

Heron Bay Homeowners Association, Inc

C/o 39899 Balentine Drive, Suite 102

Newark, CA 94560

August 13, 2001

Heron Bay Homeowner

Re: East Bay Municipal Utilities District Bayside Groundwater Storage Project

Dear Homeowner:

This letter is a follow-up to our letter of June 11, 2001, regarding the East Bay Municipal Utility District ("EBMUD") "Bayside Groundwater Project." We are writing to you today to inform you that the Board submitted comments regarding the proposed Bayside Groundwater Project to EBMUD during the comment period established by EBMUD. As a courtesy, a copy of the Board's comments are enclosed for your review.

As a reminder, the Bayside Groundwater Project as proposed is a storage and treatment plant to be located directly across from Heron Bay on the south side of San Lorenzo creek. As part of the proposed project, EBMUD plans to inject water from its distribution system (the same water that comes out of your taps) into an underground aquifer located approximately 600 to 700 feet underground and then extracting water from the underground aquifer during drought periods. This aquifer is located under Heron Bay and the surrounding areas.

We look forward to seeing everyone at the monthly Board meetings held on the third Wednesday of each month at the Community Center located on Wicks Boulevard.

Sincerely,

Heron Bay Board of Directors

Heron Bay Homeowners Association, Inc.

RESPONSE TO DRAFT ENVIRONMENTAL IMPACT REPORT
August 6, 2001

This response is filed on behalf of the Heron Bay Homeowners Association (hereinafter referred to as "Heron Bay"). Heron Bay is a California non-profit, mutual benefit corporation comprised of the owners of 710 individual homes located within the Heron Bay Project. Owners of homes within the Heron Bay development are mandatory members of the responding Association. The Association files this response pursuant to the authority vested in them by California Codes of Civil Procedure, sections 382 and 383. Heron Bay is managed by a duly elected volunteer Board of Directors who have closely followed the proposed Bayside Groundwater Project (hereinafter referred to as "the Project") from their first notice of same.

As an introduction to this response, East Bay Municipal Utility District (hereinafter referred to as "the District" or as "EBMUD") should be aware that the homeowner members of Heron Bay have been actively involved in this project, in the public hearings and in review of the documentary materials that have been presented to them for discussion and review since the public disclosure of the intended project. It is accurate to state that after the conclusion of public discussion of the Project and in several meetings conducted by the Heron Bay Board of Directors the overwhelming majority of the 710 homeowners have expressed their ^{opposition or disagreement} ~~support for its approval~~ with the concept of the Project. The owners of Heron Bay are solidly opposed to this Project and will continue to undertake whatever activities they deem appropriate in opposition to same.

On behalf of all of the members of the Association, the Board of Directors has retained several qualified expert consultants to review the Draft Environmental Impact Report ("DEIR") and the proposed Project in detail. Those expert consultants were asked to evaluate the Project and its potential effects, either beneficial or detrimental, to the surrounding, affected area in general and specifically to Heron Bay. It is important to note that these experts were not given any instruction from the Board of Directors other than to fairly evaluate the materials that were available to them. The conclusions and observations of the retained experts, based on their review of the DEIR and of the Project, have led the Board to conclude that, on behalf of all of their members, that they will vigorously object to the certification of the DEIR and to the entire Project as it is presently proposed. The following comments are representative and not exclusive. Should the project proceed, the Association and responding party reserves the right to raise and argue such additional matters, both factual and procedural, as may be available to them. The summary and partial reasons for the Associations objections to the DEIR and the project are stated below. Please understand that the Board and the Association are fully prepared to present their findings in more specific detail in the appropriate

forum and by no means intend this Response to include all of their specific objections to the DEIR and the proposed Project, however, the issues listed are meant to advise the Board and staff of the East Bay Municipal Utility District that there are serious and fatal flaws in the DEIR and in the very concept of the project as proposed and as located.

For purposes of this response, the objections of Heron Bay to the DEIR and to the project in general are grouped as follows:

1. PROJECT ALTERNATIVES.

At the outset it is generally notable that the evaluation of project alternatives consists primarily of variations of the same project, i.e., the analysis considered alternative well sites and facilities locations. Although there is a description of other efforts made by EBMUD to develop additional water supply using a similar system there is no analysis of other options that might develop other capacity outside of the East Bay Plain (see Chapter 6, DEIR). As noted below within the discussion of the risks associated with subsidence, the East Bay Area, and its heavily residential areas, poses far greater risk of property damage than an agricultural setting such as San Joaquin County. The report contains far too little discussion of the favorable conditions that exist in said San Joaquin County where over-pumping activities have made replenishment a key component of the proposed project much more feasible. The location of the facility in yet other counties or in other agricultural venues is not even considered. A review and consideration of project alternatives is an important legal requirement regarding compliance which has been overlooked in the DEIR.

2. SUBSIDENCE.

The primary component of the Project is the anticipated extraction of ground water from a deep aquifer system. In order to accomplish this possible extraction, the project contemplates the construction, operation and maintenance of several wells, equipment necessary to accomplish the injection of surplus water, construction and operation of a centralized water treatment plant and the construction and use of pipelines and other associated facilities. Overall, the project represents a significant change in the use of the ground water basin and the surrounding area.

There is no question but that subsidence can occur as the result of ground water extraction activities. This subsidence is often associated with an imbalance of extraction versus replenishment over a period of time. This potential danger is recognized in the DEIR, however, the seriousness of the potential problem is not recognized and, therefore, not addressed in adequate fashion. As stated above, it is of particular concern to Heron Bay that the maps attached to the DEIR do not even show or account for the existence of 710 homes in the direct vicinity of the Project. It is conceivable and, therefore, of great concern that the DEIR did not consider the existence of the homes in question. Subsidence becomes a far more critical issue when considering the location of the subject homes than if the same project were being considered for a rural area. For the subject

project, subsidence would be evident as a drop in land elevation and would be caused by dewatering of clay strata and subsequent compaction. The consequence of this subsidence could be minor (if in a rural area) or may result in catastrophic property damage if it occurs in a heavily residential area. Subsidence may cause cracked roadways, ruptured pipelines and altered landscape in common areas of Heron Bay.

Even more importantly, subsidence may cause major and irreparable damage to the homes located within the project. Movements amounting to fractions of an inch are enough to cause foundation cracks; stress fractures in stucco, wood members and drywall; dislocation of roofing materials; separation and resultant damage in plumbing and electrical components and weakening and failure of structural shear walls and tie-downs. Subsidence is generally a slow and gradual process and may be irreversible. This condition is particularly egregious when considering the effect on residential dwellings. An owner could conceivably attempt to repair the initial effects of subsidence, for example, foundation cracks, only to discover that the problem is continuous and cumulative. The repairs and the expense associated with same could well be never ending. The owner will conceivably reach a point where it becomes economically unfeasible to continue repairs or could reach a point wherein repairs are no longer an effective remedy.

Heron Bay's experts note that certain communities in California's Central Valley have experienced up to tens of feet of permanent land elevation drop as a result of pumping induced subsidence. This is a major problem for those rural areas so affected but would amount to a disaster of horrific proportions if similar results were projected onto the residences of Heron Bay.

It is also interesting to note that the DEIR anticipates that the effects of subsidence will be tempered by recharge of draw-down waters. Recharge may take place naturally or by the injection of surplus water. The DEIR suggests that any issue of subsidence will be mitigated by this natural or forced recharge. The problem with such a suggestion is that the period of time of the heaviest water usage, for example, a drought period or a period of below-normal rainfall, would by definition be the time period when no water was available for either natural or forced recharge. Obviously, if surplus water were readily available for recharge, it would not be necessary to proceed with the use of the deep aquifer. The DEIR's suggested mitigation of the effect of subsidence is by definition not likely to be applicable.

In the present project, the DEIR anticipates that ground water levels in the deep aquifer would be lowered for a period of up to a few years during the extraction modes of the project. It is contended that the resultant subsidence would be minimal because water levels would not drop below historic lows. This assumption must be considered faulty. The projected draw-downs around the Ora Loma well, for example, are much lower than historic levels from the 1960's as presented in figure 3.8-2. The graphic would indicate that the historic low water level change for the deep aquifer is on the order of 120 feet. Draw-down is greater than 120 feet within a 10,000 to 12,000 foot radius of the Oro Loma well field and in the immediate vicinity of the wells, the draw-down is projected to

be as much as 200 feet. It is critical to note that all of the homes within Heron Bay are located within 10,000 feet of this well field. The resultant subsidence will potentially radically affect 710 homes. It should be further noted, that running along the Eastern Boundary of Heron Bay, and well within the potential affected area of the Ora Loma well field, are extensive railroad tracks which continue to be in heavy use. It does not take an expert to recognize the potential disastrous effects of soil movement on the rail system. A movement of a fraction of an inch, not effectively monitored, could result in a tragic loss of life and property damage both to train passengers and to the surrounding homeowners.

Furthermore, the Livermore-Amador Valley Water Management Agency ("LAVWMA") has recently announced plans to replace an existing pipeline and bypass water system with a new and more extensive 36" pipeline system, which system will run on the North and Easterly boundaries of the Heron Bay property. Again, the effects of subsidence from the proposed EBMUD project could result in major damage to the LAVWMA water system located within the effective area of the Ora Loma well field. Responding party is most disturbed that the DEIR apparently did not even consider the effects of subsidence on the railroad tracking system or the pipelines owned and operated by LAVWMA and the resultant effect on the owners of Heron Bay homes.

As further comment to the issue of subsidence and its consideration in the DEIR, it should be noted that time is a key factor with regard to subsidence. For example, normal fluctuations in water levels due to pumping activities typically do not cause subsidence as long as the pumping does not result in a long term lowering of the ground-water level. The subsidence mechanism of most concern in the project would be that associated with the dewatering of clay strata triggered by pumping activities that would persist over several years.

While the proposed project indicates that a water balance would be achieved over a historic 75 years of operation, there are no apparent project controls that would limit the period of time that the water levels could be depressed, i.e., there appears to be the potential that a significant draw-down in ground-water levels could exist for consecutive years under the proposed operating plan. Furthermore, due to the presence of clay strata, conditions exist within the project area for which subsidence can occur. At a minimum we would expect to see some elastic, or recoverable, land elevation changes during the extraction periods as the result of lowering the head well below historic levels. In the best case scenario, these changes might only be in the order of a fraction of an inch, however, it is conceivable that much more severe drops in land elevation, in the order of several inches to several feet, could occur based on the experience of several other areas of California including the neighboring Santa Clara Valley. As even a fraction of an inch can cause major damage to the residences within Heron Bay, additional analysis and response to these issues is warranted before the DEIR is presented or considered for certification.

It is very important to note that no mitigation measures are proposed in the DEIR for the potential impacts of subsidence. The DEIR only anticipates active monitoring of the

condition. It is interesting to note that the significant details regarding the monitoring are missing even if one assumed that monitoring would be effective which assumption Heron Bay does not make. How will the monitoring be accomplished? How accurate will monitoring be? Will the monitoring be to 1/100th of an inch, an inch or some other measure of accuracy? These and many other questions involving monitoring activity remain unanswered. There is not even any provision for the stopping of the operation of the project or for the taking of remedial measures should monitoring indicate a particular problem level. The mere statement that monitoring will take place without a clear definition of what this means, a quantification of the warning or danger levels to be monitored or the existence of mandatory controls halting the operation of the project is a fatal flaw in the plan.

Mere monitoring is akin to window dressing and offers the residents of Heron Bay no particular protection. The proposed monitoring is hopelessly inadequate. If subsidence in any measurable degree has taken place and is detected by the proposed monitoring, major and/or irreversible damage would have already occurred in the subject homes and the surrounding common area. Monitoring may measure the degree of the subsidence but it will do nothing to prevent the horrific possible damage to the homes of the residents of Heron Bay. No after-the-fact mitigation is possible. Once a foundation has cracked, a wall has moved and cracked, a roof tile has shifted, a railroad track has become dislodged, a water pipe has dislocated or broken, and electrical outlet separated and shorted, only major repairs will potentially remedy the resultant damage.

The problem is even more dramatic when one considers that the DEIR not only does not provide for effective or any mitigation, it does not even provide for a cessation of the causation pending mitigation. Conceivably, if the area were experiencing historical drought conditions, which has occurred in recent memory, the operators of the proposed system would be under tremendous political pressure to continue pumping from the deep aquifer regardless of the resultant affect on the surrounding area "for the benefit of the majority of those in need of water." It is also important to note that in the DEIR there is little or no consideration of the draw-down of the deep aquifer by other agencies whose systems may directly impact the physical realities of the proposed site. It is apparently unknown, for example, whether or not the activities of the agencies charged with water production in Santa Clara County may affect the water levels and the deep aquifer at or near Heron Bay. Conceivably in a drought situation, all authorities will be drawing down available water with little concern over the residents of Heron Bay. There are no protections afforded the Heron Bay and surrounding residents in the above situations.

Finally, Respondent must again point out that the residences of Heron Bay, 710 homes, are not located on the maps of the proposed project where the greatest draw-downs are anticipated. As such, neither the impact analysis nor the mitigation measures address the matter of a highly residential area within the impact range of the proposed well field and whether proposed project activities, for example, high capacity extraction, would be appropriate in such a setting. Obviously, a highly residential area is much more likely to suffer irreparable damages from subsidence than is an agricultural or industrial area. The DEIR cites institutional barriers for EBMUD's having dropped consideration of portions

of San Joaquin County for the proposed project. The concerns supporting those institutional barriers are far less serious than those that result from the creation of this project in a heavily residential area. Without this consideration, the analysis of project alternatives, which will be discussed forthwith, may be improperly based on the assumption that impacts would be less significant for this industrial setting in the East Bay. The problem stems from the fact that the proposed setting is not, and will no longer be, an industrial setting.

3. POTENTIAL SURFICIAL INFLUENCES OF EXTRACTION AND INJECTION OPERATIONS.

The aquifer materials targeted by the project for extraction and injection are described as hydraulically isolated deep aquifer systems. The assumption of hydraulic isolation has been used to support findings that certain impacts, such as inducing movement of shallow contaminant plumes or saltwater intrusion in shallow zones are insignificant. There are numerous other aspects of the hydro geological setting that appear to contradict the conceptual description. In particular, the primary source of natural recharge is apparently from a surficial source, i.e., rainfall. Such a recharge source would require a broad connection between the deep aquifer system and overlying units and would reflect a potential for greater surficial influences that that characterized in the DEIR. No mention is made in the DEIR of the effects of other jurisdictions that also may be utilizing the deep aquifer system or whose own deep aquifer systems may be in fact linked geologically to the system under consideration in the DEIR.

Of great concern to Heron Bay is the concept of sustained injection and resultant draw-up in the deep aquifer estimated to be tens of feet above the ground surface. It should be noted that the members of Heron Bay are of the opinion that their homes are located within a flood zone. They are aware that more than 3 feet of topsoil was imported in order to make the home pads workable. Any measurable rise in the surrounding water table, even for a short period of time, could well have disastrous effects on the Heron Bay homes.

It is legally and factually significant to note that there is no other project in existence that may be looked to to judge the merits of the finding that surficial impacts would be insignificant. There is simply no historical information that may be relied upon in the DEIR to make such a bold assumption. Of course, should the unfounded assumption prove to be in error and unsupportable, horrific resultant damage will have already occurred to the homes in Heron Bay. This is particularly troublesome when one considers that the DEIR is devoid of viable mitigation measures.

The actual consequence of surficial impacts are that they could result in ground water flow under roadways, common areas, residences, railroad tracks and in the area of abandoned wells improperly sealed. The historical maps of the area indicate the potential existence of numerous abandoned wells, wells that were more than likely abandoned and not properly sealed. It can be assumed that these wells would not have surface seals as would be required in the vicinity of an injection project of the type proposed. In many

cases, there are no records that abandoned wells were treated or destroyed in a manner which would prevent unwanted flow through the well bore.

This concern over draw-up is very real. Heron Bay's experts cite analogous cases where ground-water conditions have changed (i.e., water levels have risen) and the problems cited above have been experienced. Very little draw-up in a shallow water table would be enough to cause resultant damage to the Heron Bay homes and common area considering the fact that the water level in the shallow aquifer in the immediate area is generally close to the ground surface.

As with the subsidence issue mentioned above, the DEIR provides no mitigation for surficial impacts. The only consideration mentioned is monitoring used to identify problems after they have developed. By definition, in this project those problems would not have developed and be subject to monitoring until after substantial resultant damage has occurred in the common areas of the project and in the homes. It is not particularly useful to advise a homeowner whose home is under water that monitoring has indicated that, in fact, his or her home is under water. If the proposed system would identify a problem abandoned well, for example, measures could be undertaken to eliminate that particular well from being a problem in the future, but the resultant damage would have already occurred.

4. AIR QUALITY.

No less significant to Heron Bay is the question of air quality associated with the project. It should be noted that Heron Bay feels that the issues raised above in this response are so determinative of a denial of this project that the issue of air quality need not be raised. However, the responding party will submit the following as a non-exclusive list of issues relating to the air quality provisions of the DEIR. As with the above issues, these comments are meant to be representative and not exclusive. Should this matter proceed beyond the current forum, Heron Bay reserves the right to list other issues relating to air quality. These comments are directed toward particular sections of the DEIR relating to air quality.

a) Page 3.12-15-16: The report purposely confuses the reader by giving BACT requirements in lb/day, but giving estimated emissions in lb/yr and TPY. The report must show that the BACT trigger of 10 lb/day is exceeded when system water is subject to additional chlorination. Under normal operating conditions system water will require chlorination and, therefore, BACT is triggered. Additional questions would be what are the number of operating days per year in the example given for estimating emissions? What are the determining parameters? Should 365 days/yr not be used?

b) Same Pages: BAAQMD air toxic screen is triggered at 36 lb/yr. The estimated emissions exceed this by 100 times. The Heron Bay community includes highly sensitive receptor residents less than 1000 feet distant. A risk screen analysis must account for those with compromised immune systems.

e) Same page plus 3.10-9: The chart on this page shows other VOCs in addition to chloroform yet no accounting of additional elements due to allowable and existing VOCs is included in the calculations. The document should include notable allowances for MTBE, toluene ethylbenzene, etc. Consideration must be given to the addition of the new increased emission add to the lb/day in adding to the BACT trigger. The report contains no additional accounting of this fact.

d) Same pages: Chloroform alone, under additional loading, triggers BACT. One must assume that BACT is triggered once all VOCs present in water are released at the air stripper. There is no consideration of the effect of all of the VOCs, including those on the chart on 3.10-9 on sensitive receptors. The trigger of BACT will require carbon filtration of a polluted airstream at the stacks. None is provided.

e) There is no consideration of the effect on residents when wind patterns (not the averages) blow plumes directly on Heron Bay. Will these be critical health warning days? Will residents be notified to stay indoors if they are sensitive? Is there any early warning system provided for or even contemplated? Why are plumes of air toxics not shown over Heron Bay in the report? Plumes from point sources must show worst case scenario and show the closest proposed stacks.

f) In reference the above, 70 years of average exposure may be concentrated into several critical events. The report should account for high exposure days in making cancer assessments. This data must be added to any consideration as to the probability of cancer contraction in the community. Furthermore, the report must combine and account for possible synergistic effects of multiple VOCs, plus chloroform, plus radon, in order to obtain accurate statistics for toxic risks.

g) The DEIR does identify radon and chloroform as two emission constituents associated with the operation of the central treatment facility. The DEIR further proposes that there would be mitigation required for chloroform depending on the level of chlorination of water used for replenishment purposes. Without discussing the accuracy of anticipated levels, as questioned above, Heron Bay notes that the DEIR supposes that all such monitoring would be by Bay Area Air Quality Management District. There is no indication that BAAQMD would agree to such monitoring and no information whatsoever on the criteria that would be employed in such an effort.

5. ADEQUACY OF MODELING TOOL.

There are several potential issues regarding the adequacy of the computer model used to assess impacts of the project on the ground-water system. However, to a large extent questions about the modeling do not alter the conclusion that there are potential severe adverse impacts associated with the draw-down and draw-up of ground water levels during extraction and injection that are not adequately addressed in the DEIR as stated above. The model will also prove to be inadequate to define whether the basin can sustain EBMUD's projection of basin yield. It must also be noted that the model is not a tool that can be used to delineate the effects of subsidence or possible breaches in the

geological confinement which controls the upward influences of extraction and injection activities.

6. CONCLUSION.

It could not be more clear to the residents of Heron Bay that this project is fatally flawed. It is hard to imagine a project that could have been formulated with less regard to the lives and property of 710 homeowners. It is equally clear that the DEIR has been formulated in such a manner to ignore the very real concerns of said homeowners. The fact that the homes of Heron Bay do not even appear on the maps utilized in the report only leads to the conclusion that the drafters of the DEIR undertook their task with a goal in mind and that goal was to gain approval of the project regardless of the risk involved to the affected owners. It is shocking that major environmental considerations such as subsidence, to name one, are discussed in conclusionary terms rather than the possible effect on homeowners. Similarly when the drafters of the report were forced to consider possible worst case scenarios, the solutions involve only monitoring of problems. No discussion is attempted regarding the fact that monitoring, by definition, takes place only after the homeowners have suffered tremendous personal loss. No mention is made of the possible consequences of subsidence and other soil conditions on the streets and surrounding railroad tracks and the existing pipelines of other agencies. In short, the DEIR appears to have been prepared with approval of the proposed project in mind rather than the real concerns of the homeowners living in the real world. If one assumes that the average price of a home within the Heron Bay Association is at or near \$450,000.00, then one can conclude that the project as stated affects property values in excess of \$300,000,000.00. The concept that such a project would be allowed to proceed which could cause property damage approaching one-third of a billion dollars on such a flawed report is stunning. The report as stated must be rejected and the project as outlined disapproved. Heron Bay is confident that an independent trier of fact would be in total agreement with their conclusions.

The final, inescapable conclusion that one must draw when considering the overwhelming possible damage that such a project may cause to this existing residential area and, in fact, to any residential area, is that such a project is not, and will not ever be suited, to a residential area. Should this project proceed at all, it must be relocated to a place far distant from the residents of Heron Bay and surrounding homeowners.

Respectfully submitted,

A. Alan Berger, Attorney for
Heron Bay Homeowners Association