal source of marine water, the frequency of brackish-tolerant (dilute seawater affinity) species increases in the southern fringing marsh of the Rail Pond, including threesquare bulrush (*Schoenoplectus pungens*), clubrush (*Isolepis* sp., likely *I. cernuus*), prostrate creeping colonies of sea-arrowgrass (*Triglochin* sp., likely *T. concinna*), silverweed (*Argentina egedii*, syn. *Potentilla anserina* ssp. *egedii*), and Baltic rush. The distribution, relative frequency and abundance of plant species with contrasting salt-tolerance ranges indicates a clear gradient in growing-season soil (subsurface) salinity of the tidally influenced Rail Pond marsh, consistent with strong and significant freshwater subsurface (groundwater seepage) from the steep, highly transmissive dune slopes north of the rail pond (continuing below Bay Flat Road), and surface freshwater flows from the nontidal freshwater marsh draining via culvert under Bay Flat Road. Most of these species, their local distribution patterns, and relative salt tolerances, were not identified in the WRA (2010) Biological Resources Assessment.

Peter R. Baye Ph.D.
Coastal Ecologist, Botanist
baye@earthlink.net
(415) 310-5109

a b

Southern (seaward) fringing marsh at west end of Rail Pond, bordering Westshore Road, disconnected from upland freshwater seepage sources. Marsh is dominated by salt-tolerant and brackish-tolerant marsh vegetation; (a) threesquare bulrush, saltgrass, jaumea; (b) sea arrow-grass, saltgrass, threesquare bulrush.

Within the Rail Pond basin are two other wetland features that are significant indicators of past fluctuating salinity gradients and dynamics. The largest and most conspicuous is the presence of extensive tule stem remnants (standing culm stubble) in unvegetated mudflats below the current seaward edge of growing (green stem) tules. The standing dead and partly decomposed culm bases were partly covered with mature barnacles, indicating their persistence and age greater than one year. The pattern of tule dieback zones below vigorous tules in intertidal marsh (not subject to significant changes in flooding depths among years) is typical of brackish marshes that undergo cycles of decreased salinity (tule expansion during consecutive high rainfall years) and increased salinity (tule dieback during series of consecutive low rainfall years or acute critical drought years). It is likely that the tule dieback pattern observed corresponds with recent years of low rainfall years, particularly 2008 and 2009. This would indicate high sensitivity of the landward brackish-fresh marsh gradient in the Rail Pond to cumulative impacts of reduced groundwater discharges during critical drought years.

a b

Past dieback of intertidal tule marsh, north side of Rail Pond. (a) leading edge of intertidal tule marsh, showing abrupt edge of live (green culm base) tules, bordering stubble of dead and partly decomposed tule culm bases in mudflat (former tule marsh). (b) barnacles (white) on standing dead tule stubble in mudflat, with green algae (*Ulva* sp.) on mudflat.

The other significant wetland feature indicating strong salinity gradients within the basin is the marsh-capped, crescent-shaped flood tidal delta outlining the tidal jet of the culvert. The concave-seaward side of the flood tidal delta marsh (culvert-facing, directly flushed by marine salinity of the tidal jet) is dominated by salt-tolerant saltgrass, and lacks salt-sensitive tules in the same elevation range in which they occur on the landward side of the delta. The convex, landward-facing side of the delta, facing landward freshwater runoff and subsurface seepage, and shielded from the tidal jet, in contrast is fringed with salt-sensitive tules on the north side facing the freshwater discharge of the Bay Flat Road culvert.

a b

Flood tidal delta marsh crescent opposite tidal jet of culvert in Rail Pond. (a) view from SW, with tule patch on convex side facing freshwater runoff from Bay Flat Road culvert, saltgrass on cap of delta marsh; (b) gravel deposit at head of flood tidal jet and channel scoured adjacent to culvert.

I directly measured (refractometer) surface water salinity and shallow subsurface porewater salinity in the Rail Pond marsh gradient during a low tide on January 25, 2011 (dormant season, not physiologically more sensitive plant growing season). I did not sample contrasting elevation gradients of soil porewater salinity profiles N, W, E, and S sides of the Rail Pond; the exploratory measurements of near-surface and water column salinities were conducted to detect any qualitative patterns of fresh to brackish wetland gradients in near-surface marsh sediment salinity that are consistent with freshwater seepage and surface flow patterns.

The measurements reflected patterns of subsurface porewater dilution by freshwater seepage consistent with the gradients of freshwater, brackish and salt marsh vegetation patterns of the Rail Pond. The water column salinity of the adjacent Bodega Harbor, more than 3 m distance from the culvert ebb outflows to the bay, were measured was 34 ppt, marine salinity. Ebb discharge from the culvert on the bay side was measured at 12 ppt. The ebb discharge from very shallow channelized ebb drainage of the Rail Pond mudflats was 7 ppt (both E and W of the culvert), indicating significant dilution of seawater during ebb tide. Surface discharge across intertidal mud of the tule marsh on the landward fringe of the rail pond, opposite the culvert, was measured at 2 ppt (oligohaline, physiologically near freshwater range). Soil porewater from the top 8 cm of mud was in the brackish range, indicating near-surface porewater mixing of freshwater and haline tidewater: 12 and 25 ppt were measured 5 minutes after two shallow pits excavated in emergent

mid-intertidal mud on north side of the Rail Pond opposite the culvert pits filled with porewater seepage. On the following (afternoon) flood tide, the interior rail pond water column salinity adjacent to the culvert was measured at 19 ppt, again indicating brackish mixing in the water column, contrasting with more dilution of seawater on mudflats during the ebb tide when seepage outflows occur.

The preliminary evidence of winter salinity measurements and wetland vegetation patterns is consistent with a hydrologic regime including:

- culvert inflows of marine salinity on flood tide;
- brackish dilution in the water column of the rail pond basin during flood and slack tides;
- increasing dilution and flushing (north to south) of marsh/mudflat surface sediments on ebb tides;
- limited infiltration of brackish water in the upper mudflat and marsh sediment during flood tides, varying with distance from the culvert tidal source;
- strong, physiologically significant dilution and flushing of infiltrated brackish soil porewater in the root zone on the landward (N side) of the Rail Pond, and to a significant but lesser extent, E and W ends of the Rail Pond;
- sufficient rates of subsurface porewater flushing during the (spring-summer-fall) growing season (maximum physiological sensitivity to root zone salinity) to enable salt-sensitive tule, slough sedge, and willows to grow without evidence of salt injury, and without or association with salt-tolerant vegetation, along the upper intertidal zone subject to regular brackish tidal flooding;
- diminished marsh soil porewater flushing and salinity dilution as distance from the landward north marsh fringe (subsurface freshwater hydraulic gradient) increases;
- consistent marsh vegetation patterns of relative salt-tolerance related to distance from the flood tidal jet, and distance from landward surface and subsurface freshwater discharges.

PRMD staff initially made a correct interpretation of the salinity gradients of the Rail Pond marsh vegetation (PRMD 2010, June 7 memo). The PRMD staff subsequently relied on ecologically invalid and misleading interpretations of the marsh hydrology of the Rail Pond that ignored the essential role of marsh soil porewater salinity in the root zone, particularly in drought conditions, as determinative of vegetation patterns. The subsequent PRMD memo (PRMD 2010, July 2) erroneously concluded that "since the study [Brelje & Race File No. 1817.06] results show that the site has salinity comparable to seawater, on high tide, this eliminates the potential for sensitive freshwater species and appears to validate the findings of the WRA Biological Resources Assessment date March 2010". This conclusion is particularly contradictory and arbitrary in view of the conspicuous salt-sensitive freshwater and fresh-brackish marsh vegetation along the north side of the Rail Pond explicitly described in both the PRMD memo and the WRA report (WRA 2010, p. 8). It appears that PRMD uncritically adopted the conclusions of WRA and hydrologic studies of groundwater that were not methodologically suited to address biological/ecological processes or impacts in wetlands.

The hydrologic method of analyzing average groundwater elevations and cones of depression (Todd Engineers 2010) is neither ecologically appropriate nor biologically meaningful for assessing marsh root zone soil porewater salinity variability influenced by well pumping during

summer high tides or during drought years. Indeed, the Todd report did not address wetland root zone hydrology at the tidal marsh edges at all. The lateral extent of the cone of depression, estimated at 107 ft for a given duration of continuous short-term well pumping, is not a valid threshold for detecting or predicting significant impacts to freshwater marsh vegetation dependent on freshwater seepage outflows bordering a tidal marsh. The Todd (2010) report stated that "it is reasonable to assume that average groundwater flow into the northern rail pond will be reduced at a rate equivalent to the net increase in production from the Dunes well field (i.e. decrease in groundwater flow to the Rail Pond from 65 gpm to 45 gpm). The Todd report stated only that the impact on the "water quality balance" of the rail pond is considered to be insignificant. This statement is about water column or aqueous salinity, not marsh soil porewater salinity, and does not actually address marsh habitat impact. It did not state that the mass balance of groundwater seepage would be insignificant for relatively salt-intolerant freshwater marsh vegetation and soils during the summer, or in critical drought years, during a reduction from 12,514 cubic feet per day of freshwater seepage outflow to 8664 cubic feet per day, 30% reduction. Thus, it cannot be applied to prediction of marsh habitat impacts without additional analysis of effects on root zone salinity in the high marsh during summer high tides and droughts.

The WRA (2010) assertion that "in order for a significant change in salinity to occur, well pumping would need to reduce the amount of ground water outflow so that freshwater seepage ceases" (emphasis added) is false. Total cessation of freshwater seepage is an unreasonably high and unrealistic threshold of significance for salt-sensitive freshwater or fresh-brackish marsh vegetation. For a biologically significant change in root-zone marsh salinity to occur, well pumping would merely need to reduce the amount of groundwater outflow to the point at which cumulative reduction in freshwater seepage rate during the growing season allows soil porewater salinity to rise within the physiological range at which substantial salt-induced growth inhibition (sufficient to alter plant competition and relative abundance of brackish, salt, and freshwater species), injury, or mortality occurs over a period of days or weeks during the spring or summer. The threshold between oligohaline (fresh-brackish) and brackish salinity that conventionally distinguishes the limits of salt-intolerant freshwater species is generally 2 ppt during the spring-summer growing season (following modified Venice salinity classification system used by U.S. Fish and Wildlife Service wetland classification system); freshwater marsh and riparian vegetation is excluded at chronic soil porewater salinities at or above 5 ppt during the spring-summer growing season. This is a very low biological threshold, and may potentially be met by reduction of freshwater seepage rates from 12,600 cubic feet per day of freshwater seepage outflow to 8732 cubic feet per day (30% reduction) during spring high (solstice) tides in drought conditions.

If soil porewater salinity rises sufficiently to cause actual dieback of salt-sensitive freshwater marsh and riparian vegetation as a result of cumulative reduction in subsurface discharges during summer high tide series (a high risk particularly during drought years), impacts would be as extreme as they could possibly be for this habitat; crossing this threshold would cause outright conversion from freshwater or fresh-brackish marsh to salt marsh habitats.

2.3. Fish, wildlife, and special-status species impacts.

The MND (BBPUD 2008) and subsequent Biological Resources Assessment (WRA 2010) failed to correctly identify the potential, likely, or confirmed presence of multiple special-status species

and suitable habitat within the project site or its vicinity. Accordingly, the MND and Biological Resources Assessment erroneously underestimated or disregarded potential significant impacts to special-status fish, wildlife, and plants species, and failed to assess modes of direct, indirect, and cumulative impacts related to the project location, design, and operation. Examples are (not exhaustive) assessed below.

California red-legged frog (*Rana draytonii*, syn. *R. aurora draytonii*). The MND does not address potential for occurrence of this special-status species or impacts to it. The geographic boundary between this species and the similar northern red-legged frog (R. aurora) on the north coast is now known to extend to southern Mendocino County (Shaffer et al. 2004, Molecular Ecology 13, 2667–2677), including Bodega Bay populations in the federally listed *R. draytonii*. The USFWS recovery plan for this species (2002) was published before the geographic range of the species was revised. The project area and the assessment area are located less than 1 mile from one known breeding habitat (seasonal to perennial freshwater ponds at the landward edge of Bodega Dunes) and riparian and stream pool habitat of Johnson Gulch. I confirmed the presence of an adult red-legged frog within suitable breeding habitat within the Bodega Head Marsh (freshwater marsh and pond complex east of the Bodega Dunes, where additional BBPUD wells are located) on January 25, 2011.

The riparian and freshwater marsh vegetation in or adjacent to and below the project site is dominated the same suite of freshwater marsh species that dominate Bodega Marsh (west of Spud Point) that is inhabited by a known population of California red-legged frogs (CRLF) less than 0.7 miles from the project site, linked by a corridor of seasonal wetland and upland CRLF dispersal habitat. Dispersing or foraging California red-legged frogs are known to move in terrestrial habitats at distances significantly greater than 0.7 miles, particularly in foggy, maritime climates.

I confirmed the presence of adult California red-legged frogs in Bodega Marsh on January 25 and again on March 4, 2011. Red-legged frogs have also been reported east of the project site in recent years in the vicinity of Johnson Gulch. The nontidal freshwater marsh on the north side of Bay Flat Road below the project site is suitable foraging habitat for the CRLF, and may be suitable breeding habitat in at least some years; it appears to have sufficient duration and depth of flooding, and open shallow water/vegetation cover to support breeding this year. Moist, shaded upland dune canyons and slopes within the project vicinity may provide terrestrial foraging habitat, moisture (hydration) refuges, and estivation habitat for CRLF.

WRA (2010) confirmed that it did not provide protocol-level surveys for this or any other special-status species. The WRA (2010) assertion regarding potential for occurrence ("suitable aquatic habitat is not available in or near the Project Area") is flatly incorrect, and also misleading in that it does not address upland dispersal habitat, foraging habitat, or upland moisture refuge habitat. The WRA (2010) recommendation that "no further surveys or avoidance measures are recommended" is inconsistent with the presence of suitable freshwater marsh (and fresh-brackish marsh with aquaeous salinity in the CRLF tolerance range of 9 ppt and less) in the project's immediate vicinity, and the presence of

CRLF at Bodega Marsh approximately 0.7 miles away with suitable dispersal corridors connecting the project site to this major population.

California red-legged frogs may occur within or near the project site, and may be directly, indirectly adversely affected by project construction and operation. This potential impact triggers Section 7 Endangered Species Act consultation with USFWS through any U.S. Army Corps of Engineers permit required for project construction. It also meets the "mandatory finding of significance" criterion for CEQA if it is not assessed and adequately mitigated.

a

b

c

(a) Occupied California red-legged frog freshwater marsh habitat at Bodega Marsh (west of Spud Point). The marsh supports water supply wells currently operated by BBPUD, indicating BBPUD knowledge of this habitat and potential source population. (b) Adult California red-legged frog observed in Bodega Marsh on January 25, 2011, on driftwood in old well casing. (c) Mature California red-legged frog in Bodega Marsh, March 4, 2011 (emerged from standing water with duckweed).

Tidewater goby (*Eucyclogobius newberryi*). The MND does not address potential for occurrence of this special-status species or impacts to it. WRA (2010, Appendix B, incorrectly asserts that the federally listed tidewater goby's "potential for occurrence" is "not present. Suitable aquatic habitat is not available or near the project area". The "rail

ponds" are a brackish to saline shallow sheltered basin with tidal choking (18" culvert) located less than 0.5 mile west of Johnson Gulch, a location identified in the final recovery plan for this species (USFWS 2005) as potential reintroduction habitat, located between Salmon Creek lagoon (population detected in 1999), and Cheney Gulch (population detected 1946, not detected 1996 & 1999). The rail ponds are hydrologically influenced by reduction in freshwater seepage (groundwater inflows) related to well use. Suitable habitat for this species is "brackish, shallow lagoons and lower stream reaches where the water is still but not stagnant" (USFWS 2005). Thus, potentially suitable habitat occurs within the assessment area of the project, in proximity to known recent and historic localities within dispersal range. Potential indirect project impacts to this species may include reduction of brackish influence (reduced shallow groundwater inflows) on tidewater goby habitat.

This potential impact triggers Section 7 Endangered Species Act consultation with USFWS through any U.S. Army Corps of Engineers permit required for project construction. It also meets the "mandatory finding of significance" criterion for CEQA if it is not assessed and adequately mitigated.

Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*) The MND does not address potential for occurrence of this special-status species or impacts to it. This federally listed species may occur in the project vicinity, utilizing summer-blooming coastal scrub or dune scrub species as nectar plants, and coastal grasslands in the project vicinity may supply larval food plants. Potential nectar plants used by the species, such as thistles or gumplants, may occur on the project site or in areas indirectly affected by project construction or operation. WRA (2010) dismissed occurrence or impacts to this species as "unlikely" because "typical" habitat not is not present and because the larval foodplant was not observed directly within the Project Area during site visits. This argument is invalid because it does not address the amount of potential nectar plant habitat in proximity to primary habitats of the species, or potential indirect project impacts (such as marsh-edge soil salinization due to groundwater seepage reduction).

Coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*). The MND does not address potential for occurrence of this special-status species or impacts to it, nor does WRA (2010). It is treated as a species of concern by the U.S. Fish and Wildlife and a list 1B species by California Native Plant Society. Suitable habitat (high brackish tidal marsh) occurs in the project vicinity, in the Rail Pond fringing marsh, and potential parent populations occur in Drakes Bay. If undetected populations are present, this species could be adversely affected by project operation, particularly conversion from fresh or fresh-brackish to brackish or salt marsh influenced by reduction of freshwater seepage during droughts, as well as hypochlorite solution spills due to accidental release or seismic disturbance.

Deceiving sedge *(Carex saliniformis)* The MND does not address potential for occurrence of this special-status species or impacts to it. Suitable habitat for this species occurs along the landward fresh-brackish and freshwater fringing marsh of the Rail Pond, among other sedges and rushes present. WRA (2010) dismisses impacts to this species, making the invalid argument that no marsh habitat occurs within the Project Area, despite

obvious suitable habitat in the rail pond marsh below the project site. If present, this species could be adversely affected by project operation, particularly conversion from fresh or fresh-brackish to brackish or salt marsh influenced by reduction of freshwater seepage during droughts, as well as hypochlorite solution spills due to accidental release or seismic disturbance.

Humboldt Bay owl's-clover (*Castilleja ambigua* ssp. *humboldtiensis*). The MND does not address potential for occurrence of this special-status species or impacts to it. Suitable habitat for this species occurs along the bayward fringing marsh of the Rail Pond, and the species is known to occur in tidal marshes in Bodega Harbor, which provide potential source populations for colonization of sheltered upper tidal salt or brackish marshes like those within the Rail Pond. WRA (2010) dismisses impacts to this species, erroneously claiming that no salt marsh occurs in the Project Area, despite obvious suitable habitat in the rail pond marsh below the project site. If present, this species could be adversely affected by project operation, particularly hypochlorite solution spills due to accidental release or seismic disturbance.

Point Reyes bird's-beak (*Chloropyron maritimum* ssp. *palustre*; syn. *Cordylanthus maritimus* ssp. *palustris*). The MND does not address potential for occurrence of this special-status species or impacts to it. Suitable habitat for this species occurs along the seaward fringing marsh of the Rail Pond, and the species is known to occur in tidal marshes in Bodega Harbor, which provide potential source populations for colonization of sheltered upper tidal salt or brackish marshes like those within the Rail Pond. WRA (2010) dismisses impacts to this species because no salt marsh occurs directly on the project site, and disregarded the potential for occurrence in the rail pond marsh below the project site. If present, this species could be adversely affected by project operation, particularly hypochlorite solution spills due to accidental release or seismic disturbance.

Franciscan thistle (*Cirsium andrewsii*). The MND does not address potential for occurrence of this special-status species or impacts to it. WRA (2010) states there is "No potential" for this species due to lack of habitat, based on generalized descriptions of habitat. In fact, *C. andrewsii* occurs at Point Reyes in coastal marshes dominated by *Juncus* lescurii at the northeast end of Abbott's Lagoon (host vegetation closely similar to supratidal *J. arcticus* marsh at the east end of the Rail Pond). Suitable habitats occur in coastal bluff seeps along the adjacent Sonoma Coast, indicating a reasonable though low likelihood of undetected populations in the vicinity that could act as source (seed dispersal) populations. If present in suitable habitat in the proper biological assessment area, this species could be adversely affected by project operation, particularly hypochlorite solution spills due to accidental release or seismic disturbance.

Bolander's water-hemlock (*Cicuta bolanderi*, syn. *C. maculata* var *bolanderi*). The MND does not address potential for occurrence of this special-status species or impacts to it. WRA (2010) states "forb understory component is relatively impoverished" as the only reason for dismissing the potential occurrence of this species in "coastal, fresh or brackish marshes and swamps". Populations are known to occur in lowland fresh-brackish and freshwater marshes bordering tidal marsh at two localities at Point Reyes, in

association with species also occurring in the Rail Pond (*Schoenoplectus californicus, Juncus arcticus* ssp. *balticus*), indicating potential for previously undetected presence of this plant, and potential impacts of hypochlorite solution spills due to accidental release or seismic disturbance.

Sonoma alopecurus (*Alopecurus aequalis* var *sonomensis*). The MND does not address potential for occurrence of this special-status species or impacts to it. This species occurs in mixed disturbed native/non-native vegetation of coastal wet pasture and seasonal marsh at Point Reyes. Suitable habitat occurs in disturbed portions of the roadside nontidal freshwater marsh and similar supratidal portions of the Rail Pond marsh. WRA (2010) argued that "Although the study area contains riparian scrub habitat, most occurrences known from inland open marsh sites". This is not true of modern occurrences, and it is certainly not true of the nearest known major populations; it is an invalid and factually unsound argument. WRA (2010) therefore erroneously dismisses potential occurrence of the species in potentially suitable habitat on the site within the known range of the species.

Marin knotweed (*Polygonum marinense*). The MND does not address potential for occurrence of this special-status species or impacts to it. WRA (2010) dismisses impacts to this species by arguing that no tidal marsh occurs on the project site; however, suitable high brackish tidal marsh habitat does occur in the Rail Ponds within the project assessment area. This species has been identified in brackish marsh tidal marsh edges within Bodega Harbor, within reasonable dispersal distance of suitable habitat in the project assessment area. At Point Reyes, the type locality, it occurs primarily in brackish edges of tidal salt marsh. This indicates potential for undetected presence of this plant in the assessment area of the project. Although this species is potentially a cryptic nonnative species, it is currently listed as an endemic special-status native species.

Virginia rails *(Rallus limicola)* and sora *(Porzana carolina)*. The MND did not address potential habitat impacts to Virginia rails and sora, for which the Rail Ponds are named. These species depend on regionally scarce freshwater and fresh-brackish perennial marsh habitats. Madrone Audubon Society conducts bird walks around Bodega Bay and has reported detections of Virginia rails at the Rail Pond on the following dates: 27-Jan-99, 07-Apr-99, 26-Jan-00, 24-Feb-00, 15-Mar-00, 05-Apr-00, 02-Nov-00, 22-Mar-01, 05-Sep-01, 31-Oct-01, 21-Mar-02, 18-Apr-02, 22-Feb-03, 03-Sep-03, 11-Feb-04, 18-Mar-04, 10-Apr-04, 27-Oct-04, 19-Oct-05, 01-Sep-10. Sora were reported on 10-Mar-99, 07-Apr-99, 15-Mar-00, 19-Oct-05, 18-Jan-07, 05-Sep-07, 01-Sep-10. The long-term continuity and frequency of detections indicate that the Rail Pond is an important local habitat for these regionally uncommon rail species.

Potentially significant adverse impacts may occur to freshwater and fresh-brackish marsh habitats preferred by Virginia rails and sora as a result of marsh soil salinization that may be caused by cumulative impacts of groundwater pumping (reduced rates of freshwater groundwater seepage at the upper marsh edge), discussed above.

Peter R. Baye Ph.D.
Coastal Ecologist, Botanist
baye@earthlink.net
(415) 310-5109

Salt marsh or San Francisco Common yellowthroat *(Geothlypis trichas sinuosa).* Neither the MND nor WRA (2010) Biological Resource Assessment addressed potential habitat impacts to the salt marsh common yellowthroat, a regionally rare nonmigratory passerine that moves seasonally between salt or brackish tidal marshes and riparian scrub or freshwater marshes. It is considered a species of concern by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Madrone Audubon Society reports routine detections of salt marsh common yellowthroats at the Rail Ponds over many years.

Potentially significant adverse impacts may occur to freshwater and fresh-brackish marsh habitats used by salt marsh common yellowthroats at the Rail Ponds due to marsh soil salinization due to cumulative impacts of groundwater pumping (reduced rates of freshwater groundwater seepage at the upper marsh edge), discussed above.

Complex wetland habitat of the Rail Pond combines dense cover of willow scrub and fresh-brackish marsh cover of tules, bulrushes, rushes bordering shallow water and open mud -- suitable habitat for Virginia rail, sora, and yellowthroats.

2.4 Monitoring reports required by Sonoma Coast State Beach Agreement.

None of the environmental assessment documents prepared by BBPUD or its consultants cite any data from monitoring reports required by Sonoma Coast State Beach Agreement (1979) and Amendment No. 1 (1987). These reports were required to document vegetation changes, groundwater elevations and quantitative variability in groundwater salinity in the vicinity of existing wells. Adequate assessment of indirect ecological effects of proposed new well use will depend on re-assessment of these empirical data. The applicant (signatory of the agreement) has the burden of providing and assessing these data, and the lead agency is obliged to make reasonable efforts, as a matter of due diligence, to obtain and evaluate these reports to apply to assessment of long-term cumulative impacts of well pumping on adjacent wetland habitats.

2.5 Indirect significant ecological impacts of spills of hazardous chemicals (hypochlorite; chlorination chemicals).

The RGH geotechnical consulting letter report (October 22, 2009) confirms that the site is located directly within an Alquist-Priolo Earthquake Fault zone of the San Andreas fault, and has a high risk for surface rupture, and a high risk for liquefaction hazard and strong ground shaking, resulting in unpredictable impacts. The project would include ongoing transport, use, and storage of hypochlorite chlorination chemicals at a new location adjacent to wetlands. Catastrophic release of hypochlorite (bleach) into wetlands would be a low-probability/high (significant) impact risk that requires assessment and mitigation.

Peter R. Baye Ph.D.
Coastal Ecologist, Botanist
baye@earthlink.net
(415) 310-5109

MEMORANDUM

Kamman Hydrology & Engineering, Inc.
7 Mt. Lassen Drive, Suite B-250, San Rafael, CA 94903
Telephone: (415) 491-9600
Facsimile: (415) 680-1538
E-mail: Greg@KHE-Inc.com

Date: July 10, 2011

To: Rose Zoia, Law Offices of Rose Zoia

From: Greg Kamman

Subject: Preliminary Review of BBPUD Bay Flat Road Well Installation Project

The purpose of this memorandum is to present the findings of my technical assessment of a large number of technical and environmental compliance documents for or in response to the Mitigated Negative Declaration for the Bodega Bay Public Utilities Bay Flat Road well installation project dated June 19, 2008 and the Subsequent Mitigated Negative Declaration published June 3, 2011. The documents I reviewed are listed in Attachment A. The focus of my review was on the direct, indirect and cumulative impacts to water and ecological resources. Based on this review, it is my opinion that the project poses potential significant and unmitigated impacts to the surrounding ecological environment, for the reasons numbered below.

I am a hydrologist with over twenty five years of technical and consulting experience in the fields of geology and hydrology. I have a Master's of Science degree in Geology received from Miami University (Oxford, Ohio) in 1989 and I am a California Professional Geologist and Certified Hydrogeologist. I have been providing professional hydrology services in California since 1991 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work is located in the Coast Range watersheds of California, including the Northern San Francisco Bay Counties. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I co-own and operate a hydrology and engineering the consulting firm Kamman Hydrology & Engineering, Inc. in San Rafael, California (established in 1997).

1. Inadequate Assessment of Sustainable Water Supply from Bay Flat Road Well

The BBPUD has either, a) not demonstrated that the Bay Flat Road well will provide a reliable source of water per their project goals, or b) their analyses supporting such a claim are inaccurate and, in some cases, significantly over-predict available supply. These conclusions are based on the following rationale.

a) Uncharacterized Groundwater Quantity in Water Scarce Area

The Sonoma County General Plan Water Resource Element contains numerous goals, objectives and policies to guide the management of groundwater as a valuable and limited shared resource. Objective WR-2.1 of the Plan states, "*Conserve, enhance and manage groundwater resources on a sustainable basis that assures sufficient amounts of clean water required for future generations, the uses allowed by the General Plan, and the natural environment.*" The Todd report (2010) indicates that there will be, on average, a long-term 31-percent reduction in groundwater flow to the Rail Pond, which also means the same reduction in supply to fringing and upland freshwater wetlands, whose main supply is groundwater. None of the BBPUD project reports or documents indicate how this continual net loss will impact local area spring, seep and groundwater sources, which are acknowledged to sustain downstream wetlands. Clearly, the impacts of groundwater withdrawals during the summer, a dry-year and drought years may have even more potential significant impacts on wetlands as these periods are times of reduced groundwater recharge and supply, which has a compounded adverse impact due to reduced direct rainfall supply to the wetlands.

The Bay Flat Road well project is located in a County-designated, Class 4 Water Scarce Area of Sonoma County (Sonoma County PRMD, 2010). Groundwater Resource Policy WR-2e of the Sonoma County General Plan (formerly Policy RC-3h) requires proof of groundwater with a sufficient yield and quality to support proposed uses in Class 3 and 4 areas. Policy WR-2e also requires test wells or the establishment of community water systems in Class 4 water areas.

An aquifer test[1] is standard procedure implemented to most accurately quantify the hydraulic and storage parameters of an aquifer when conducted at a proposed well site. Todd's groundwater assessments and estimates on groundwater flow parameters are based partially on existing aquifer tests from existing wells in the Dune Well field. However, Todd's (2008) groundwater storage parameter/coefficient estimates are based on best-estimates, derived by non-aquifer-test methods, relying on simplifying assumption and empirical relationships. In order to improve the assessment of available groundwater resources, Todd (2008) also recommends the completion of aquifer (well pumping and monitoring) tests to: a) "*...refine aquifer* [conductivity and flow] *parameters (which would provide data for an improved assessment of available groundwater resources*", and b) *...to determine the efficiency of Dunes Well 4, the S value* [aquifer storage coefficient or storativity] *of the deeper formation tapped by Well 4, and the hydraulic connection between the shallower formation tapped by previous Dunes production wells and the deeper formation tapped by Dunes Well 4. Aquifer test results may assist BBPUD in selecting appropriate well drilling and development techniques in the future that optimize well yields.*"

b) Non-Uniform Hydrogeologic Conditions (Fault Heterogeneities)

Another reason for implementing an aquifer pump test is related to the unknown interconnected nature of the dune aquifer underlying the project locality. The aquifer tests and hydraulic parameter estimation methods and equations used by Todd (2008, 2010) are based on

[1] Driscoll (1995) defines an aquifer test as, a test involving the withdrawal of measured quantities of water from or addition of water to, a well and the measurement of resulting changes in head in the aquifer during and after the period of discharge or addition.

assumptions that the aquifer in question is a homogeneous and laterally continuous sand layer[2]. However, the site lies within the Alquist-Priolo earthquake fault zone (CDMG, 2000) and geologic mapping by the USGS indicates that the project lies within a zone of mapped traces of the San Andreas Fault (see Figure 1). In their 2008 report, Todd states;

"The Dunes and Roppolo well fields are situated within the San Andreas Rift Zone, a 1.5-mile wide, northwest-southeast trending fracture zone that crosses through Bodega Bay and Bodega Harbor (Wagner, 1982). Although the fault traces have been identified within the fracture zone, it is not known whether the faults influence groundwater flow or chemistry at the two well fields."

Figure 1: Mapped active faults within project area (source: Blake et al., 2002).

[2] Driscoll (1995) states that the analytical well equations used by Todd are based on the following abbreviated list of assumptions:

1. The water-bearing formation is uniform in character and the hydraulic conductivity is the same in all directions.
2. The formation is uniform in thickness and infinite in areal extent.
3. The formation receives no recharge from any source.
4. The pumped well penetrates, and receives water from, the full thickness of the water-bearing formation.

It is generally accepted that faults are low conductivity zones and act as barriers to groundwater flow, either by slowing flow through them or bounding primary aquifer storage areas. The most standard and informative method to determine the hydraulic and storage properties of an aquifer basin or subbasin whose boundaries are, in part, determined by fault zones is to complete an aquifer and well pump test.

c) Inaccurate Water Supply Assessment – Water budget

Todd's (2008) study presents a water budget developed to estimate the amount and distribution of recharge to the Dunes and Roppolo sites (as an estimate of groundwater supply). This analysis grossly overestimates the annual recharge to the aquifer that supplies the Dunes and Roppolo well fields and incorrectly states or implies that all water that recharges the aquifer in question is available (i.e., within the well capture zone) to the wells. Therefore, the estimates of available water supply to project wells are inaccurate and significantly inflated.

Todd's delineation of the watershed (Figure 2 of their 2008 report) for the Dunes and Roppolo well fields is incorrect and significantly overestimates the amount of water available to the combined Dunes and Roppolo well fields, let alone the Dunes wellfield watershed that best represents the contributing watershed to the Bay Flat Road project well. Todd uses the entire area of their delineated watershed to estimate the amount and distribution of recharge to the Dunes and Roppolo well fields, which, in turn, grossly overestimates the supply available to well fields. In reviewing available USGS topographic maps for the Bodega Bay vicinity, the Todd watershed delineation, used to calculated groundwater supply to the project well, includes large areas that are outside of the Dunes and Roppolo well field watersheds according to their own definitions of either a surface and/or groundwater watershed/basin. The first paragraph of the Todd (2008) report states:

"Rainfall is the primary source of recharge to the Dunes and Roppolo well fields. Because the direction of surface water and groundwater flow generally follows surface topography, the surface drainage basin (watershed) must be considered when evaluating the reliability of a groundwater basin as a water supply source. Watershed boundaries best represent the true hydrologic boundaries of the groundwater system, across which groundwater flow can be assumed to zero. Figure 2 [Todd 2008 report] *shows the watershed for the Dunes and Roppolo well fields (Project Watershed). The Project Watershed covers 1,466 acres."*

Based on their own definition, a groundwater basin is best defined by the surface water watershed boundaries, yet their own delineation of the watershed contributing recharge to the Dunes and Roppolo well fields includes significant watershed areas that lie outside of and do not drain to the Dunes and Roppolo well fields. A preliminary review of the USGS 7.5-minute quadrangle topographic map for Bodega Bay indicates that the watershed to the Dunes and Roppolo well fields is much smaller that that presented in Figure 2 of Todd's 2008 report. Figure 2 of this memorandum illustrates the approximate location of Dunes-Roppolo well fields, and associated watersheds draining to Bodega Bay (i.e., drainage area lying east of mapped drainage divide) on the USGS quad-sheet (1972), which equates to an area at least half of the watershed acreage used by Todd to estimate groundwater supply to the well fields.

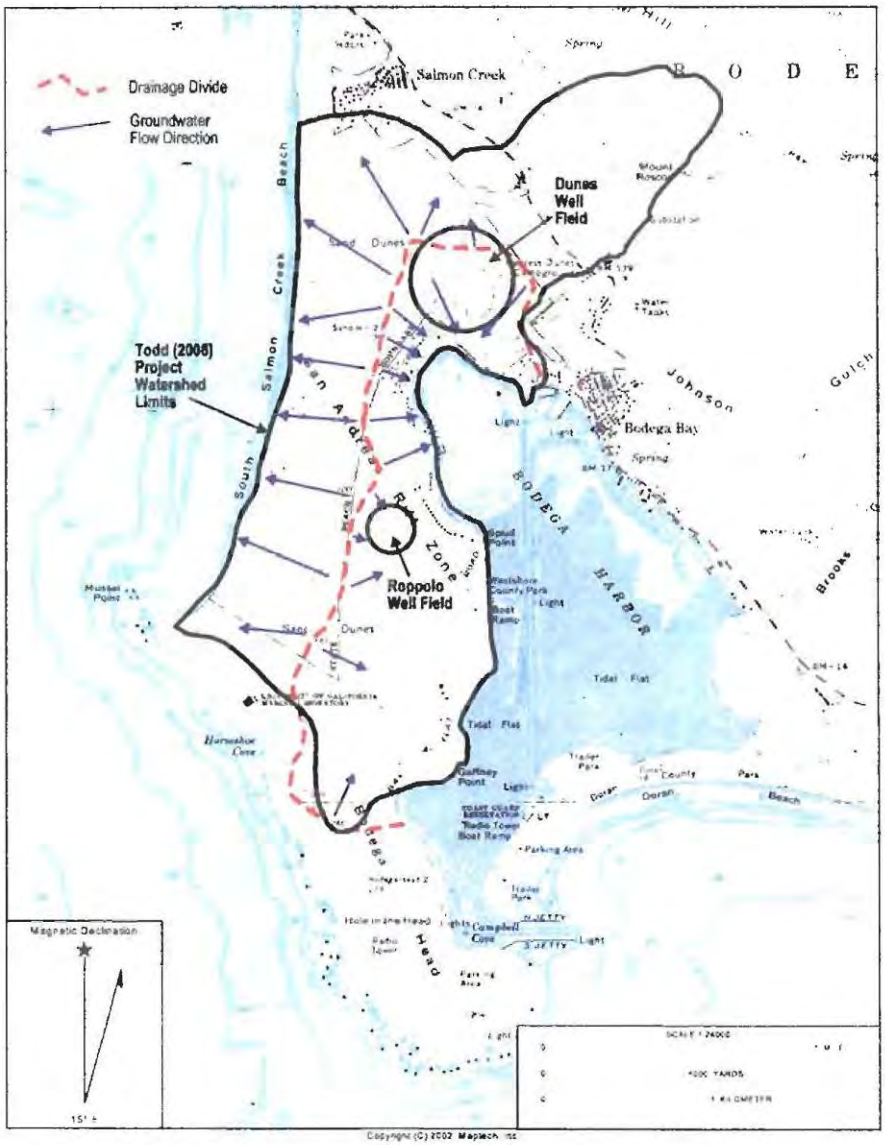


Figure 2: Map comparing Todd's project drainage area (solid black line) versus actual surface drainage areas.

Yet again, only a portion of the true Dunes-Roppolo well field watershed area depicted on Figure 2 (this memorandum) is available for recharge to the wells. Much of the watershed and groundwater basin area lying down-gradient of the well field locations is unavailable to recharge and supply to the wells, respectively. In addition, groundwater basin areas and associated aquifer storage beyond the well capture zone are not available as supply to the wells. As stated by Todd in their own report (2008);

"It should be noted that the amount of recharge is not equivalent to the amount of water that can be efficiently captured by wells and used in the basin even if the basin is in balance. Pumping wells will draw from groundwater storage, lowering water levels locally and producing cones of depression. These cones expand to hydrologic boundaries and may alter boundary conditions. From a practical standpoint, it is not possible to locate wells to effectively capture all of the natural recharge; in addition subsurface outflow and other boundary conditions may provide more or less water to the basin as groundwater conditions change."

Assuming, as Todd does, that there is no subsurface groundwater inflow to the well field watershed, this last statement implies that not all of the recharge estimated in Todd's water budget is available as supply to the wells – yet their study results and conclusions state that it is. It's also important to point out again, the Todd estimates include a watershed area contributing to both the Roppolo and Dunes well fields, which actually occupy their own subbasins and should be calculated independent of the other, in lieu of lumping them together. However, although significant, these omissions will likely lead to smaller differences in available well supply than the over-inflated recharge estimates resulting from using an inaccurate watershed areas described above.

d) Likely Unreliable Well Yields

The relatively rapid decline in annual well yields in the Dunes well field due to well screen clogging by precipitates created by iron-reducing bacteria is well documented (Brelje & Race Master Water Plan, 2007; Todd, 2008). Based on review of available documents, I estimate that well yields in the Dunes well field begin to fall-off after approximately seven years. Historically, BBPUD has either replaced wells or treated wells through "periodic chlorination." The impacts of this latter practice on the environment have not been addressed in any reports I've reviewed if such maintenance practice is anticipated on the new Bay Flat well, if constructed.

The occurrence of earthquakes is also associated with decreased well yields in many areas of California. It is not unreasonable that for this to occur within the project area as it lies within the active San Andreas Fault zone. None of the documents I've reviewed address the long-term maintenance or well replacement needs associated with the project.

2. <u>Inadequate Assessment of Impacts from Well Pumping</u>

Todd's 2010 (March) "long-term" impact assessment associated with groundwater pumping results are stated as, *"it is reasonable to assume that average groundwater flow into the northern rail pond will be reduced at a rate equivalent to the net increase in production from the Dunes well field (i.e., from 65 gpm to 45 gpm)."* This analysis was completed for "average" groundwater flow conditions only and does not evaluate the

flow changes associated with single dry-year or multi-year drought conditions - the most critical time for wetland plants when less than "average year" groundwater supply is likely available. Thus, it is not unreasonable that an even greater incremental decrease in water supply would result to wetlands during dry and drought years.

Todd's 2010 (March) "short-term" impact assessment associated with groundwater pumping quantifies the amount of drawdown and cone-of-influence associated with different pumping scenarios. Similar to Todd's 2008 estimates of aquifer hydraulic and storage properties, these calculations are based on a long-list of simplifying assumptions regarding aquifer characteristics (see footnote 2 this memorandum). Of particular note is the assumption that, "*The formation is uniform in thickness and infinite in areal extent.*" Given the potential for fault traces through and within the area of well pumping influence, this assumption would not hold true and could lead to significantly different results in the amount of draw-down and/or extent of cone-of-depression. In addition to being a method to best quantify reliable yields from the new well, an aquifer (pump) test would also be a standard method to better quantify, if not verify, the potential "short-term" impacts from pumping.

Todd's 2010 (March) "short-term" impact assessment of pumping also assumes what they state as a "*conservative*" pumping cycle of 18-hours a day in order to allow water levels in the wells to recover. However, they also state that current pumping conditions are, "*equivalent to a combined rate of 100 gpm over 24 hours*". If pumping actually occurs for 24 hours, or continuously, then it would take a little more than a week for the cone-of-depression to reach the wetlands. Therefore, the project Mitigated Negative Declaration should provide a mitigation measure that no such continuous pumping scheme should occur, otherwise there will be a significant impact to the downstream wetlands.

The BBPUD does not present an assessment of the cumulative impacts to the downstream wetlands associated with pumping from the new well in combination with the other Dunes well field wells. As reiterated from above, Todd (March 2010) states that the incremental impact of the new well reduces flow to the downstream wetlands by, "*a rate equivalent to the net increase in production from the Dunes well field.*" Based on this conclusion, it can be assumed that the current pumping from the Dune well field has already reduced groundwater flow to the downstream wetland by 100 gpm, a value equivalent to the cumulative well field pumping rate reported by Todd (March 2010). Todd (March 2010) also quantifies the current inflow to the wetlands at 65 gpm, thus, using the Todd estimates, the natural or pre-Dunes well field pumping groundwater supply to the downstream Rail Pond and wetlands would sum to 165gpm. Thus, under current conditions, well pumping from the Dunes well field has resulted in a 60% loss of historic/natural water supply to the downstream wetlands, while the proposed future project cumulative pumping rate of 120 gpm will (Todd, March 2010) yield a cumulative reduction of 73% of natural supply to the wetland. Surely these current total and added potential future losses of water supply to the wetlands posses a significant adverse impact to health, extent, water quality and sustainability of the wetlands. As discussed above, these impacts are likely further exacerbated during dry and drought years.

Finally, current studies of sea-level rise along the California coast project a rise from 1.0- to 1.4-meters (m) by the year 2100 (Pacific Institute, 2009; IPCC, 2007; USACE, 2009). The BBPUD does not present any evaluation of the potential impacts of salt water intrusion to the project wells associated with anticipated rises in sea-level. Therefore, this should be considered a potential significant impact until demonstrated otherwise.

3. Inadequate Assessment of Impacts to Wetlands within Project Area of Influence

There is a north-south continuum of wetland habitats between Bodega Bay and the Bay Flat Road well site (the Project). To the south lies the open water, tidally influenced Rail Pond that displays marine through brackish water salinity. The salinity and water level in the Rail Pond is primarily controlled by tidal exchange with Bodega Bay via culverts under Westshore Road. The Rail Pond wetlands are described as follows in the Coastal Commission's 1979 report (pg. 4):

"The freshwater/brackish rail ponds which occur between Bay Flat and Westshore Roads along the north rim of Bodega Harbor are significant wetland habitats. Separated now from the harbor by the Construction of Westshore Road on fill during the 1960s, the ponds are nonetheless historic wetland/tidal areas which maintain hydrologic continuity with the harbor and with upland feeder streams and springs. This continuity is maintained, among other means, by flow under the roads through culverts. Springs or other seeps may also contribute. The habitat value of the ponds was described in the report "Natural Resources of the North Central Coast Region", a report prepared for the Regional Commission in 1975. These marsh-pond areas support a variety of rails, including the Sora and Virginia rails, and have become a favorite bird-watching area."

The Bay-dominated, open-water tidal wetlands of the Rail Pond transition quickly into a fresh-water (to slightly brackish based on season and tides) wetland that fringes the north side of the Rail Pond. The freshwater wetland fringe on the north side of the Rail Pond is dominated by freshwater plant communities. WRA (2010, pg 8-9,) provides a good description regarding the hydrologic conditions that snstain the fresh-water fringe wetlands:

"Constant fresh water seepage outflow from the dune field prevents saline water from infiltrating into the soil and keeps the root zones of plants supplied with fresh water which supports the dominance of a freshwater plant community around the pond. At the most, there may be slight natural fluctuation in saline-fresh water balance that naturally occurs between winter and summer months (i.e., perhaps slightly increasing salinity in warmer, dry summer months and slightly decrease salinity in cooler, wetter winter months) to which the existing plant community has adapted."

Because the Rail Ponds are dominated by high-salinity water and there is minimal surface water inflow to the freshwater fringe wetlands, the freshwater supply to the fringe wetlands is groundwater, either as direct subsurface flow or from seeps and springs

within and along the upslope margins of the fringe wetlands. It also appears that the freshwater wetland occurs on the north side of Bay Flat Road, based on the following statement by the Coastal Commission in their 1979 report regarding a site immediately adjacent to the Bay Flat Road well project (property currently owned by Kepner and formerly by Frank):

"The marsh and riparian vegetation at the bottom of the dune, along Bay Flat Road, is visually a part of the same marsh/riparian vegetation pattern that flourishes in the marsh belt between the old and the new roads (that is, between the historic Bay Flat Road and the new road, Westshore Road, built on fill in the early 1960s)."

The ecological importance of the wetlands within the influence of the project actions is stated well in the Coastal Commission's 1979 report:

"Section 30231 of the Coastal Act specifies that the biological productivity of coastal waters and wetlands shall be maintained and, where feasible, restored. Means to achieve those objectives include (but are not restricted to) maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams."

The Sonoma County Local Coastal Plan (LCP; 2001) also advocates for the protection of wetlands, marshes, ponds, and seeps. Of relevance to the Bay Flat Road well project is recommendation number 27 in Chapter III of the LCP, which states, "*Prohibit new water diversions from streams that feed wetlands without establishing limits on diversion sufficient to protect the wetland.*" Although the project is not diverting a stream, they are diverting water supply to the wetland, which is consistent with the spirit and intent of the recommendation which acknowledges the importance of preserving the freshwater supply to wetlands.

In light of the historic importance placed on the Rail Pond wetlands by the Coastal Commission and County Local Coastal Plan, it is an omission that the BBPUD environmental compliance documents fail to evaluate potential significant impacts to the freshwater fringe and upland wetlands given: a) their acknowledgement on the fringe wetland's dependence on fresh groundwater supply; and b) the stated long-term impact that fresh groundwater flows to the fringe wetlands and downstream receiving rail pond will be reduced by 31-percent (reduction from 65-gpm to 45-gpm in groundwater supply to rail pond; Todd, March, 2010), or "at a rate equivalent to the net increase in production from the Dunes well field" (Todd, March 2010). The BBPUD can not claim that the lack of required wetland impact assessments was because they were not aware of the downstream freshwater wetlands. On the contrary, the BBPUD 2007 Master Water Plan (Brelje & Race, 2007) states that the Bay Flat Road well site was selected because of the wetlands. Specifically, in reference to sighting potential well sites, page 24 of the Master Water Plan states:

"An area between Bay Flat Road and Dunes Well No. 4 appears to be promising because fresh water seeps, below this areas year round. Suitable locations would have to be identified and test wells drilled before the feasibility of this alternative could be fully

determined. District staff have discussed the potential for a well with property owners in this area. Recent discussions with one property owner have been positive."

In addition, the water quality study completed by Brelje & Race (2010) on behalf of the BBPUD did not characterize the existing conditions or evaluate potential water quality impacts to the freshwater fringe wetlands. Their study focused solely on salinity impacts to open-water portion of the Rail Pond, a system and habitat type not dependent on freshwater inflows, but dominated by tidal exchange of Bay water. Nor is there a quantification of potential impacts to the fringe and upland wetlands associated with reduced groundwater supply.

Through their environmental compliance process, the BBPUD started out by completely omitting any analysis of potential impacts to the freshwater wetlands, but only addressed such impacts in response to County PRMD comments and recommendations. In response, the BBPUD's water quality analysis (Brelje & Race study mentioned above) did not include the freshwater fringe and upland wetlands and the reductions in groundwater supply to the fringe wetlands were simply lumping into a general conclusion of no potential impact to the Rail Ponds by WRA (2010). Therefore, the conclusions and statements of no potential impact on local area wetlands from changes in hydrology provided by WRA, Inc. in their 2010 reports are incorrect.

4. <u>Non-compliance with Sonoma County General Plan Policies</u>

Base on my review of project documents and reports, it appears that the Bay Flat well project assessments and compliance fail too satisfy many of the Sonoma County General Plan policies associated with Groundwater and Public Water Systems.

- **Policy WR-2e (formerly RC-3h):** Require proof of groundwater with a sufficient yield and quality to support proposed uses in Class 3 and 4 water areas. Require test wells or the establishment of community water systems in Class 4 water areas.

In light of: a) the inaccurate water supply (water budget) assessment submitted by the BBPUD; b) likely reduced well yields and need for maintenance or replacement over time, and c) presence of faults that may limit supply or well yields, the project has failed to demonstrate proof of adequate groundwater supply or well yields in this water scarce area that satisfy the needs of the project or that will not impact downstream wetland resources.

- **Policy WR-3a:** Work with public water suppliers in assessments of the sustainable yield of surface water, groundwater, recycled water and conserved water, including during possible drought periods. This work should include the exploration of potentially feasible alternative water supplies. Surface and groundwater supplies must remain sustainable and not exceed safe yields.

Even in light of a water supply analysis based on recharge estimates that are erroneously high, no BBPUD assessments were completed to evaluate the availability of groundwater supplies during dry or drought years. There also does not appear to have

been a formal evaluation or documentation of potential feasible alternative water supplies. Given the likely long-term problems with decreased well yields due to screen clogging that occur at Dune well field, it would seem prudent for BBPUD to evaluate sources of alternative supply. Possible alternative supplies identified during my review that may prove worthy of further investigation include the following.

1) Increased pumping from the Roppolo well field. There do not appear to be the long-term yield-decreases and maintenance needs at this site and existing wells appear to have much higher production rates than the Dune field wells.

2) Increased wet-season pumping and storage from the existing Salmon Creek wells.

3) Water conservation.

4) Rectify water losses experienced by the District, which are characterized as "*relatively high levels of water loss*" in the BBPUD's own Master Water Plan (pg 14; Brelje & Race, 2007). Historical water losses between 2001 and 2006 (last year reported in Water Master Plan) indicate an increase in loss from 5% to around 18%. The BBPUD has public trust to use water in a beneficial manner. Inefficiencies in their system are no excuse to draw more water and use in the same inefficient manner at the expense to tax-payers and the natural environment.

- **Policy WR-3b:** Support to the extent feasible the actions and facilities needed by public water suppliers to supply water sufficient to meet the demands that are estimated in adopted master facilities plans, consistent with adopted general plans, urban water management plans and the sustainable yields of the available resources and in a manner protective of the natural environment.

As discussed above, it appears that the proposed project has not demonstrated that increased groundwater is available from the Dune well field in a long-term, sustainable fashion or in a manner that protects the downstream freshwater wetlands. Therefore, the project should demonstrate how it does not pose any potential significant impacts to the important and sensitive freshwater-brackish wetlands downstream and within the zone of influence of the proposed Bay Flat Road well.

- **Sonoma Local Coastal Plan**: As part of the development of the Local Coastal Plan (LCP; page III-4), the environmental resources of the Sonoma Coast were identified, reviewed and mapped by a biological consulting firm, the Environmental Technical Advisory Committee and staff. Based on this assessment a hierarchy of environmental sensitivity was established. Especially sensitive areas are designated Sanctuary-Preservation; the more important environmental resource areas are designated Conservation; the remaining environmental resources are designated Potentially Sensitive. Sanctuary-Preservation areas are the most environmentally sensitive areas along the coast. They correspond to "Environmentally Sensitive Habitat Areas" as defined in the

1976 Coastal Act Sections 30107.5 and 30240. No development other than nature trails and resource dependent uses shall be allowed within such areas.

The LCP also designates many locals and habitat types within the Bay Flat well project area-of-influence as Sanctuary-Preservation areas. Specifically, page III-10 of the LCP states:

"Bodega Harbor is an area of high natural resource value, combined with intensive activities of commercial and sport fishing, passive recreation, and educational institutions. The natural resources of the are include a salt marsh which is rare on the northern California coast and which would benefit from restorative measures; tidal mud flats; freshwater-brackish water on the west side and north end of the harbor.

Sanctuary-Preservation Areas:

- *Freshwater marshes on west side and at north end of Bodega Harbor*
- *Ocean, rocky intertidal, and sandy beach of the Bodega Marine Life Refuge*
- *Bodega Rock*
- *Freshwater marsh along Salmon Creek*
- *Dunes and mud flats on the north side of Doran Park*
- *Rare and/or endangered plant sites*
- *Ponds, reservoirs, seeps*
- *Freshwater marsh areas north of the entrance road to Bodega Dunes State Park and at the north end of the harbor*
- *Marsh areas at the southeast side of Bodega Harbor*
- *Seabird nest sites near Bodega Head*
- *Riparian areas of Salmon Creek*
- *Riparian areas west of the entrance road to the State Park and at the north end of the harbor."*

Therefore, the project should demonstrate how it does not pose any potential significant impacts to the important and sensitive freshwater-brackish wetlands downstream and within the zone of influence of the proposed Bay Flat Road well.

5. References

Blake, M.C., Jr., Graymer, R.W., and Stamski, R.E., 2002, Geologic map and map database of Western Sonoma, Northernmost Marin, and Southernmost Mendocino Counties, California. U.S.G.S. Miscellaneous Field Studies Map MF-2402, v.1.0.

California Department of Conservation, Division of Mines and Geology, (CDMG), 2000, Digital images of official maps of Alquist-Priolo earthquake fault zone of California, Central Coastal Region. DMG CD 2000-004.

Driscoll, F.G., 1986, Groundwater and wells. Second edition, U.S. Filter / Johnson Screens, St. Paul, MN, 1088p.

Intergovernmental Panel on Climate Change (IPCC), 2007. Climate change 2007: the physical science basis, contribution of working group I to the Fourth Assessment Report of the IPCC, (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Avery, M. Tignor, and H. L. Miller, eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. http://ipcc-wg1.ucar.edu/wg1/wg1-report.html

Pacific Institute, 2009. The impacts of sea-level rise on the California coast. A paper from: California Climate Change Center, CEC-500-2009-024-F, 101p.

U.S. Army Corps of Engineers (USACE), 2009. Water resources policies and authorities incorporating sea-level change considerations in civil works programs. USACE Circular no. 1165-2-211.

United States Geological Survey (USGS), 1972, Bodega Head, California, 7.5-minute topographic quadrangle map.

ATTACMENT A
List of Documents Reviewed (sorted by date)

November 2, 1979, State of California, Dept. of Parks and Recreation, Sonoma Coast State Beach Agreement with BBPUD.

March 17, 1987, State of California, Dept. of Parks and Recreation, Sonoma Coast State Beach Agreement with BBPUD, Amendment No. 1.

October 5, 1998, Letter from Linda Kepner to Andy Gustavson, Sonoma County PRMD.

October 6, 1998, Letter from Linda Kepner to Andy Gustavson, Sonoma County PRMD. Includes 5/10/79 deed restrictions to Kepner parcel by North Central Coast Regional Commission and Commission Staff Report dated 4/30/79.

February 14, 2006, Letter from Zachary C. Rounds, P.E., CA Dept. of Public Health Services to Janice M. Oakley, P.E., Sonoma District Engineer; subject: Source capacity requirement – Bodega Bay PUD.

February 23, 2006, Letter from CA Dept. of Public Health, Drinking Water Field Operations Branch, Santa Rosa to BBPUD; subject: Source capacity requirements.

April 16, 2007, Letter from CA Dept. of Public Health, Drinking Water Field Operations Branch, Santa Rosa to BBPUD; subject: Draft Master Water Plan Comments.

June 27, 2007, Letter from CA Dept. of Public Health, Drinking Water Field Operations Branch, Santa Rosa to Brelje & Race; subject: June 5, 2007 Master Water Plan Comments response.

August 2007, Master Water Plan, BBPUD, prepared by Brelje & Race Consulting Engineers.

February 15, 2008, Letter from CA Dept. of Public Health, Drinking Water Field Operations Branch, Santa Rosa to BBPUD; subject: Water supply permit amendment.

June 19, 2008, Notice of Intent to Adopt a Mitigated Negative Declaration, Bay Flat Road Well project.

June 19, 2008, Mitigated Negative Declaration, Bay Flat Road Well project.

July 2008, Assessment of Groundwater Resources, Dunes and Roppolo Well Fields, Bodega Bay, CA, Prepared by Todd Engineers.

July 25, 2008, Letter from CA Dept. of Public Health, Drinking Water Field Operations Branch, Santa Rosa to BBPUD; subject: Water supply permit amendment.

August 8, 2008, Email from Doug Macmillan (California Coastal Commission) to Rod Huls, subject: Coastal Commission questions.

May 22, 2009, Email from Richard Ingram (Brelje & Race) to Janet Mantua (BBPUD), subject: pursuit of Coastal Permit.

June 6, 2009, Planning Application Sonoma County PRMD, Bay Flat Road Well and transmission line project.

July 2, 2009, Comment letter from Cynthia Demindovich (Sonoma PRMD) to Janet Mantua (BBPUD) re: Bay Flat Road well project Mitigated Negative Declaration.

July 30, 2009, Email from Richard Ingram (Brelje & Race) to Janet Mantua (BBPUD), subject: Coastal Permit.

October 19, 2009, Email from Richard Ingram (Brelje & Race) to Janet Mantua (BBPUD), subject: attachment of chronology of events re: Bay Flat Well (Coastal Permit Timeline).

October 22, 2009, RGH Consultants letter report to BBPUD re: seismic foundation considerations, Bay Flat Road well project.

November 24, 2009, Email from Justin Witt (Brelje & Race) to Janet Mantua (BBPUD), subject: project biological issues.

December 9, 2009, Comment letter from Jonathan Tracy (Sonoma PRMD) to Janet Mantua (BBPUD) re: Bay Flat Road well project.

January 4, 2010, Email from Justin Witt (Brelje & Race) to Janet Mantua (BBPUD), subject: reply to PRMD comments.

January 11, 2010, Email from Justin Witt (Brelje & Race) to Janet Mantua (BBPUD), subject: wetland delineation.

January 15, 2010, Email from Justin Witt (Brelje & Race) to Janet Mantua (BBPUD), subject: reply to PRMD comments.

February 23, 2010, Memorandum from Brelje & Race to BBPUD, subject Harbor Flat Road Rail Pond Study, B&R File No. 1817.06.

March 2010, Biological Resources Assessment, Bodega Bay Flat Road Well Project, prepared by WRA Environmental Consultants for BBPUD.

March 23, 2010, Technical Memorandum, BBPUD – Proposed Bay Flat Road Production Well Assessment of Groundwater Flow into Rail Pond between Bay Flat Road and Westshore Road, Prepared by Todd Engineers.

March 29, 2009, Email from M. Sean Jeane (Brelje & Race) to Jim Flugum et al., subject Coastal Permit.\

June 7, 2010, Comment letter from Richard Stabler (Sonoma PRMD) to Cynthia Demidovich (Sonoma PRMD) re: Bay Flat Road well project Use Permit.

July 8, 2010, Email from Richard Stabler (Sonoma PRMD) to Cynthia Demidovich (Sonoma PRMD) re: Bay Flat Road Rail Pond TDS Salinity Study.

July 13, 2010, Technical Memorandum, BBPUD – Proposed Bay Flat Road Production Well Evaluation of Potential for Local Land Subsidence, Prepared by Todd Engineers.

(Undated), Letter from Peter Warner (Botanical and Ecological Consulting) to Tom Beavers, subject: biological observations at well site vicinity.

August 18, 2010, Memorandum from Brelje & Race to Cynthia Demidovich and David Hardy (Sonoma PRMD); subject: Project information PRMD File: PLP09-0057.

August 3, 2010, Letter from WRA to Claudia Gorham (Meyers Nave), subject: Bay Flat Road Well Project, Bodega Bay PUD (response to Peter Warner) biological assessment of project site.

September 24, 2010, Letter from Anthony Cohen, Clement, Fitzpatrick & Kenworthy to Sonoma County PRMD; subject: Notice of Appeal: PRMD file number PIP09-0057 (Bay Flat Road well project).

October 22, 2010, Letter from Sonoma PRMD to Interested Agencies; subject: chlorination facility permit application for Bay Flat Road well project.

June 3, 2011, Subsequent Mitigated Negative Declaration (File No. PLP09-0057). Prepared by Sonoma County Permit and Resource Management Department.

Grassetti Environmental Consulting

County of Sonoma Board of Supervisors
575 Administration Drive, Room 100 A
Santa Rosa, CA 95403

March 8, 2011

SUBJECT: REVIEW OF CEQA DOCUMENTS FOR BAY FLAT ROAD WELL INSTALLATION PROJECT

Honorable Supervisors;

Grassetti Environmental Consulting (GECo) has been retained by Bodega Bay Concerned Citizens (BBCC) to review the Draft Initial Study/Negative Declaration (IS/ND) for the Bodega Bay Public Utilities District's (BBPUD) proposed Bay Flat Road Well Installation Project. This review was prepared by Richard Grassetti, GECo Principal. I have over 30 years of experience preparing and reviewing CEQA documents; my qualifications are attached to this letter.

The Initial Study for this project was originally adopted by the BBPUD in June 2008. Subsequently, numerous comments regarding the deficiency of that report were provided to the County Community Development Department staff for its consideration in determining the adequacy of that IS/MND for its use in considering County permits required for the well project to proceed. We have been provided with numerous additional technical reports prepared by the applicant's consultants to "backfill" technical deficiencies in the 2008 IS/MND. Many of these documents were prepared in response to requests from County staff, who identified a number of data gaps in the original IS/MND. Other documents were prepared in response to comments submitted by affected stakeholders and concerned citizens who were not noticed at the time of the original IS/MND, and therefore did not have the opportunity to comment at that time. It is my understanding that the County proposes to use these documents in preparing a Subsequent or Supplemental Initial Study[1].

Peer reviews of the original IS/MND and subsequent hydrologic, geologic, water quality, and biological resources reports were conducted in March 2011 by Peter Baye[2] and Kamman Hydrology and Engineering[3] on behalf of BBCC. The Baye and Kamman reports also presented additional analyses and information omitted from the IS and applicant's consultants' reports.

I have reviewed the 2008 IS/MND, the applicant's subsequent technical documents for compliance with CEQA requirements. My review also considered information presented in the

[1] The appropriateness of this type of CEQA document for the proposed project is discussed under "CEQA Document and Lead Agency Issues", below

[2] Peter Baye, Ph.D, Botanist and Coastal Ecologist, Lettr report to Rose Zoia, March 4, 2011

[3] Kamman Hydrology and Engineering, Inc., Preliminary review of BBPUD Bay Flat Well Installation Project, March 2, 2011

7008 Bristol Drive, Berkeley, CA 94705 www.grassettienvironmental.com (510) 849-2354

Baye and Kamman technical peer reviews and technical reports. The information reviewed indicates that the CEQA documentation for the project does not provide support a Mitigated Negative Declaration. Further, the Baye and Kamman reports, along with my own assessment of the project's potential growth-inducing impacts, provides evidence that clearly exceeds the threshold of a "fair argument" that significant environmental impacts could occur as a result of the project. Therefore, it is my professional opinion that an Environmental Impact Report is required to be prepared for the project. The bases for these conclusions are detailed below.

CEQA REQUIREMENTS

The primary purposes of the California Environmental Quality Act (CEQA) are to inform the public and decision makers of the potential adverse environmental impacts of a project, and to identify mitigation measures to reduce or eliminate those impacts. Preparation of an Initial Study is the first step in identifying those environmental impacts and determining if any impacts could potentially be significant. CEQA requires that an Environmental Impact Report (EIR) must be prepared if there is a fair argument that the project "***may*** have a significant effect on the environment based on substantial evidence in light of the whole record " (CEQA Statutes section 21082.2) (emphasis added). Under this low threshold, if any impacts could be potentially significant and are not clearly mitigated to less-than-significant levels by measures identified in the IS/MND, the preparation of a full or focused Environmental Impact Report is required. Further, if an Initial Study finds that the project may result in an unavoidable significant environmental impact, and EIR must be prepared.

CEQA documents also are required to consider growth-inducing impacts of a project (Guidelines Section 15126.2(d) and Initial Study Checklist item XIII (a) along with indirect impacts of any induced growth. Growth inducing project include infrastructure expansions, such as new water supplies or wastewater treatment facilities, if the lack of those new/expanded facilities are impeding growth. CEQA also requires consideration of cumulative impacts in the IS. The CEQA statutes and Guidelines establish Mandatory Findings of Significance (triggering preparation of an EIR) if "The project has possible environmental effects that are individually limited but cumulatively considerable. 'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of likely future projects." (CEQA Guidelines Section 15065(a) (3))

With respect to the scope of the subject of the environmental review, CEQA requires that an Initial Study consider "the whole of an action which has the potential to result in ...a physical change in the environment" (CEQA Guidelines Section 15378(a)). This means that all aspects of the project must be considered.

PROJECT DESCRIPTION ISSUES

A complete project description would provide all of the information necessary to assess the project's potential environmental impacts. The project description also is required to be consistent and stable to allow an accurate environmental review. We have identified at least one substantive change between the 2008 Initial Study and the project as currently proposed. The proposed chlorination shed has been relocated such that it now would be directly above canyon

with surface flow connection the non-tidal freshwater roadside marsh/potential CRLF habitat. This revision to the project description should be addressed in the County's CEQA review.

TECHNICAL IMPACT ASSESSMENT ISSUES

Overall Comments

Overall, the 2008 Initial Study/Negative Declaration has numerous technical deficiencies and inadequacies. In general, it focused on project footprint impacts, and failed to consider off-site impacts. It also failed to conduct any meaningful analyses on environmental topics other than cultural resources. As summarized below, it is comprised mainly of unsupported conclusions and offers no evidence that impacts would not be significant.. Major technical problems with the Initial Study and subsequently submitted supporting documentation (that was not part of the administrative record when the BBPUC approved their project) are summarized by topic below.

Aesthetics

The aesthetics analysis fails to consider the relocation of the chlorination shed. Further, it fails to address potential damage to trees as a result of trenching immediately adjacent to a row of mature trees on the Beaver's property. In addition, it fails to assess changes in visual quality of the hillside and marsh margins below the property that may result from changes in vegetation due to the project's reducing or eliminating spring flows on and at the base of that hillside.

Air Quality

The air quality assessment is devoid of any data or analysis. It consists solely of conclusions. In addition, it fails to address potential secondary air pollution emissions associated with the project's growth-inducement of up to approximately 200 residential units (see discussion of Growth Inducement, below). The analysis should be revised to include, at a minimum, a screening level analysis of potential impacts of both the project itself and potential induced development.

Biological Resources

This 2008 IS section included no data or actual analysis. It consists solely of conclusions. Given the numerous sensitive ecological resources that may be either directly or indirectly affected by the project, this "analysis" fails to meet even the most basic CEQA disclosure purposes.

In response to requests from County staff, the applicant provided supplemental biological documentation intended to support the IS/MND's conclusions. Those reports were peer-reviewed in the Baye and Kamman reports, which also have been submitted to the County.

The Baye and Kamman reports provided substantial evidence that the IS and subsequently developed BBPUC technical analyses completely omitted or failed to identify the full impacts on sensitive species and habitats. Specifically, as documented by Baye:

- The Initial Study limited its biological review to the project footprint, thereby failing to assess potential indirect and off-site impacts of the project.

- The IS and subsequent supporting documentation fail to address impacts of release of hypochlorite solution into the wetlands in the event of accidental spill or seismic shaking/rupture along the San Andreas Fault zone, on which the site is located.

- The IS failed to address impacts to wetland areas and concluded that no such impacts existed. The subsequent biological assessments used incorrect biological, salinity and hydrologic analyses to support those conclusions. As documented in the Baye report, the open-water salinity studies conducted by the project engineers fail to address soil pore salinity, which is the critical factor for the survival of the freshwater wetland species fringing the landward side of the Rail Ponds. Further, Baye sampled the salinity of those areas and found freshwater conditions not considered in any of the applicant's reports. Baye also found that the WRA criteria used to identify potential impacts to the wetlands was in error; WRA considered ceasing of freshwater seepage as their criteria, while Baye explained that biologically significant changes could occur from reduced seepage rates that allow root-zone salinity levels to rise.

  The Kamman report reviewed the applicant's hydrologic studies and found that the groundwater analyses were incomplete and inadequate, and that there was a substantial potential for groundwater pumping to adversely affect the freshwater flows supporting the wetlands and therefore the wetlands themselves.

- Nowhere in the documentation provided are potential impacts to wetlands from cumulative groundwater withdrawal by BBPUD wells assessed.

- The IS/MND failed to disclose or assess potentially significant impacts to suitable habitat for numerous special-status species, as well as the presence of several such species within the potentially affected area. These include state and/or federally protected species: the California red-legged frog, tidewater goby, Myrtle's silverspot butterfly, Salt marsh yellowthroat, northern salt-marsh (Point Reyes) birds-beak, and other species of concern: Humboldt Bay salt marsh owl's clover, coastal marsh milkvetch, Marin knotweed, Bolander's water hemlock, Franciscan thistle, and Sonoma alopecurus, Virginia rails, sora. The 2010 WRA Biological Assessment addressed these species only for the project footprint, and therefore failed to identify potential impacts of reduced seepage/spring-flows (identified as likely in the Kamman report) on these species. The Baye report provides substantial, detailed, documentation of these species and/or their habitats being present or potentially present on-site or in similar habitats nearby. The Baye report also documented the potential for these species and/or their habitats to be significantly adversely affected by direct or indirect project impacts.

Because the IS/MND and subsequent reports failed to assess project impacts as summarized above, they also failed to provide mitigation for those impacts.

Geology and Soils

The 2008 IS/MND failed to identify the project site as within an Alquist-Priolo fault zone. In fact the IS/MND specifically stated that the site ***was not*** within such a zone. Potential impacts on public health and safety, and ecological resources from potential release of water treatment chemicals have not been assessed. Potential impacts of land subsidence from long-term cumulative groundwater withdrawal have not been evaluated.

Hazards and Hazardous Materials

As noted above, potential impacts to health and safety associated with accidental or earthquake-related release of treatment chemicals have not been evaluated. A statement that those spills "would be avoided and handled appropriately" (IS/MND, p. 32) is not an analysis of the likelihood or magnitude of impacts.

Hydrology and Water Quality

The 2008 IS/MND included no analysis of changes in groundwater conditions; no acknowledgment of the ponds, springs, or seeps; no analysis of salinity; no analysis of drainage or water quality; no analysis of erosion or sedimentation; and no analysis of water supply. In short, it contained no analysis other than a single paragraph regarding overall water balance for the combined Dunes and Roppolo well fields that concluded that there was enough water to supply a well "under average and drought conditions and should not significantly impact regional groundwater levels." This "assessment" was based on a draft report of groundwater resources prepared by Todd Engineers in February 2008.

The information provided to the County after the BBPUD's approval of the IS/MND was reviewed in Kamman Hydrology and Engineering (March 2, 2011 letter report) and also found to be lacking adequate information to assess project impacts. The Kamman report findings are summarized below:

- As described under Biological Resources, above, the water quality study by Brulje and Race (2010) did not characterize the existing conditions or evaluate potential water quality (salinity) impacts to the seeps and springs that are sustaining the freshwater vegetation fringing the landward side of the Rail Ponds.

- The "assessment" in the IS/MND found that the project would reduce flows in the seeps and springs feeding the Rail Ponds and adjacent vegetation by 31% in a series of dry years and by 53% in a single dry year, yet, inexplicably, found no impacts to the water supply or quality of those springs and seeps.

- An aquifer (well pumping and monitoring) text is the standard procedure to quantify the hydraulic and storage parameters of an aquifer at a well site. Such tests were not completed for the project site, resulting in guestimates of actual impacts. Given the high percentage of remaining available supplies to be tapped by the proposed new well, this approach does not provide adequate evidence that the proposed project would not

result in significant impacts to the groundwater and associated surface waters. The need for an aquifer test is made more important because of the unknown effects of the San Andreas fault on the aquifer. Faults act as barriers to groundwater flows. This fact was not taken into consideration by the Todd 2008 and 2010 groundwater studies, which assumed a homogeneous and laterally continuous aquifer. In short, the size and supply of the aquifer are not well enough described/evaluated to determine what the project's impacts on the aquifer and associated water features may be, but, given the magnitude of the proposed pumping in the context of the aquifer, they could well be significant. Kamman concluded that under 24-hour pumping, the cone of depression would reach the Rail Ponds within a week.

- The water budget calculated by Todd Engineers in 2008 "grossly overestimates the annual recharge to the aquifer that supplies the Dunes and Roppolo well fields and incorrectly states or implies that all water that recharges the aquifer in question is available... to the wells. Therefore the estimates of available water supply to the project are inaccurate and significantly inflated." Kamman details how the Todd assessment includes significant watershed areas that lie outside of and do not contribute to the Dunes and Roppolo well fields. In addition, some of the watershed considered as contributing to the project well field is downgradient of the proposed well, and therefore clearly not contributory. This means that impacts to the aquifer and associated springs and seeps (and habitats and species dependent on them) are likely to be substantially understated. It also means that impacts to the aquifer overall may be significantly understated.

- The assessment of well pumping does not consider cumulative impacts to the aquifer and associated freshwater flows to the Rail Ponds from existing wells in addition to the proposed well. Using the Todd estimates, Kamman estimated that, under current conditions, pumping from the Dunes well field has already resulted in a 60% loss of natural/historic freshwater supply to downstream wetlands, and the proposed project will yield a cumulative reduction of 73% of the flows to those wetlands. The IS/MND and subsequent technical analyses prepared for the BBPUD fail entirely to evaluate the potential effects of this cumulative loss of freshwater to the ponds and fringing wetlands. The effects of this loss of freshwater supply in combination with projected sea level rise also should be considered.

Land Use and Planning

The IS/MND states that the proposed project "is not in conflict with the Sonoma County General Plan or the Local Coastal Plan" (LCP), but offers no analysis or evidence to support this conclusion. We are not aware of any supporting evidence being submitted to the County regarding this issue. As detailed in the Kamman report, the proposed project fails to demonstrate compliance with a number of General Plan and LCP policies associated with Groundwater and Public Water Systems, including, but not limited to:

- Policy WR2e – requiring proof of sufficient groundwater yield, and
- Policy WR-3a – exploration of feasible sustainable alternative water supplies

Further, the LCP also includes a policy that:

> 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

The proposed project also would conflict with the Sonoma Local Coastal Plan's policies to preserve and protect Environmentally Sensitive Habitat Areas. P. III-10 of the LCP identifies the "A salt marsh that is rare on the northern California coast and which would benefit from restorative measures; freshwater-brackish water on the west side and north end of the harbor". This geographic area includes the Rail Ponds, the sensitive fresh/brackish water habitats of which may be adversely affected by the project.

Population and Housing – Growth Inducement

The 2008 Initial Study analyzes the project's growth-inducement potential as follows:

> The proposed project is intended to bring the District into compliance with the Safe Drinking Water Standards that require water supply to be able to match peal, demands without reliance on storage, as required by the California Department of Public Health. The proposed project will not change growth in the area as growth is strictly regulated by the Local Coastal Plan and the Sonoma County General Plan.

This "analysis" is inadequate on its face. The IS contains no assessment of the current and planned development in the Bodega Bay area, as permitted under the General Plan. The stated purpose of the project (Initial Study, p. 5) is to:

> ...allow the District to provide adequate water service to its existing customers and to meet future demands, as determined by the Sonoma County General Plan and the Sonoma County Local Coastal Plan.

The BBPUD's Master Water Plan (Brelje and Race, 2007) states that one of the its main purposes is to "insure that the expansion program for the water system will continue to be compatible with the land use element of the 1981 Coastal Plan..." According to that Plan, there were 1862 Residential Use Equivalents in the District, with existing (2006) average daily demand of about 160 gallons per day (gpd)/RUE, with an average daily demand of about 298,000 gallons and a maximum daily demand of 318,000 gallons. The Plan projects the number of RUEs at buildout of the General Plan at 2080, with average daily demand of 220 gallons/day/RUE and maximum daily demand of 410 gpd/RUE. This equates to a projected daily demand ranging from 462,000 gallons (average day) to 861,000 gallons (maximum day). This is a major increase in demand over the existing conditions. It should be noted that demand has not been increasing because

the State Department of Health Services (DHS) has placed a moratorium on new hookups until the water supply is increased[4].

The existing wells produce approximately 705 gallons/minute if all wells are producing, but one of the wells may need to be idled during certain high-demand months, resulting in a current safe supply of 570 gpm. This is sufficient to meet current (2006) maximum daily demands of 513 gpm (Brelje and Race, p. 23). However, DHS requires that the District have adequate supplies even if one well is down. The current supply does not meet that standard, therefore DHS recommended that the County place a moratorium on new hookups until it demonstrates sufficient capacity to serve the additional connections[5].

The proposed new well, along with additional storage facilities, would exceed the DHS mandates for current demand, and would meet or exceed the anticipated demand at full buildout under the General Plan. Because the new supply would exceed the supply necessary to meet existing demands plus DHS safety buffers, and because growth in Bodega Bay is limited by water supply, there is a fair argument that further expanding the water supply to serve the additional 218 RUEs would induce growth of up to 208 residential units (or their equivalents) ***that could not otherwise occur.*** Therefore, the impacts of the induced growth on sewage treatment, traffic, land use, natural resources, and other environmental issues must be analyzed in the CEQA documents for this project. This analysis is not abstract or conceptual – it is my understanding that several developments have been proposed on vacant sites in the town that cannot move forward until this supply is in place. It is also my understanding that at least one of these developments may have contributed financially to the fund the currently proposed well permitting activities, which would further link the proposed project to potential new growth.

Public Services, Recreation, Traffic, and Utilities

The 208 IS/MND conducts no analysis and identifies no impacts associated with public services, recreation, traffic, or utilities. As discussed above, the project could induce the growth of over 200 units in Bodega Bay. This would have the potential to create new traffic impact on the already congested Highway 1 as well as local roadways, which could increase air pollutant emissions and noise levels in the area. The new development also would require additional new services and utilities such as sewer systems and police and fire services, and recreational facilities, all of which should be assessed.

MANDATORY FINDINGS OF SIGNIFICANCE

CEQA Guidelines Section 15065 states, "The Lead Agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:

---

[4] Janice M. Oakley, Sonoma District Engineer, Drinking water Field Operations Branch, California Department of Health Services, letter to Ray Huls, Bodega Bay Public Utilities District, February 23, 2006.
[5] Ibid

1. The project has the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species....
2. The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
3. The project has potential effects that are individually limited but cumulatively considerable....

As described above, the Baye and Kamman reports present substantial evidence that the project may substantially reduce important, sensitive, habitats, and substantially reduce the number and restrict the range of endangered, rare, or threatened species. Kamman also provides evidence that potentially significant hydrologic impacts may result from the proposed project. Further, those reports conclude that cumulative groundwater withdrawals also may even more severely adversely affect these resources. Finally, as described above, the project would induce growth that would further exacerbate cumulative impacts and result in additional potentially significant impacts on other resources.

CEQA DOCUMENT AND LEAD AGENCY ISSUES

Email correspondence between Rebecca Beavers and County staff in February 2011 indicates that the County proposes to prepare a Supplemental Initial Study for this project, acting in a capacity as Responsible Agency. Under this approach, the County would revise the BBPUD's Initial Study for use in considering approval of County land use permits. However there is no provision in the CEQA Guidelines for preparation of such a document. CEQA Guidelines Section 15162 provides for Subsequent Negative Declarations and Guidelines Section 15164 provides for Negative Declaration Addendums, but Section 15163, which applies to EIR Supplements, has no provisions for Supplemental Initial Studies or Negative Declarations. Moreover, only Lead Agencies may approve Subsequent Negative Declarations.

The County's use of a Supplemental Initial Study for this project would be inappropriate, even if it were permitted by statute. Supplemental EIRs are permitted when "Only minor additions or changes would be necessary to make the previous EIR adequate to apply to the project in the changed situation" (Guidelines Section 15163(a) (2)). As detailed below, the BBPUC's 2008 IS/MND was wholly inadequate in that it failed to analyze any of the key impacts, relied upon entirely unsupported conclusions for its findings, and failed to identify, assess, or mitigate numerous potentially significant environmental impacts.

The County's use of a Subsequent Initial Study for the project would depend on the conditions in CEQA Guidelines Section 15162 being satisfied by the project. That section applies to changes in the project or in circumstances that might result in new or more severe impacts than identified in the Lead Agency's IS, or new information is developed that was not known and could not have been known at the time that the lead agency adopted the original IS/MND, and that information indicates new or more severe impacts would occur or new mitigation measures or alternatives are needed and are not adopted. In this case, although new information indicating new and more severe environmental impacts has been developed, it is

not clear that such information could not have been identified at the time of the original project approval, had the Lead Agency bothered to actually do an analysis of the impacts.

CEQA Guidelines Section 15052 provides an alternative and appropriate vehicle for the County to use in this case. Under that section, "the Responsible Agency shall assume the role of Lead Agency when .....The Lead Agency prepared inadequate environmental documents without consulting with the Responsible Agency as required by Sections 15072 or 15082 and the statute of limitations has expires for a challenge to the action of the appropriate Lead Agency." (Guideline Section 15052(a)(3). Absent evidence that the BBPUD appropriately consulted with the County, it is my professional opinion that the proper approach for the County to take at this juncture is to assume Lead Agency status and then prepare a full or focused EIR addressing all of the issues identified as inadequately considered in the 2008 IS/MND in this letter.

CONCLUSIONS

Based on the above analysis, it is my professional opinion that there is substantial information on the record that a number of significant impacts may result from implementation of the project (and cumulative projects). It is my professional opinion that the deficiencies outlined above are substantial enough to warrant the County's assumption of Lead Agency status and preparation of a full or focused EIR for the project (addressing project-specific, growth-induced and cumulative impacts).

Please feel free to call me at 510 849-2354 if you have any questions regarding this letter.

Sincerely

Richard Grassetti
Principal

This is a Sanctuary –Preservation Area

Dense Habitat Rims the north side of Rail Pond

Habitat

Well head site

4 foot deep trenching will pass thru the roots of these trees

Down the driveway into the wetland

fundamental flaws that the recent National Academy of Sciences critical review of the Delta Protection Plan emphasized with the State Water Project proposal. A blinkered approach to rationalizing impacts of the proposed project design and location will not meaningfully advance its CEQA adequacy.

Respectfully submitted,

Peter Baye
baye@earthlink.net

cc: Rose Zoia
Richard Grassetti, GECONS
Greg Kamman, KHE Inc.

BODEGA BAY CONCERNED CITIZENS

P. O. Box 815
Bodega Bay, CA 94923

October 11, 2011

Charles Lester, Executive Director
CALIFORNIA COASTAL COMMISSION
North Central Coast District Office
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

ATTENTION: Ruby Pap, District Supervisor

Dear Director Lester,

The BODEGA BAY CONCERNED CITIZENS wish to thank you for your acceptance of our appeal dated October 4, 2011 with regard to the following project:

Commission Appeal No. A-2-SON-11-037
Sonoma County Project File No. PLP09-0057
Bodega Bay Public Utilities District, Applicant
Bay Flat Road Well Project, Bodega Bay

Our initial appeal contained technical reports from Dr. Peter R. Baye, Ph.D., Coastal Ecologist & Botanist, Gregory Kamman of Kamman Hydrology & Engineering, Inc. and Richard Grassetti, Grassetti Environmental Consulting. These documents, prepared on behalf of the Bodega Bay Concerned Citizens, contain complete reviews of all of the documents made available and obtained from both the applicant and County of Sonoma and more than meet the criteria for fair argument in opposition to the project.

This letter and its enclosures contain additional information not sent with the initial appeal due to time constraints. Among the enclosures you will find an update from Dr. Baye with regard to the installation of the chlorination shed

Exhibit 6 (A-2-SON-11-037)

approved at the September 27th hearing extension, along with other information with regard to other aspects pointing to the need for preservation of this sensitive Sanctuary Preservation area. Also enclosed are more photographs with regard to the project and their relevance to the site plans submitted by Brelje & Race for the project. A list of the enclosures is a part of this addendum.

Once again, we thank you for your acceptance of our appeal and look forward to working with you. Should you desire more information, we are available at the above address or at 707-875-2297 and briarepach@aol.com.

Sincerely,

BODEGA BAY CONCERNED CITIZENS

Margaret C. Briare

Margaret Briare, Representative

Enclosures as listed

List of Enclosures Sent With Addendum dated October 11, 2011:

1. Additional comments from Peter R. Baye dated September 27, 2011 regarding relocation of chlorine shed and the feasibility of the proposed modified condition 8.
2. Excerpts from Natural Resources of the North Central Coast Region and Chapter 3 of the Coastal Act as prepared by the Coastal Commission for the area.
3. Excerpts from the North Central Coast Regional District, California Coastal Commission Initial Summary Report dated April 30, 1979.
4. Information on location of the chlorination shed issues. Photo shows the road now owned by resident Linda Kepner being acquired via condemnation by the applicant. This is precisely the area protected in the Initial Summary Report. Site plans did not show the protected wetlands at the base of the road that are an important part of the freshwater flow into the Rail Ponds. Note where some of the protected trees have already been cut down adjacent to the shed site.
5. Site Plan prepared by Brelje & Race for the applicant shows proposed trenching within the base and root zone of the irreplacable landmark trees which make up an important part of the Sanctuary area and contain nests for osprey, hawks, owls and other raptors. [see letter from Darrell B. Sukovitzen dated July 7, 2011].
6. Partial list of agencies and individuals who have joined us in opposition to the project. Many of them testified at the hearings before the Board of Supervisors and submitted testimony on the issues.
7. Important photograph taken by Don Coates, Geologist with the North Coast Regional Water Quality Control Board. Photo shows wetland area directly adjacent to the well site (approx. 40 ft. downslope). Fences shown in the photograph are the property lines for 1677 and 1681 Bay Flat Road. Individual in photo is Paul Keiran, Enforcement Officer for the RWQCB, pointing directly upslope to the well site. This wetland was not included in the initial study from WRA
8. Letter from Richard Stabler, Environmental Specialist/Biologist for the County of Sonoma dated June 7, 2010 with regard to groundwater flows to the Rail Ponds. Mr. Stabler was later asked to recant his information, but this letter of June 7, 2010 is part of the record.

9. Letter from Jonathon Tracy, Project Revuew Section, Health for the County of Sonoma with regard to decrease of groundwater discharge to Bodega Harbor and the impacts to dune flora and fauna. Additional requested information not found in files or made available.
10. Letters from National Audubon Society and Madrone Audubon Society regarding the importance of this area and the significant impacts this project will have on the Sanctuary area and bird population, along with certificate of designation as a Globally Important Bird Area.

NOTE. Another important issue that was not evaluated completely by the applicant and/or County of Sonoma is the issue of ground subsidence and the cone of depression that could affect the residences at both 1677 and 1681 Bay Flat Road. This issue is discussed in the hydrology report submitted by Greg Kamman attached to the initial appeal. The cone of depression is estimated to be approximately 107 ft. in either direction from the well and encompasses the two residences at 1677 and 1681 Bay Flat Road.

ENC. #1

Peter R. Baye, Ph.D.
Botanist, Coastal Ecologist
P.O. Box 65,
Annapolis, California 95412

(415) 310-5109

baye@earthlink.net

Efren Carrillo, Chair, and Supervisors
Sonoma County Board of Supervisors
575 Administration Drive, Room 100 A
Santa Rosa, CA 95403

September 23, 2011

Cynthia Demidovich
Sonoma County Permit and Resource Management Department
22550 Ventura Avenue
Santa Rosa, CA 95403

Via email

SUBJECT: Bay Flat Well Subsequent Mitigated Negative Declaration, notice of re-opened public hearing pre-dated September 27, 2011; Bodega Bay Public Utilities District Bay Flat Road Well Project: supplemental comments on location-dependent chlorination shed impacts on freshwater marsh north of Bay Flat Road; feasibility of proposed revision of Condition 8.

To the Board of Supervisors and Permit and Resource Management Department, Sonoma County:

I am responding to the notification of the re-opened public hearing the Bay Flat Well project. I previously commented on the mitigated negative declaration for this project in my letter of June 12, 2011, which I incorporate by reference. Please consider my specific comments below on (a) the location-dependent wetland impact risks of the relocated chlorination shed, and (b) the feasibility of monitoring and mitigation measures proposed in the modified condition number 8.

1. Chlorination shed impact risks to freshwater marsh north of Bay Flat Road, and fresh-brackish tidal marsh south of Bay Flat Road. The MND failed to identify the very conspicuous freshwater marsh dominated by tules, cattails, and bulrush – suitable California red-legged frog (CRLF) habitat within its occupied range in Bodega Bay. The marsh exists in plain view of the road, and could not possibly be more conspicuous from the road. It lies directly downslope from the currently proposed chlorination shed

location. I described and exhibited photographs of the freshwater marsh in my previous comment letter. Even a cursory field investigation of the project vicinity, or background documents, would have readily revealed this marsh and smaller slope wetlands above it (seepage-dependent wetlands; not uncommon in the project vicinity and in Bodega Dunes generally, and a typical type of wetland that must be expected in this geomorphic setting by any qualified professional wetland ecologist).

Any project documents identifying slope wetlands would be a plain indicator of the likelihood of even more and "wetter" freshwater wetlands downslope as sea level is approached. I can find no reasonable explanation for the continued omission of the freshwater wetland impact assessment in the MND, and the omission is apparently not addressed in any currently proposed conditions of authorizations.

An accidental spill of soluble hypochlorite/chlorination materials during the winter rainfall period anywhere between the chlorination shed and vehicle routes transporting them from Bay Flat Road would be at high risk of transport by surface runoff and subsurface seepage in sandy substrates to the freshwater marsh on the north side of Bay Flat Road. Exposure to hypochlorite or other caustic chlorine materials would likely cause significant mortality ("take") of any federally listed CRLF tadpoles present. Such a spill would also likely cause mass mortality of aquatic invertebrates that support the food chain of the marsh. These potential significant impact appears to remain unaddressed by the MND or conditions of authorization. The MND has not reviewed alternative chlorination shed locations that would avoid or minimize potential spill impacts to the sensitive freshwater marsh.

2. Proposed condition 8 technical adequacy, and its potential feasibility and efficacy. Proposed condition 8 cannot possibly have any substantive mitigation effect on the potential impact of acute, short-term salinity intrusion on long-lived riparian woodland and fresh-brackish perennial marsh vegetation. Salt-sensitive mature perennial and woody riparian (willow-waxmyrtle) vegetation takes many years to develop, but can be killed in a matter of days or weeks by brief and rapid subsurface salinity pulses affecting their root zones during the summer growing season. Proposed condition 8 (as quoted in your notice for the September 27 hearing) stipulates that:

> *If, during any time within the five year monitoring period, the annual well monitoring reports (or monthly samples) indicates an increase in root zone porewater salinity levels at or above 5 parts per thousand (ppt) or above the salinity level established by baseline data, a biological review will be conducted. The biological review shall be prepared at the District's expense. The report shall assess the biological conditions influenced by pumping along with other factors that may have influenced the biological diversity of the rail ponds. If the biological review indicates a significant shift in the plant community composition beyond seasonal variation or baseline conditions, or other potentially significant impacts on the biologic function of the Rail Pond, then the district shall reduce or suspend pumping to evaluate methods to reduce porewater salinity to levels below 5*

ppt, or below the salinity level established by baseline monitoring, subject to review and approval by PRMD.

This proposed after-the-fact "correction" is utterly pointless because effectively irreversible salinity impacts would have already occurred before or during detection by the proposed monitoring methods. There is no mitigation measure proposed to prevent or minimize the salinity intrusion impact before irreversible damage is done. The pseudo-mitigation measure essentially prescribes post-mortem cessation of an ongoing lethal process after death of the valuable natural resource that needs to be protected.

The recovery time for a mature willow stand affected by severe salinity intrusion event would take decades, if it occurs at all, and is for all practical CEQA purposes would be irreversible. Cessation of groundwater pumping after acute marine salinity intrusion in the root zone is detected would have no protective effect on the willow or fresh-brackish wetlands whatsoever; irreversible lethal and sublethal root and shoot damage would already have been done to these salt-sensitive plant species once elevated root zone salinity occurs. Intertidal tule dieback caused by haline groundwater intrusion to the root zone would potentially recover during a 3 to 7 year period, depending on phasing with high rainfall climate cycles. But mature willow-waxmyrtle riparian woodland would likely become a skeletal, dead relict snag habitat feature that would be replaced by other vegetation types – most likely invasive non-native vegetation growing in the subcanopy – and may never have the chance to recover during predicted acceleration of sea level rise in the next several decades.

Proposed condition 8, in short, is scientific and regulatory nonsense dressed up with diversionary technical details and prose. In order for any protective mitigation effect at all to be even possible, monitoring methods would have to detect the earliest onset of salinity intrusion in the leading (seaward) edge of the tule root zone, and trigger cessation of pumping before the groundwater "wave" of salinity intrusion even approaches the inner (landward) root zone of tules and particularly the riparian woodland. This would require real-time data on groundwater elevation and salinity from a data logger providing continuous monitoring during the summer, particularly during perigean spring tide series, in both drought and nondrought years. Even this continuous real-time monitoring-mitigation measure would not ensure impact minimization and avoidance of significant impacts with irreversible consequences because of the inertia (lag in groundwater response time) of salinity intrusion and the hydraulic gradient of subsurface freshwater flows protecting the root zone of the willow-waxmyrtle community.

The fundamental problem with this CEQA process is not a matter of technical details: it is the failure to address reasonable alternatives that would avoid or minimize location-dependent impacts (chlorination shed, well location) in relation to geographically embedded natural resources, and assess reasonable and practical modal alternatives (such as water conservation and reduced peak demand). These are precisely the same

Peter R. Baye Ph.D.
Coastal Ecologist, Botanist
baye@earthlink.net
(415) 310-5109

ENCL. #2

Excerpt From: NATURAL RESOURCES OF THE NORTH CENTRAL COAST REGION

North End Marsh. At the extreme north end of Bodega Harbor, two small marshy ponds, ranging from fresh to brackish to salt water depending upon tide and rainfall, are separated from the harbor water by the hard surface road. **This is one of few locations in Sonoma County known for the tule Scirpus Californicus.** It grows at the edge of this marsh in areas varying from saline to fresh water. Although many species of shorebirds and waterfowl use these marshy ponds, they are particularly well know as rail ponds and are visited by birdwatchers and teachers from surrounding counties. Both Sora and Virginia Rails can be seen here very close to the road, and evidence indicates that Virginia Rails may nest in this small marsh (M. Rosegay, pers. Comm..). This is one of very few areas where a large number of people can observe these secretive birds without apparent disturbance. These brackish ponds should certainly never be filled in, but they face a more immediate problem. The culverts draining both ponds are in disrepair and tend to be blocked by the riprap on the harbor side of the road. When this occurs, as it frequently does, the fresh water accumulating in the ponds does not drain into the Harbor. The marsh becomes a pond and the best rail habitat is removed. The culverts must be kept open to permit the free flow of salt and fresh water between the marsh and the Harbor. The Sonoma County Department of Public Works is aware of this situation and has indicated its intention to alleviate the problem. Both these marshes should be given some recognition and status so that maintenance of optimum water conditions [salt and fresh] is guaranteed.

Freshwater wetlands occur at several other areas along the north and east side of Bodega Harbor, They should all be preserved.

Excerpt From CHAPTER 3 of the Coastal Act:

SECTION 30231.
The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimize adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Note: These excerpts are a part of the Coastal Commission's jurisdictional determination that is a part of the protected land of Linda Kepner and are a part of her deed covering the property at 1705 Bay Flat Road. This includes the access road the BBPUD wishes to use to stock and maintain the chlorination shed and is currently the subject of condemnation and eminent domain on behalf of BBPUD to gain access.

ENCL. #3

Excerpt From North Central Coast Regional District, California Coastal Commission Initial Summary Report dated April 30, 1979:

"The site contains several noticeable and important natural features. A lush row of stately cypress trees lines the eastern property boundary. Tall and mature, the cypress are estimated to be 100 years old. Another stand of cypress at the northeast (rear) property line will shield the proposed building site #2 from the State Park. In close proximity to the cypress and clinging to the sides of a steep drainage ravine which parallels the access road is a stand of tall eucalyptus. The eucalyptus, in consort with the cypress provide a canopy which shrouds the driveway and which will screen building site #1 (in addition to #2) from many public viewing locations. At the base of the dune, the drainage course has been diverted by fill toward the western edge of the property.

A natural freshwater spring emerges on the west property line, at the base of the dune. This spring flows along the west property line through a marshy area and feeds, after passing under Bay Flat Road, the narrow marsh/mudflat belt which thrives between Bay Flat and Westshore Roads in this vicinity. The marshy area on the Funk (i.e. Kepner) property is punctuated by pampas grass, reeds and riparian vegetation."

Page 2, Paragraph 1:
"The project area lies within the Alquist-Priolo Geologic Studies Zone mapped by the State Geologist. The geotechnical report referenced here was prepared to determine the stability of the proposed building sites."

Page 3, Paragraph B of "Findings":
"The existing vegetation on the site, specifically the mature cypress and tall eucalyptus, provide not only the value of screening the proposed building sites and aiding in site stabilization, but they also constitute a scenic visual resource in and of themselves. They contribute significantly to the visual quality of the dunes area between the State Park properties and the privately held lands. The park property is lined with both cypress and eucalyptus, although cypress predominate in the immediate project vicinity. The marsh and riparian vegetation at the bottom of the dune, along Bay Flat Road, is visually a part of the same marsh/riparian vegetation pattern which flourishes in the marsh belt between the old and the new roads (that is, between the historic Bay Flat Road and the new road, Westshore Road, built on fill in the early 1960s).

Because this vegetation is a distinct visual resource, its preservation should be assured…."

Page 4, Section D of "Findings":
"Section 30231 of the Coastal Act specifies that the biological productivity of coastal waters and wetlands shall be maintained and, where feasible, restored. Means to achieve these objectives include (but are not restricted to) ***maintaining natural vegetation buffer***

Page 2 - Excerpt from Initial Summery report dated April 30, 1979.

Areas that protect riparian habitats, and minimizing alteration of natural streams [emphasis added].

The freshwater/brackish rail ponds which occur between Bay Flat and Westshore Roads along the north rim of Bodega Harbor are significant wetland habitats. Separated now from the harbor by the construction of Westshore Road on fill during the 1960s, the ponds are nonetheless historic wetland/tidal areas which maintain hydrologic continuity with the harbor and with upland feeder streams and springs. This continuity is maintained, among other means, by flow under the roads through culverts. Springs or other seeps may also contribute. The habitat value of the ponds was described in the report "Natural Resources of the North Central Coast Region" [excerpts from this report are attached], a report prepared for the Regional Commission in 1975, These marsh-pond areas support a variety of rails, including the Sora and Virginia rails, and have become a favored bird-watching area. The ponds also support the tule Scirpus Californicus, being one of the few locations for this tule in Sonoma County."

The available information indicates that the marshy area at the bottom of the subject parcel (Kepner property) may be an extension of the other ponds. The vegetation varieties are similar. The spring emanates on the west property line and feeds (through a culvert) the other ponds."

Note: For further information on this area proposed for installation of the chlorination shed, please read Dr. Peter M. Baye's reports.

ENCL. 4

CHLORINATION SHED LOCATION

- Location of this shed is in close proximity to wetland areas and uphill from sensitive wetlands and rail ponds.
- The site is located on the Alquist-Priolo Fault Zone. Liquifaction and severe ground shaking are highly probable if an earthquake should occur.
- Shed would contain and process hazardous material (hypochlorite) for treatment of well water.
- The access road that would be utilized for delivery and maintenance of the shed is a private driveway through a designated protected wetland area under the jurisdiction of the California Coastal Commission since 1979. (see photo 1, 2, and 3).
- Pipeline carrying hazardous materials from the shed to the well main would be trenched within the root lines and drip lines of landmark status trees that are protected as a part of the Sanctuary Preservation Area and the Coastal Commission. (See Excerpts from 1979).
- BBPUD is attempting to gain access to this driveway via condemnation proceedings filed against the property owner Linda Kepner.
- The California Coastal Commission has not given permission for use of its jurisdictional area other than access and egress by property owners.
- The changed location will have even more of an impact on the ESHA and private property than the original location. Information submitted by Brelje & Race has been found to be questionable at best.

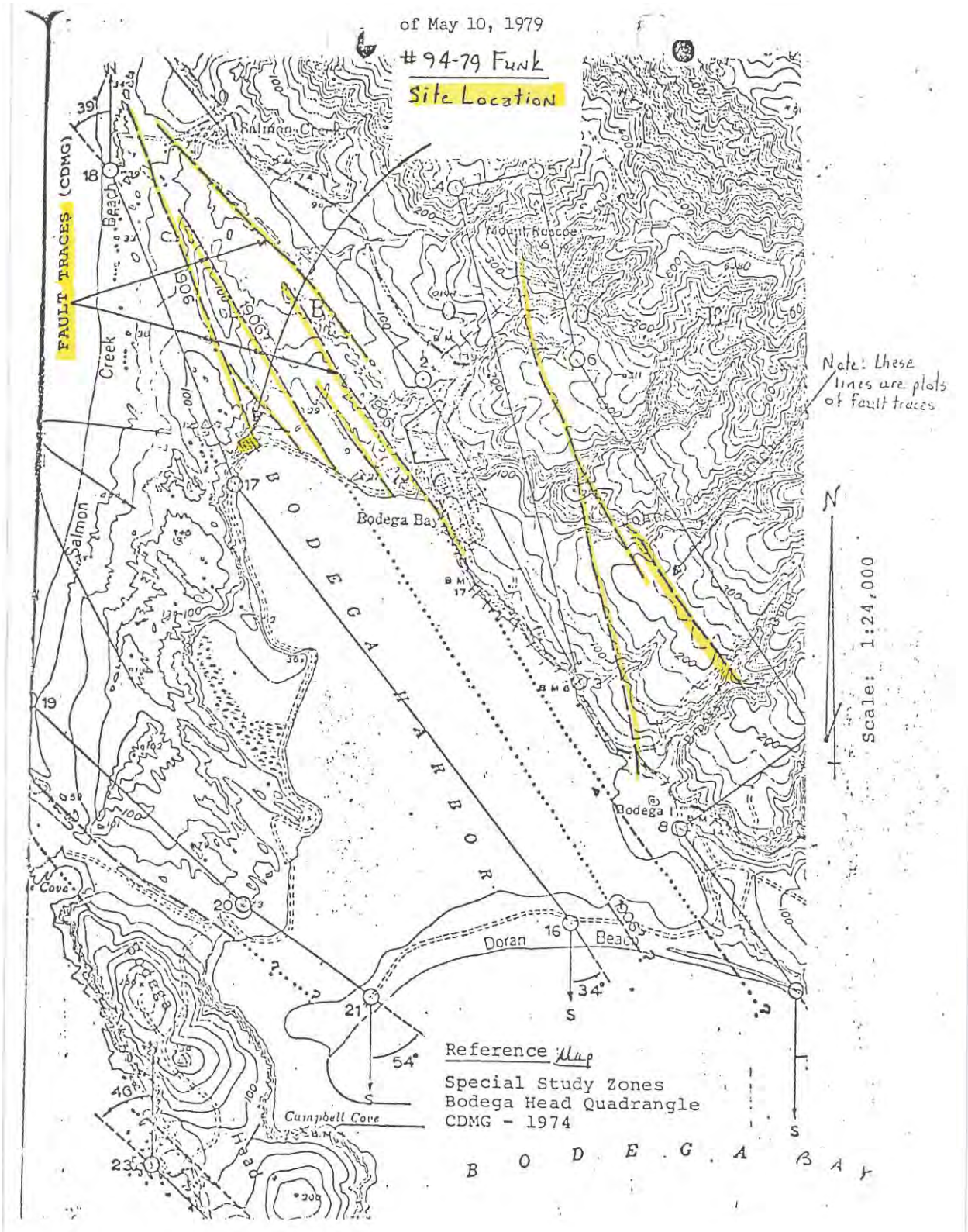
Note: When the buffer area of 100 ft. from wetlands is used, it must be understood that this is only the minimum amount required. In instances of areas that are within a sensitive zone and contain important wetlands, a distance of 300 ft. may be and is usually required by the consulting agencies. BBPUD has not contacted these agencies with regard to the necessary permits.


SHED
P.O ENCL. 4

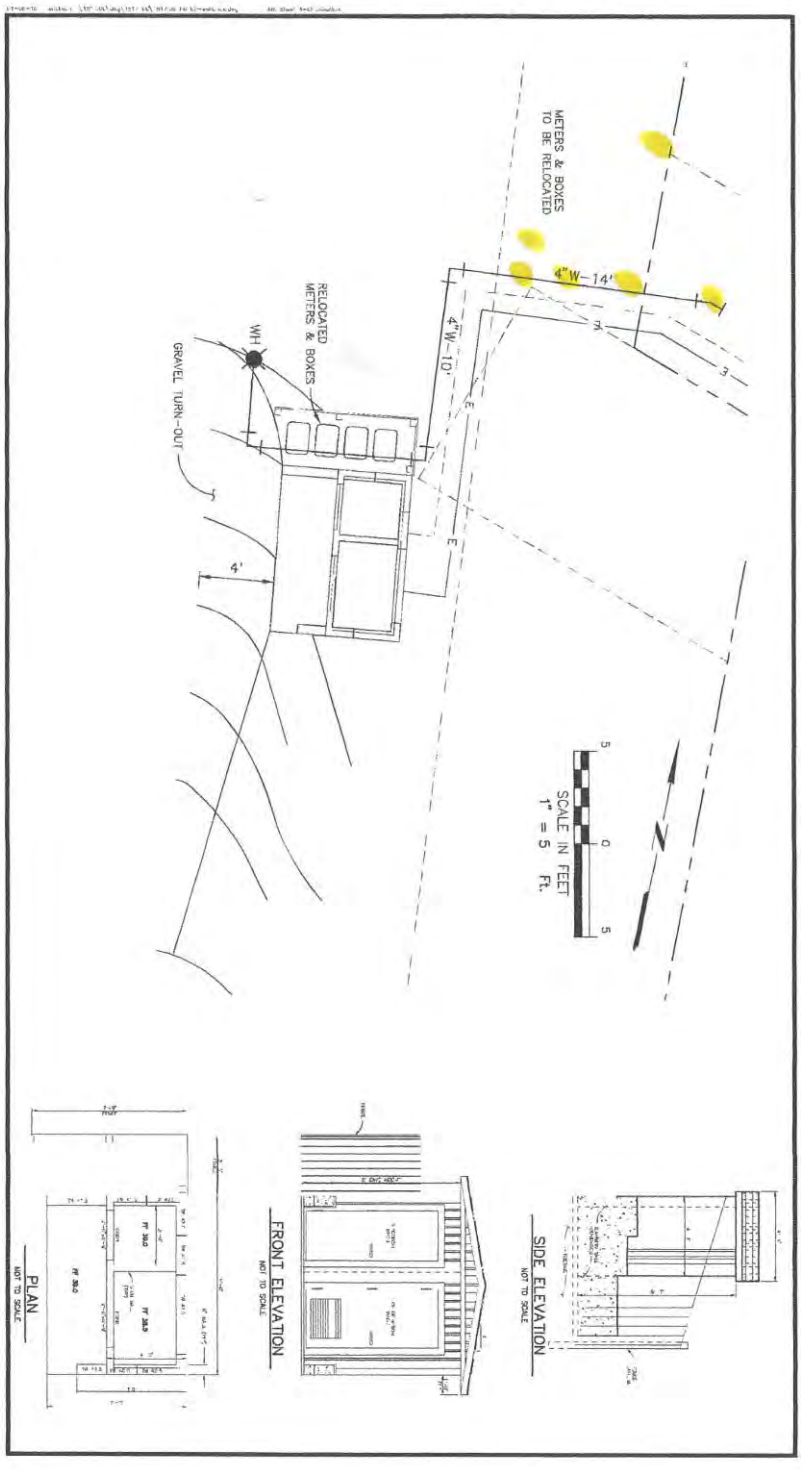
P.U. ENC. 4


P.C
EXCL. 4


OWNER'S CERTIFICATE
OWNER'S NOTARY PUBLIC
IMPROVEMENT CERTIFICATE
Exception No. 10
A-195150
IMPORTANT: This is not a Plat of Survey. It is furnished as a convenience to locate the land indicated hereon with reference to streets and other land. No liability is assumed by reason of reliance.
SONOMA TITLE GUARANTY COMPANY
SURVEYOR'S CERTIFICATE
COUNTY SURVEYOR'S CERTIFICATE
RECORDER'S CERTIFICATE
PARCEL MAP NO. 6791
FREDERICK L. BROWNE & ASSOCIATES, INC.
ENGINEERING and SURVEYING
LOCATION MAP
NOT TO SCALE
P.R.A.C. NOTES
COASTAL COMMISSION NOTES
LEGEND
BUILDING ENVELOPE
PRIVATE DRIVE B
PUBLIC UTILITIES EASEMENT
HIGHWAY 1 AREA
LOT 1
LOT 2
048 AC. ±
PARCEL MAP NO. 3715
190 MAPS 6
LEO SCHAEFER ET UX
2059 O.R. 192
JOY L. AINSWORTH
2099 O.R. 838
STATE OF CALIFORNIA
PACIFIC OCEAN
BODEGA BAY
SITE
HARBOR
SCALE 1" = 40'
A.P. No. 100-060-13
SHEET 1 OF 1 SHEETS
108-78


of May 10, 1979
#94-79 Funk
Site Location
FAULT TRACES (CDMG)
Note: These lines are plots of fault traces
N
Scale: 1:24,000
Reference Map
Special Study Zones
Bodega Head Quadrangle
CDMG - 1974
Bodega Bay
Bodega Harbor
Doran Beach
Campbell Cove
Salmon Creek
Mount Prescott
Bodega
Bodega Head
34°
54°

ENCL. #5



Brelje & Race
CONSULTING CIVIL ENGINEERS

BAY FLAT ROAD WELL

CHLORINATION BUILDING

JANUARY 2010

FIGURE 4

#5

The Tree Climber
Darrell B. Sukovitzen
P.O. Box 849
Guerneville, CA 95446
(707) 887-1017
www.thetreeclimber.net—CCL #909691

July 7, 2011

Board of Supervisors, County of Sonoma
c/o Permit Resource and Management Department
ATTN: Cynthia Demidovich
2550 Ventura Avenue
Santa Rosa, CA 95403

RE: Application PLP09-0057
Public Comment on Environmental Impacts to Rail Ponds

Dear Supervisors:

I wish to register my protest to the above application.

I am a licensed California contractor and have been familiar with the trees at 1677 and 1681 Bay Flat Rd. for many years. The multiple trees located on these properties are vital to bird migration, a wind buffer for adjacent properties, and most important to the stability of the soil; without the interlocking eucalyptus and Monterey cypress roots, what is a fragile crown of land could become a sand dune. These trees could potentially be designated Heritage Trees under the Sonoma County Heritage Tree Ordinance.

The project referenced above does not adequately address the damage that will be done to these trees not only by dewatering of the fresh water supply they require, but also by potentially increasing the salinity of the underground water. Tree roots are also vitally important for the structural stability of these properties. In any trenching for utility lines, all tree roots encountered must be tunneled under and not damaged.

Trees will adapt to their environment over the period of their lives. When abrupt change occurs such as increased salinity they may go into shock and die. Placing salt within a tree's dripline is a common cause of death.

In any portion of this proposal, these issues must be addressed, including the removal and replacement costs for these trees. That this proposal is located in proximity to a significant fault

line bolsters the vital importance of maintaining the existing system of interlocking roots for structural support of the s

The driplines of these trees, both individual and overlapping, were delineated with orange cones and plastic tape on 1/14/11. Photos were taken of PRMD staff, Bodega Bay Public Utilities staff and legal counsel for Bodega Bay Public Utilities standing within and in proximity to the defined driplines of said trees.

I request that a full Environmental Impact Report be conducted and that it include protective measure for the trees for the reasons stated above.

Sincerely,

Darrell B. Sukovitzen, Consulting Arborist
DS:kf

Cc: NCRWQCB

2

SEE REVERSE ENCLOSURE # 7

Enclosure No,7.

Photo taken by Don Coates, Geologist with the North Coast Regional Water Quality Control Board. Photo shows wetland area directly adjacent to the well site at1681Bay Flat Road.

Individual in photo is Paul Kieran, Enforcement Officer for the RWQCB pointing directly upslope to the well site.

This significant wetland was completely overlooked in the reports prepared by the Applicant and is not a part of the biological reports submitted by WRA. Applicant's agents claim that there are no wetlands within 100 ft. of the project.

ENCL. #8

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

DATE: June 7, 2010
TO: Permit and Resource Management Department, Project Review Section, Planning
ATTN: Cynthia Demidovich

FROM: Richard Stabler MS, Environmental Specialist/Biologist

PROJECT TYPE: Use Permit

SUBJECT: Bodega Bay Public Utility District

Re: PLP09-0057
A.P.N. 100-060-002
1665 Bay Flat Road, Bodega Bay
Installation of water supply wells.

Further information as indicated below is needed before we can analyze potential project impacts that may result from the proposed project.

Thank you for the Technical Memorandum dated March 23, 2010, by Todd Engineers and the Biological Resources Assessment date March 2010 from WRA. On page 4 of the Memorandum, it is estimated that about 65 gpm of fresh groundwater flows toward the Northern rail pond. In the next paragraph the memorandum states that this flow may be reduced by 45 to 65 gpm due to water production by the new well. It appears likely that production by the new water well would severely reduce or eliminate any existing freshwater aquatic habitat in the rail pond. The presence of freshwater plants within the rail pond suggests that this is currently an marsh with abundant freshwater habitat present, which may change dramatically if the proposed project were built as proposed. This change may constitute significant project related impacts to the freshwater marsh and potential sensitive species that could be present on-site.

In an effort to establish an accurate baseline for the marsh we are requesting a salinity evaluation to consist of a minimum of two transects (length and width) of the rail pond, during Spring high tide to determine the extent of any existing freshwater aquatic habitat during maximum tidal impact. Electrical conductivity is likely the easiest, fastest, and cheapest way to evaluate salinity within multiple locations within the marsh. In addition, based upon this we request an analysis of how the salinity levels may change after the project is complete.

The results of this evaluation may drive the need for a further biotic evaluation of the site.

Please feel free to contact Rich Stabler Environmental Specialist at (707) 565-8352, should you have any questions on the above information.

Cc: Board of Supervisors
Applicant
Supervisor Carrillo
Janet Mantua, Bodega Bay Public Utility District
(janetbbpud@hotmail.com)

1

ENCL. #9

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

DRAFT HEALTH USE PERMIT CONDITIONS

DATE:	December 9, 2009
TO:	Permit and Resource Management Department, Project Review Section, Planning
ATTN:	Cynthia Demidovich
FROM:	Jonathan Tracy, R.E.H.S., Project Review Section, Health
PROJECT TYPE:	Use Permit
SUBJECT:	Bodega Bay Public Utility District
Re:	PLP09-0057 A.P.N. 100-060-002 1665 Bay Flat Road, Bodega Bay Installation of water supply wells.

Further information as indicated below is needed before we can respond to the project.

A) **FOR MARGINAL AND WATER SCARCE AREAS CLASS 3 AND ZONE 4:**

A geological report prepared by a Registered Geologist, addressing Water Extraction Impacts according to the General Plan requirements of WR-2e shall be submitted to the Project Review - Health Specialist prior to the discretionary decision. Specifically, we have reviewed the "Assessment of Groundwater Resources, Dunes and Roppolo Fields, Bodega Bay, CA, dated July 2008 by Todd Engineers, that says on page 12, the last sentence, that: "Additional production proposed near the Dune well field will decrease groundwater discharge to Bodega Harbor..." We are concerned that this discussion does not address potential impacts to natural spring water flows and corresponding impacts to the salinity balance/biological impact to the spring fed Rail Pond adjoining Bay Flat Road. We are also concerned that there is no discussion of construction impacts of water well drilling upon the Dune flora and fauna. A similar evaluation is also missing from the discussion of further development of the Rappolo well field. Given the sensitive biological setting, we suggest that the Registered Geologist collaborate with a qualified Biologist in order to complete this evaluation.

Assuming that the applicant will provide an acceptable groundwater/biotic study, draft health conditions (with space reserved for additional mitigations) have been attached as follows:

PRIOR TO DRILLING PERMIT AND VESTING THE USE PERMIT :

1. Portable toilets and portable hand-washing facilities shall be placed and maintained for employees as needed on the drill sites, but in no case shall they be serviced less than once per three days when 24 hour operations are conducted, and once per seven days when only daytime operations are conducted. Permitee shall provide an accessible portable restroom on

ENCL. #10

PLP09-0057

We are joined in opposition to this project by:

- Sonoma County Conservation Action (Bill Kortum)
- Sonoma County Water Coalition (A consortium of approximately 30 agencies and individuals).
- Surfriders
- Sonoma County chapter of the National Audubon Society.
- Madrone Audubon Society.
- Regional Water Quality Control Board (re Wetland Determinations).
- Members of Redwood Chapter, Sierra Club

And many others within Sonoma County and the Bodega Bay area. These individuals and agencies recognize the importance of protection of this most sensitive area and the future of our wetland preservation.

We are enclosing just some of the comments and letters are a part of the record. Time and space does not allow for all the testimony and letters to be included, but more can be obtained upon request to the Bodega Bay Concerned Citizens.

We are also awaiting comments from California Department of Fish & Game, U. S. Army Corps of Engineers, and all agencies that must be contacted by the Applicant for the permits necessary for completion of this project, along with further comment from the Regional Water Quality Control Board.

MADRONE AUDUBON SOCIETY
P. O. Box 1911
SANTA ROSA CA 95402

NOVEMBER 11, 2010

Attn: Cynthia Demidovich, PRMD
2550 Ventura Avenue
Santa Rosa, CA 95403-2829

Re: PLP09-0057 BODEGA BAY PUBLIC UTILITY DISTRICT
P. O. BOX 70, BODEGA BAY CA 94923

Dear Ms Demidovich,

Madrone Audubon Society has serious concerns regarding the effects that the drilling of a municipal water well in the proposed location will have on the Rail Ponds into which fresh water flows from the upland area of the well.

Bodega Bay harbor and surrounding area was designated in 2001 as a GLOBALLY IMPORTANT BIRD AREA by the American Bird Conservancy in association with The Nature Conservancy.

Madrone Audubon Society, the Sonoma County chapter of the National Audubon Society, considers the proposed well to be a significant threat to the value of the Rail Ponds for wildlife as a result of the change of water flow into the Ponds. And the proximity of the chlorination facility to the Rail Pond and the Bay is also a significan problem.

These proposed installations will impact an Environmentally Sensitive Habitat Area, or ESHA. The Bodega Bay Public Utility District should be expected to relocate the well so that draw from the ground water is at a much greater distance from the Rail Ponds. The Rail Ponds habitat is unusual in the Bodega Bay area and should be protected, not impacted and compromised. In the report by Todd Engineers to Brelje and Race, water quantity projected to the Rail Ponds is indicated over time as impacted by the well location, projected decline from 65 gpm to 45 gpm; this is a SIGNIFICANT loss. ("Based on a projected average annual increase of up to 20 gpm from the Dunes well field following installation of the new well, average groundwater flow into the northern rail pond is expected to decrease over time from 65 gpm to 45 gpm."). Since it is also noted that "the pond does not track evenly with the harbor level" there are other influences on pond level, such as groundwater flow.

Such changes in flow are likely to change the depth which is of particular significance to bird use. Depth changes impact which birds will use the area for feeding or breeding. Such a sizeable change may also change the salinity, as the

quantity of the flow is significantly decreased. Salt water is already reported to be infiltrating in the other direction. This will likely alter the vegetation, which again impacts the bird species that use the area. This in itself may be detrimental to habitat and to the actual water supply the PUD hopes to gain. The hydrology is of course irregular since that is the Alquist-Priolo Earthquake fault zone (that may also make placement of a chlorination plant ill advised in proximity to these HABITAT areas).

It should be noted that while the direct area of the drilling project may not contain habitat suitable for support or breeding of some birds, the result of the drilling i.e. change of the water flow, will affect both the vegetation and therefore the species of birds and other wildlife which use the down-stream habitat of the Rail Ponds.

This area also is particularly valuable to migratory bird populations which pass through the area in the spring and fall. Also present are 'listed species' not observed during the on-site visits.Two brief on-site visits in August and December by the biologist for the study will not record these birds that depend on these ponds and the habitate they support. Species missed include Sora Rails in winter. Virginia Rails breed there. Common Yellowthroats are year-round residents and 'listed' as are Yellow Warblers and Tri-colored Blackbirds, both also listed and regular migrants. Practially all common neo-tropical migrants pass through. And hundreds of Yellow-rumped Warblers (both races) regularly winter in the willows of the Rail Ponds.

The Bodega Bay environs, as a Globally Important Bird Area, brings revenue in to the local area and this can be diminished by changes to the water flow, habitat and wildlife as well.

While we appreciate that the original proposal and studies were very inadequate, and that further studies were ordered and submitted for review, we still maintain that a different well location, further back and maintaining a greater distance from the Rail Ponds and Bay would be more appropriate and this is what we request be expected by the permitting agencies.

Sincerely,

Betty Burridge

Elizabeth L. (Betty) Burridge, Research Chair, Madrone Audubon Society
1653 Arroyo Sierra Way, Santa Rosa CA 95405

Encl: Copy of Globally Important Bird Designation Certificate

CC: Janet Mantua, BBPUD
Justin Witt, Brelje & Race
Herman Diekmann

Chris Anderson

From: BOS
Sent: Thursday, July 07, 2011 3:34 PM
To: Susan Upchurch; Andrea Krout; Jenny Kidd; Jennifer Hainstock; Michelle Whitman
Cc: Chris Anderson
Subject: FW: Board of Supervisors Contact Us: Issue from Diane Hichwa, Conservation Chair

To District Directors:
The below email is in regards to hearing PLP09-0057, scheduled for 7/12/11 at 2:10 p.m.
Thank you.

-----Original Message-----
From: no-reply@sonoma-county.org [mailto:no-reply@sonoma-county.org] On Behalf Of Diane Hichwa, Conservation Chair
Sent: Thursday, July 07, 2011 3:05 PM
To: BOS
Subject: Board of Supervisors Contact Us: Issue from Diane Hichwa, Conservation Chair

Subject: Issue
Message: TO: Board of Supervisors, County of Sonoma and Permit Resource and Management Department ATTN: Cynthia Demidovich 2550 Ventura Avenue Santa Rosa, CA 95403 RE: Application PLP09-0057 - Mitigated Negative Declaration Tuesday, July 12 at Board of Supes: 2:10 p.m. File No.: PLP09-0057 Applicant: Bodega Bay Public Utility District Env. Doc.: Subsequent Mitigated Negative Declaration Description: Hearing to consider approving a Use Permit and Coastal Permit for the construction of a new municipal water well, transmission piping, and chlorination facility for the Bodega Bay Public Utility District. Location: 1681, 1707, 1705, 1685, and 1677 Bay Flat Road, Bodega Bay APN: 100-060-012, -004, -010, -015, and -016 Sup. Dist.: 5 Supervisors and PRMD Staff: Nothing has alleviated our serious concerns with the project and its detrimental impact on sensitive habitat at Bodega Bay. Madrone Audubon Society has serious concerns regarding the effects that the drilling of a municipal water well in the proposed location will have on the Rail Ponds into which fresh water flows from the upland area of the well. Bodega Bay harbor and surrounding area was designated in 2001 as a GLOBALLY Important Bird Area by the American Bird Conservancy in association with The Nature Conservancy Madrone Audubon Society, the Sonoma County chapter of the National Audubon Society, still considers the proposed well to be of significance in that itwould result in change of water flow into the Rail Ponds. The proximity of the chlorination facility to the Rail Pond and the Bay will also be significant. These proposed installations will impact an Environmentally Sensitive Habitat Area, or ESHA. The Bodega Bay Public Utility District should be expected to relocate the well so that draw from the ground water is at a much greater distance from the Rail Ponds. The Rail Ponds habitat is unusual in the Bodega Bay area and should be protected, not impacted and compromised. In the report by Todd Engineers to Brelje and Race, water quantity projected to the Rail Ponds is indicated over time as impacted by the well location, projected decline from 65 gpm to 45 gpm; this is a SIGNIFICANT loss. ("Based on a projected average annual increase of up to 20 gpm from the Dunes well fieldfollowing installation of the new well, average groundwater flow into the northern rail pond is expected to decrease over time from 65 gpm to 45 gpm.") . Since it is also noted that "the pond does not track evenly with the harbor level" there are other influences on pond level, such as groundwater flow. Such changes in flow are likely to change the depth which is of particular significance to bird use. Depth changes impact which birds will use the area for feeding or breeding. Such a sizeable change mayalso change the salinity, as the quantity of the flow is significantly decreased. Salt water is already reported going back in the other direction. This will likely alter the vegetation, which again impacts the bird species that use the area. This in itself may be detrimental to habitat and to the actual water supply the PUD hopes to gain. The hydrology is of course irregular since that is the Alquist-

1

Priolo Earthquake fault zone that may also make placement of a chlorination plant ill advised in proximity tothese HABITAT areas). It should be noted that while the direct area of the drilling project may not contain habitat suitable for support or breeding of some birds, the result of that drilling i.e. thechange of the water flow, will effect both the vegetation and therefore thebirds which use the down-stream habitat now present. This area also is particularly valuable to migratory bird populations which pass through the area in the spring and fall. Two on site visits in August and December will not record any of these birds that depend on the Bodega Bay harbor Rail Ponds.

Name: Diane Hichwa, Conservation Chair
Email: dhichwa@earthlink.net
Phone: 707.785.1922
Address: PO Box 1911
Santa Rosa, CA 95402

Important Bird Area Certificate of Designation

In Recognition of its Value to the Conservation of
Birds and Their Habitats,

Bodega Bay

Has Been Designated A Globally Important Bird Area
By American Bird Conservancy
In Association With The Nature Conservancy

George Fenwick
President,
American Bird Conservancy

Robert Chipley
Director, IBA Program,
American Bird Conservancy

IMPORTANT BIRD AREAS PROGRAM

Dated: October 1, 2001

Elizabeth (Betty) Burridge
1653 Arroyo Sierra Way, Santa Rosa CA 95405
bburridge@sbcglobal.net **(707) 527-0225**

11/12/2010

Attn Cynthia Demidovich, PRMD
2550 Ventura Avenue
Sanata Rosa CA 95403

Re: PLP09-0057 – An anadromous stream at the Rail Ponds, Bodega Bay Harbor?

Dear Ms. Demidovich,

My father, Carl H. Ludemann, was an ardent flyfisherman all along the northern California coast from the 1920s through and perhaps into the 1960s. He told me, on many occasions, of catching mature steelhead near the culvert between Bodega Bay harbor and the Rail Ponds. I have a photo of him proudly holding his catch. The back of the photo is marked Bodega Bay harbor, but there are no identiying geographical landmarks visible to verify this information.

On two occasions in the last few winters I have encountered fly fishermen at this location, and both times I was told that adult steelhead are still attempting to return to the Rail Ponds to spawn. Both gentlemen were watching for the fish 'rolling' in the harbor at the entry to the Rail Ponds. One, about age 60, stated that he had started fishing there for steelhead as a young boy with his father. Unfortunately I did not get contact information for either man, but I am convinced that there is significance to all these stories.

I did learn, by word of mouth, that Rick Powers, a long-time local resident, party boat owner, and fisherman knows of these fish. He probably could confirm this infomation.

So, this stream seems to be a highly likely candidate as an at least historical anadromous stream, if not a currently active steelhead spawning stream. And any appropriation of water rights by means of a well being drilled nearby would clearly be a serious matter. Any decrease of the flow of fresh water into the Rail Ponds as the result of a BBPUD well being drilled would be, at a minimum, inappopriate and should not occur.

Sinerely,

Janet Mantua, BBPUD,
Chuck Armor, California DF&G
Grant Davis, Sonoma County Water Agency
Herman Diekmann, owner
Janet Witt, Brelje & Race

ISSUES RAISED IN BAY FLAT ROAD WELL PROJECT – BODEGA BAY – Submitted by Margaret Briare for Hearing before Board of Supervisors

Failure to adequately assess the environmental impacts of the project.

Substantial discrepancies, lapses, omissions and false data submitted by BBPUD have been used in preparing the SMND and Staff Report.

Reports on total impacts to the area—its habitat, wildlife and wetlands—are not fully included.

MND and SMND do not contain applicable information as to the complete existence of wetlands in the area. In some cases, the information has even denied the presence of wetlands.

Subsistence caused by installation of the well due to the shallow depth of the well (75 to 100 ft.) was not adequately studied or reported. The minimum cone of depression at 150 GPM is estimated to be 107 ft. after 18 hours of pumping. Two of the affected residences lie within that cone of depression and could be severely impacted with irreversible damage.

The well project, as proposed, goes against the wishes of the homeowners in the area. Despite the fact that BBPUD has yet to receive a permit of any kind, Eminent Domain lawsuits have been filed and threatened, thereby clouding titles to the affected properties and inflicting undue financial and emotional stress. The actions of the BBPUD and their attorney clearly impugn the property rights of those residents affected by this project.

Extensive trenching associated to the project would severely damage the root and drip zones of the designated Landmark trees on the site. (see letter from Darrell B. Sukovitzen dated July 7, 2011). Many of these trees are protected by the California Coastal Commission and are considered to be under their jurisdiction as to preservation and protection. The California Coastal Commission 1979 Report is a part of the deed for the property adjacent to the proposed chlorine shed now owned by Linda Kepner. The needed trenching to and from the placement of the chlorine shed adjacent to

her access road and use of her access road to stock that shed with hazardous materials could cause additional damage to the protected riparian vegetation surrounding the area. Earlier BBPUD documents state that 85% of the proposed pipe installation is within the required 100 ft. buffer zone.

Neither the BBPUD in their original MND, nor the County of Sonoma in preparing the SMND consulted with other agencies before preparing the documents. Necessary permits from RWQCB, U. S. Army Corps of Engineers, Dept. of Fish & Game, Coastal Commission et al must be obtained before the County of Sonoma can approve the project or issue any permits of its own.

Not only the Coastal Act but also the LCP declares this area to be a Sanctuary Preservation area. The purpose of a Sanctuary Preservation area, is to protect the land from any and all impacts that come with development of any kind within that area. The many birds inhabiting this entire area are protected by the Migratory Bird Treaty Act and CEQA. This area is designated a "Globally Important Bird Area", in recognition of its value to the conservation of birds and their habitats. It is also a part of the Pacific Flyway and an important part of the historic environment that is Bodega Bay. This is one of the most visited areas for bird watching in and around the entire Sonoma coast. The Rail Ponds are less than ¼ mile from the heron and egret Rookery on Bay Flat Road behind Spud Point Marina. The birds from this rookery along with the many other inhabitants of the area utilize the rail ponds and the surrounding trees and habitat during all seasons of the year. Contrary to the reports submitted by WRA, rare and endangered species have been found to exist over the entire site. Along with California red-legged frog and tidewater goby, the matter of steelhead being found in and about the Rail Ponds will be turned over to the Dept. of Fish & Game for investigation. Rare birds like the Yellow Chat have been seen and heard occupying the trees within the well site during the past few week

The importance of preserving the remaining wetlands in Bodega Bay cannot be overstated. They are vital to the overall health and vitality of the entire area.

ATTACHMENT "M"

Criteria for Establishing Buffer Areas

A buffer area provides essential open space between the development and the environmentally sensitive habitat area. The existence of this open space ensures that the type and scale of development proposed will not significantly degrade the habitat area (as required by Section 30240). Therefore, development allowed in a buffer area is limited to access paths, fences necessary to protect the habitat area, and similar uses which have either beneficial effects or at least no significant adverse effects on the environmentally sensitive habitat area. A buffer area is not itself a part of the environmentally sensitive habitat area, but a "buffer" or "screen" that protects the habitat area from adverse environmental impacts caused by the development.

A buffer area should be established for each development adjacent to environmentally sensitive habitat areas based on the standards enumerated below. The width of a buffer area will vary depending upon the analysis. The buffer area should be a minimum of 100 feet for small projects on existing lots (such as one single family home or one commercial office building) unless the applicant can demonstrate that 100 feet is unnecessary to protect the resources of the habitat area. If the project involves substantial improvements or increased human impacts, such as a subdivision, a much wider buffer area should be required. For this reason, the guideline does not recommend a uniform width. The appropriate width will vary with the analysis based upon the standards.

For a wetland, the buffer area should be measured from the landward edge of the wetland (Appendix D). For a stream or river, the buffer area should be measured landward from the landward edge of riparian vegetation or from the top edge of the bank (e.g., in channelized streams). Maps and supplemental information may be required to determine these boundaries. Standards for determining the appropriate width of the buffer area as follows:

1. Biological significance of adjacent lands. Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. That is, functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance would depend upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding or resting). This determination requires the expertise of an ecologist, wildlife biologist, ornithologist, or botanist who is familiar with the particular type of habitat involved. Where a significant functional relationship exists, the land supporting this relationship should also be considered to be part of the environmentally sensitive habitat area, and the buffer area should be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no significant functional relationships exist, the buffer should be extended from the edge of the wetland, stream or riparian habitat (for example) which is adjacent to the proposed development (as opposed to the adjacent area which is significantly related ecologically).

2. Sensitivity of species to disturbance. The width of the buffer area should be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination should be based on the following:

   a. Nesting, feeding, breeding, resting or other habitat requirements of both resident and migratory fish and wildlife species.

   b. An assessment of the short-term and long-term adaptability of various species to human disturbance.

3. Susceptibility of parcel to erosion. The width of the buffer area should be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, and vegetative cover of the parcel and to what degree the development will change the potential for erosion. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development should be provided.

Exhibit 7 (A-2-SON-11-037)

4. Use of natural topographic features to located development. Hills and bluffs adjacent to environmentally sensitive habitat areas should be used, where feasible, to buffer habitat areas. Where otherwise permitted, development should be located on the sides of hills away from environmentally sensitive habitat areas. Similarly, bluff faces should not be developed, but should be included in the buffer area.

5. Use of existing cultural features to locate buffer zones. Cultural features, (e.g., roads and dikes) should be used, where feasible, to buffer habitat areas. Where feasible, development should be located on the side of roads, dikes, irrigation canals, flood control channels, etc., away from the environmentally sensitive habitat area.

6. Lot configuration and location of existing development. Where an existing subdivision or other development is largely built out and the buildings are a uniform distance from a habitat area, at least that same distance will be required as a buffer area for any new development permitted. However, if that distance is less than 100 feet, additional mitigation measures (e.g., planting of native vegetation which grows locally) should be provided to ensure additional protection. Where development is proposed in an area which is largely undeveloped, the widest and most protective buffer area feasible should be required.

7. Type and scale of development proposed. The type and scale of the proposed development will, to a large degree, determine the size of the buffer area necessary to protect the environmentally sensitive habitat area. For example, due to domestic pets, human use and vandalism, residential developments may not be as compatible as light industrial developments adjacent to wetlands, and may therefore require wider buffer areas. However, such evaluations should be made on a case-by-case basis depending upon the resources involved, and the type and density of development on adjacent lands.

Exhibit 7 (A-2-SON-11-037)

ATTACHMENT "J"

ADMINISTRATIVE WAIVER OF WETLAND (100 FOOT SETBACKS) REQUIREMENTS
IN THE LOCAL COASTAL PLAN IN "RURAL COMMUNITIES" AND
"URBAN SERVICE AREAS" ONLY, WHERE ROADS, TOPOGRAPHY, OTHER
DEVELOPMENT EXISTS BETWEEN PROPERTY DEVELOPMENT AREA AND WETLAND.

In enforcing the 100 foot setbacks from wetlands and 300 foot environmental requirement near wetlands in urban areas, the Director of the Permit and Resource Management Department may, through aerial photos, topographical maps, or other means make a determination, subject to review and approval by the Executive Director of the Coastal Commission, that development will not affect the riparian area or wetland because:

a. Other developed lots or roads exist between the proposed development and the wetland. This standard shall be used cautiously - at the outer edge of the 300 foot limit. If there is any reasonable doubt the proposal would affect the wetlands or riparian area, an environment assessment shall be undertaken and include appropriate mitigation measures.

b. Topography is such that it is highly unlikely that development could affect the wetland.

The policies shall not be waived outside designated "rural community" and "urban service areas" on the Coastal Plan Land Use Map.

Exhibit 7 (A-2-SON-11-037)

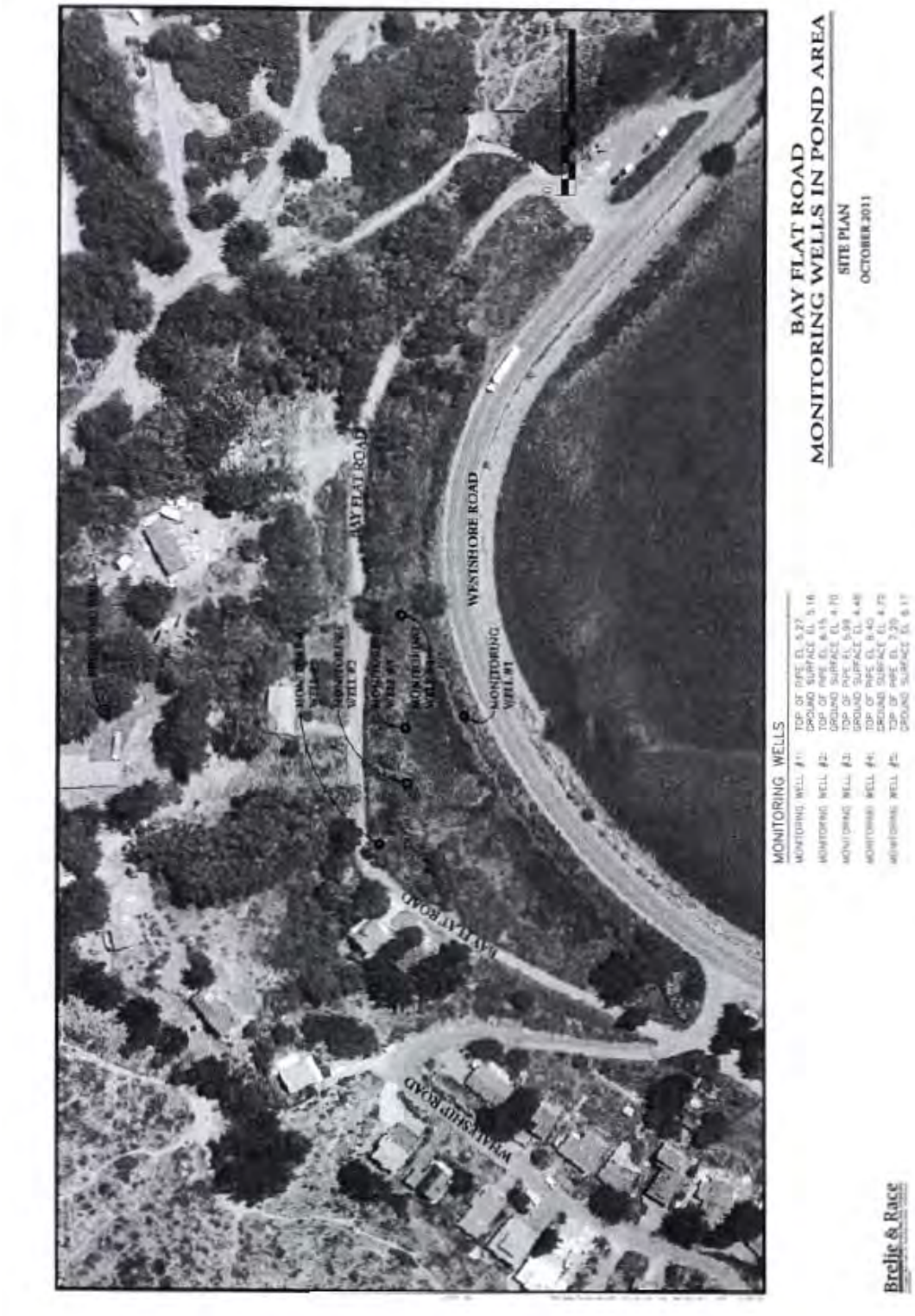


Exhibit 8 (A-2-SON-11-037)