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April 9, 1999

SANTA CRUZ COUNTY BOARD OF SUPERVISORS
701 Ocean Street
Santa Cruz, CA 95060

SUBJECT: BUENA VISTA LANDFILL SOIL MANAGEMENT PROJECT

Members of the Board:

On March 23, 1999, your Board was provided with a staff report on the feasibility of utilizing the Watsonville Landfill expansion site for the Buena Vista Landfill Soil Storage Project. This feasibility study was completed at the direction of the California Coastal Commission and as required under Condition A. 12 of Costa1 Zone Permit No. 98-0650. After representatives from the Buena Vista Community Association (BVCA) received copies of this report, they requested this item be deferred to a later Board agenda in order to allow additional time for their review and comment on the report. Public Works requested your Board defer deliberations on this report until April 13, 1999, to allow for this additional discourse.

Attachment 1 is a summary of staff discussions with City of Watsonville staff and City Council regarding the feasibility of this project. While the City Council appeared to have some reservations regarding this cooperative project, both County and BVCA representatives spoke on behalf of the project and the Council approved staff recommendations to at least pursue the feasibility study. Based on feedback we received from the City Council at its January 12, 1999, hearing on this matter and through subsequent staff discussions, Attachment 1 provides a summation of the most critical issues that will need to be cooperatively addressed to accommodate development of this project. While this cooperative venture with the City appears to be feasible, there are no guarantees of success if the City chooses at a later date not to participate or is not satisfied with the County-proposed compensation package.

Staff from Public Works and County Counsel's Office conducted four meetings with BVCA representatives to receive their feedback on the feasibility report and discuss some of the issues related to use of the city landfill expansion. These meetings were very productive and resulted in many positive changes in both the Watsonville site alternative being recommended by BVCA and the County's previously approved project on the Rocha site. Through these discussions, we were able to clarify many technical and operating issues and find some common

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ground resulting in a net reduction in the estimated costs for the Watsonville alternative. In a similar manner, many of the suggestions from BVCA were of equal benefit to the Rocha site project and the net result was a comparable decrease in cost for this alternative as well. Attachment 2 includes a summary discussion of the many issues discussed between County and BVCA representatives. Below are summaries of the revised cost estimates reflecting improvements to both projects under discussion and a summary of additional Board considerations.

SUMMARY OF COSTS

Operations	Rocha Site (as revised)	Rocha Site (as permitted)	Watsonville Site (BVCA option)
Capital/O&M Costs - Excavation	$1,697,000	$1,315,000	$2547,000 (1), (2), (3)
Equipment Costs - Excavation	$1,169,000	$1,169,000	$1,183,000
Capital/O&M Costs - Soil Return	$384,000	$0	$82,000
Equipment Costs -Soil Return	$2,354,000	$3,866,000	$4,321,000
Total:	$5,604,000	$6,350,000	$8,133,000
Cost Differential:	**$0**	**+$746,000**	**+$2,529,000**

1. Does not include potential railroad trestle replacement costs of up to $2-$3 million per Union Pacific.
2. Only reflects lease cost to City of Watsonville. This cost does not include potential costs for added landfill related biological mitigation costs of up to $225,000 or landfill capacity exchange.
3. Does not reflect costs associated with administrative process for taking habitat within the Biotic Conservation Easement.

UMMARY OF ADDITIONAL CONSIDERATIONS

	Rocha Site (as revised)	Rocha Site (as permitted)	Watsonville Site (BVCA option)
Start-up Tuning	3 -4 months	3 -4 months	2 years +/-
Project Uncertainties	Pending Approvals: 1. Armycorp 2. CA Fish and Game 3. Coastal Commission	Pending Approvals: 1. Army Corp 2. CA Fish and Game 3. Coastal Commission	New Approvals needed: 1. Board of Supervisors 2. Planning Commission 3. CEQA/EIR 4. Army Corp 5. US Fish and Wildlife 6. CA Fish and Game 7. Coastal Commission 8. Air District 9. Regional Water Board 10. Union Pacific/PUC 11. Watsonville City Council 12. Waste Management Board

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	Rocha Site (as revised)	Rocha Site (as permitted)	Watsonville Site (BVCA option)
Environmental Considerations	1. Taking of 0.79 acres of highly degraded riparian habitat 2. Restoration and expansion of riparian habitat totaling 2.4 acres 3. Placement of restored habitat, all existing habitat, and 3.5 acres of biotic buffer land into permanent protective easement 4. Temporary creation of 18 acres of additional open space buffer and protective structures to protect newly established habitat 5. Temporary taking of 30 acres of Class IV AG land 6. Restoration and drainage improvement of AG land at project closure	1. Taking of 0.79 acres of highly degraded riparian habitat 2. Restoration and expansion of riparian habitat totaling 2.4 acres 3. Placement of restored habitat, all existing habitat, and 3.5 acres of biotic 'buffer land into permanent protective easement 4. Temporary creation of 18 acres of additional open space buffer and protective structures to protect newly established habitat 5. Temporary taking of 30 acres of Class IV AG land 6. Restoration and drainage improvement of AG land at project closure	1. Taking of 0.5+ acres of Biotic Conservation Easement for site access and 0.75 acres of riparian habitat for the stockpile site 2. Replacement of 2.25 acres of habitat for the stockpile site at a designated Watsonville Landfill mitigation area 3. Replacement of 1.5+ acres of habitat for the Biotic conservation Easement loss at a site to-be-determined. 4. Increased dust emissions and impacts at the Biotic conservation Easement Crossing 5. Increased dust and noise impacts for neighbor located 600' from project

As discussed in more detail below, the Watsonville Landfill alternative is feasible, but would result in the following:

1. Costs $2.5 million in excess of the recommended project.
2. Adds 2+/- years to the time line.
3. Substantially increases risk to successful project implementation.
4. Results in more significant biotic impacts than the recommended project, while not impacting agricultural resources.

The revised cost estimates include an additional Watsonville Landfill site alternative (A5) and a Rocha site variation (C2) that have taken into consideration some of the BVCA suggestions received during our four meetings. The Watsonville site alternative (A5) calls.for movement of the soil from Buena Vista Landfill to the Watsonville Landfill site using a 5,300 foot-long conveyor system. To access the Watsonville site and provide vehicular and conveyor egress, a road will have to be cut through the Biotic Conservation Easement (BCE) that separates our two facilities. This BCE includes a combination of mature riparian, wetland and oak woodland habitats. The habitat loss to gain this access through the BCE is estimated conservatively at 0.5 acres. However, this number could increase dependent upon results of a geotechnical investigation and the resultant engineering requirements for road design and railroad trestle under crossing,

The railroad under crossing is also an unknown component of this alternative. County staff met with maintenance and engineering representatives from Union Pacific on April 7, 1999, to discuss an appeal of their at-grade crossing denial and the feasibility of an under-trestle crossing. Based upon the age of the trestle (early 1900s), they informed the County that they would not approve any traffic crossing without significant bridge modifications, up to and possibly including full trestle replacement. Their primary concern is that mobile equipment could damage the

old sub-standard trestle and they have not historically permitted under crossings in the state that are not designed to current standards (full concrete structures). Our best case estimate is $200,000 for minor protective improvements, and ingress and egress structures, but it appears that Union Pacific will require a much higher level of bridge modification, up to full trestle replacement at $2-3 million, However, pending a formal application and full engineering review by Union Pacific, we are assuming the best case cost scenario at this time. Union Pacific also informed the County that they must perform all bridge construction work and their construction crews are backed up at least l-2 years with priority projects.

BVCA also suggested a variation from return of soil to the Buena Vista Landfill that would reduce the costs significantly. Instead of purchasing the conveyor system at the outset, the County could lease the 5,200 foot long unit for one year to move soil to the Watsonville site, at an estimated savings of $1.2 million. When it is time to return soil, we would purchase a much shorter unit, approximately 400 feet long ($152,000), to move soil from the Watsonville site to the top of the closed Buena Vista Landfill. At this point it would be placed in an overhead hopper for direct load into dump trucks that would haul the soil to the active site. Overall, this revised scenario would reduce the Watsonville site alternative by approximately $1.3 million for a net difference between the approved Rocha project of $1.8 million.

Many of the suggestions from BVCA were also applicable to the Rocha project and can be applied to benefit that project as well. One idea in particular would be to use a conveyor to return the soil from the Rocha site. We had previously considered this option, but discounted it for visual purposes. However, with the rustic architectural design of the structure it is very conceivable that it could be left in place to return soil to the landfill. Use of a conveyor in this situation reduces equipment and staff requirements, almost eliminates heavy equipment crossings of Buena Vista Drive (an ongoing BVCA concern), and reduces the overall project costs by $750,000. Only a minor permit modification would be required to accommodate this alternative and benefit from the resulting operational efficiencies and cost savings. Under this scenario the cost differential between the Watsonville Landfill alternative and the Rocha project would be approximately $2.5 million, Attachment 2 includes a revised cost estimate reflecting this alternative (C2). This cost does not reflect the potential replacement cost for the railroad trestle, which could be as high as $2-$3 million.

Regardless of the cost differential, it is Public Works' opinion that the alternative soil storage project on the Watsonville City Landfill expansion is feasible. However, there are still many hurdles to clear in order to facilitate this change in project direction, as discussed in Attachments 1 and 2. Below is a list of the most significant issues for your Board to consider in deliberating whether to change the direction of this project at this juncture:

A. A new round of environmental review (CEQA) needs to proceed immediately. We cannot move forward with any permitting processes without CEQA documents. Counsel for BVCA believes it would take the County only three to six months, but it is our opinion, based on the length of the current process, that two years is a realistic time frame. Development of a scope of work, and selection and hiring of an Environmental Impact Report (EIR) consultant will take at least six months, plus at least another year and a half for EIR development and multiple rounds of public review. This process could be much longer, as in the current case, if neighbors adjacent to the Watsonville Landfill expansion site file appeals with the decision and permitting bodies throughout the process.

B. Design level engineering and geotechnical investigation will also need to proceed immediately to accompany the CEQA process and resolve design and permitting related cost issues associated with the conveyor route through the Biotic Conservation Easement BCE.

C. Your Board will also have to weigh the value of the biotic impacts between the two sites. As it has been well documented, the biotic area to be lost on the Rocha site has no significant habitat value, while the habitat between the County and City is of such significance that a previous Board of Supervisors placed this habitat into a permanent protective BCE. Both the taking of habitat and the impacts from operations on the bisecting road should be considered. In addition, the Rocha site project also includes a substantial biotic mitigation plan that has been endorsed and cooperatively designed by all the involved biotic resource agencies. Biologists from all the resource agencies have agreed that the biotic mitigation plan on the Rocha site will provide a valuable restoration of lost habitat and migratory corridors.

D. Consideration will also have to be given to the value of the temporary loss of agricultural lands on the Rocha site. The Watsonville site is no longer zoned for agriculture, and therefore no loss of agricultural lands would result. However, your Board approved a substantial mitigation package for this loss on the Rocha site in the amount of $240,000 to the Agricultural Conservation Easement Program and an added direction to minimize agricultural land losses as much as possible through stockpile modifications, where feasible.

E. The existing BCE between the County and City Landfills will have to be amended by your Board, under consultation with U.S. Fish and Wildlife Service, Army Corp. of Engineers, CA Coastal Commission, and CA Department of Fish and Game to allow the necessary taking within the easement to accommodate the conveyor and access road between the sites. See Attachment 3 for approximate location of roadway within the BCE.

F. Higher level negotiations with the Watsonville City Council will have to take place in order to accommodate this project. Many significant decisions will be required by both jurisdictions regarding the future valuation and exchange of landfill capacity, financial responsibility for Watsonville City Landfills' permitting costs and biotic mitigation costs, and valuation for the long term land lease costs. Watsonville staff has also indicated there may be some unavoidable landfill development costs associated with this project that may also require County reimbursement.

G. Your Board will have to consider the cost differential and its short and long-term impacts to landfill services. We are approaching the year 2000 landfill diversion requirements of 50%. In order to meet these goals, the County needs to direct as much of our staff and financial resources as possible toward this diversion goal in order to comply with the State mandates. Diversion of staff and funding resources away from public service projects (i.e., recycling programs) directed at attaining this goal will undoubtably have some impacts.

H. Impacts to landfill operations must also be considered. This revised project has been discussed at length with landfill operations staff and they have continued to express strong reservations over the impacts associated with this project. It is clearly more labor intensive and more complex. Routing of a conveyor system across an active landfill will pose many engineering, traffic and operational difficulties. Operational flexibility, necessary to respond to emergencies or undertake new diversion programs will be impacted. Without added staffing they are concerned that some public services may be affected with diversion of more staff time to this project.

Our department is very aware of the controversial nature of this project. Unfortunately, by its very nature this project will have impacts wherever it is located and raise controversial issues. Your Board has already approved this project after four rounds of public and resource agency review of CEQA documents, four public hearings before the Planning Commission, two neighborhood workshops, three Board hearings, two Coastal Commission hearings (three including next May's meeting), and numerous negotiation and information sharing sessions with BVCA and all the involved resource agencies. The result is a well-balanced project that meets most of the needs and expressed concerns of the neighborhood groups and the resource agencies. It is our department's opinion that to change project direction at this late date will not provide any added benefit and it is likely to be opposed again by either adjacent neighbors or resource agencies concerned with the new set of impacts. We had a recent discussion with Coastal Commission staff involved with this project, and they have indicated that the first and most important priority regarding this project is the biotic impacts. While they have not finalized an opinion regarding this feasibility study, they are keenly aware of the impacts and costs and have assured the County that they will fairly weigh all the issues in their final analysis.

It is therefore recommended that the Board of Supervisors accept and file this addendum to the Buena Landfill Soil Management Project Feasibility Study.

Yours truly,

Charlie A Jones Jr
For JOHN A. FANTHAM
Director of Public Works

RPM:mg

Attachments

copy to: California Coastal Commission (w/a)
Buena Vista Community Association, c/o Jonathan Wittwer (w/a)
David Koch, City of Watsonville (w/a)
County Counsel (w/a)
Ray Dodson, Public Works (w/a)
Kim Tschantz, Planning Department (w/a)
Ana Demorest, CH2M Hill (w/a)
Jim Smith, Union Pacific

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CONDITIONS OF NEGOTIATION WITH CITY OF WATSONVILLE FOR USE OF CITY LANDFILL EXPANSION SITE FOR LONG TERM STORAGE OF SOIL FROM COUNTY'S BUENA VISTA LANDFILL

On January 12, 1999 County staff attended a City of Watsonville Council meeting to provide information regarding the project alternative to utilize the Watsonville Landfill Expansion site for long term storage of soil from the County's Buena Vista Landfill. After receiving the City staffs recommendation to provide the County with information necessary to conduct a Project Feasibility Study, the City Council was asked to approve use of City staff and resources to assist the County. After a lengthy deliberation and numerous questions and comments to County staff, the City Council agreed to cooperate with the Feasibility Study.

It was clear from the comments received by the City council and through subsequent discussions with City staff that there are numerous issues that the County will need to address in order for the City Council to give this project any further consideration. The City Council also made it very clear that they would only support moving forward, with this project if there was a significant benefit to the City. While there is no direct operational benefit to the City, the City staff has indicated the items below represent the basis for a compensation package the City may accept.

1. **Land Lease -** A reasonable lease price needs to be negotiated for the 20+ year life of the project. It is our opinion that a range of $500-$1,000 per acre per year is fair market value for low-mid level agricultural lands, though this site is no longer zoned for agriculture. The City Council was very interested in the price we were estimating for the Rocha property and indicated that this was potential starting place for a lease estimate ($1,800 per acre per year).

2. **Biotic Mitigation -** As a condition of using the Watsonville Expansion site a 0.75 acre riparian corridor that bisects the expansion site will have to be remove. This biotic taking was considered in the landfill expansion permits and mitigation was to have been completed prior to construction of the landfill expansion in 10- 12 years. This is an unavoidable impact of the stockpiling operations and therefore the mitigation for this planned loss will have to be completed earlier than Watsonville anticipated.

   In addition to the landfill's mitigation requirement, there is an additional soil project mitigation requirement for the taking within the Biotic Conservation Easement to allow conveyor and heavy equipment access, as discussed in the Feasibility Report. The biotic loss for the conveyor and equipment access road is conservatively estimated at 0.5 acres, for a total of 1.25 acres of biotic impacts associated with this project. At the Coastal Commission mitigation ratio of 3 to 1, we could be responsible for creation of 3.75 acres of new habitat in order to proceed with this project.

3. **Exchange of Landfill Space -** One of the most significant underlying issues and policy decisions for this project is the need for the County and City to exchange landfill capacity. Watsonville is scheduled to construct their Phase 4 and 5 disposal areas in approximately 1 O-l 2 years. The future Phase 4 and 5 expansion make up the entirety of the previously referred "Expansion Site". Due to the relatively steep terrain and limited space, the County will need to use nearly all of the Expansion Site to accommodate the soil storage project (please refer to Appendix 1 drawings in the Feasibility Study). The County soil

storage project will run for an estimated 20 years, but needs to be flexible from a time perspective to accommodate a longer period if we are successful in diverting a larger volume of waste that is currently predicted or improving waste placement methodologies.

In light of the difference between the County's soil storage timing needs (20+ years) and the City landfill construction schedule (1 O-l 2 years), the County will have to agree to provide Watsonville with landfill capacity at the Buena Vista Landfill for the overlap period of 8-10 years and longer if we can extend the Buena Vista Landfill's life beyond 20 years. Provision of this capacity to Watsonville, for an estimated 8 years, will reduce the Buena Vista Landfill's life by least 2-3 years. Of course, the County should request a contractual condition requiring return of a comparable amount of landfill capacity in the Watsonville Expansion site once the Buena Vista Landfill is closed and all soil has been removed. This will be the most significant decision that nolicy makers will have to agree upon.

4. **Drainage Improvements -** The existing Watsonville Landfill drainage facilities are inadequate for the soil stockpile operations and will need to be improved and upgraded to handle this project and the landfill's needs.

5. **CEOA -** At a minimum, amendments to the existing landfill EIR's (County and Watsonville) will have to be completed to allow for this project. Watsonville has indicated that they are expecting the County to complete all the required CEQA work for their site as well as ours.

6. **Permitting -** Existing Coastal Zone, Integrated Waste Management Board, Water Quality Control Board, and National Pollution and Discharge Elimination System permits for the Watsonville site will also have to be amended to accommodate this project. Watsonville has indicated that they are expecting the County to complete all the required permitting work for their site as well as ours. The County would also have to amend its own Develpment permit for the Watsonville City Landfill.

7. **Sludge Disposal -** Watsonville City staff has indicated that they would be interested in having the County use their wastewater sludge for an erosion control soil amendment in our landfill cover as part of the overall compensation package for this project. By using sludge in this manner, as opposed to landfill burial, Watsonville will receive waste diversion credits.

SUMMARY RESPONSES TO BVCA QUESTIONS AND ISSUES

(FROM MEETINGS HELD ON **3/19/99, 3/29/99, 4/5/99** AN-D **4/8/99**)

1. *Is the County going to follow through with an appeal of the Union Pacific railroad crossing denial?*

Yes, we have explored the next step, which is an appeal with the Public Utilities Commission (PUC). PUC staff has, however, informed the County that the process could take as long a 18 months and would require CEQA documents to proceed. They have also indicated that it is not likely that they would uphold a safety based decision by Union Pacific, as their own policy of reducing at-grade crossings is as stringent as Union Pacific's. If the Board of Supervisors directs staff to pursue use of Watsonville site, we would immediately proceed with CEQA, both for the crossing and the entire project.

Have we re-applied to Union Pacific for a crossing under a reduced heavy equipment crossing scenario utilizing conveyor system?

We have discussed this issue verbally and during a site visit with Union Pacific. On March 26, 1999, a request was made to the Union Pacific representative, Jim Smith to reconsider our application with a reduced number of crossings (from 576/day to 20/day). He informed County that under no circumstances would they approve a crossing permit at this location even with significantly reduced traffic. He further discussed this issue with Manager of Train Operations and the Manager of Track Maintenance and Engineering for this area, and they both concurred with this decision. In their professional opinion, any crossing at this location would put their operations at risk and is in direct opposition of their stated policy of reducing at-grade crossings. They will not permit new crossings when there is an existing crossing in the vicinity (at intersection of San Andreas and BV drive).

2. *Why do we need a railroad crossing at all with conveyor system?*

Yes, for several key reasons:

a. To maintain operating flexibility in event of emergencies or landfill operational needs where we need to return heavy equipment to the County landfill in short notice.

b. It is costly and operationally inefficient to strand expensive heavy equipment at WLF and not be able to use at BVLF when needed (ie. emergencies , down time, non-operational days). Some equipment is only needed a few hours each day and the operation is only permitted to run 6 days per week.

c. The Buena Vista Landfill has a fully equipped and staffed heavy equipment maintenance facility. Periodic maintenance, performed at this existing facility is more cost effective than contracting out remote maintenance at the Watsonville site or adding staff to work on equipment at Watsonville. The Watsonville Landfill does not have a appropriate maintenance facility as well.

d. Round-trip cost to haul large piece of heavy equipment from the Watsonville site (WLF) to the Buena Vista Landfill (BVLF) for our use or for maintenance is $1 ,OOO-$1,500 per round trip and each piece needs to go into shop l-2 times per month for repairs or maintenance that can't be done in field. If we assume an average of 1 piece per week hauled to BVLF @ $1,200 each = $62,500/year, or $750,000 for the 12 year operational period on this site. This does not include the cost of leaving or acquiring some of added equipment needed for only a few hours each day, or the lack of access to equipment during down periods or the one non-operational day each week.

e. This crossing was originally considered for joint projects and as such should be designed for potential future use, particularly the sharing of landfill space that needs to occur between our two jurisdictions, to make this project feasible.

3. *How many meetings has the County had with Watsonville, where BVCA was not invited?*

None, only phone conversations with WLF staff to discuss information provided or request additional data. Meetings with Watsonville staff and City Council would only be needed if the Board directs us to move forward with WLF alternative after review of feasibility report.

4. *Has the county consider bottom dumps to move soil to and from the WLF ?*

See return cost for alternative A2 using "dump trucks" for soil return (end dump cost/capacity used), cost is $9.8 million. Use of bottom dumps or any vehicular soil carrier, under any set of scenarios would be much more costly than acquisition of the conveyor. Air quality impacts would be significant increased during the haul to WLF with multi-wheeled vehicles, such as an end dump. 14-l 8 wheeled end-dumps/bottom dumps) have greater impacts than 4 wheel scrapers (ie. more wheels churn up more dust). Bottom/end dumps are also not designed for extended off-road operation and steep dirt roads.

5. *Why did we spend so much time on combinedproject alternative?*

The County permit condition, negotiated between the Board and BVCA during the October 20, 1998, hearing required us to consider this option. We discussed the alternative scenarios with BVCA's representative on January 29, 1999 and he did not question the list at that time.

6. *BVCA asked why the County did not consider an appreciation resale value for the Rocha site in 20 years, it should be higher.*

This is true and we have adjusted the cost analysis to reflect a 2% per year appreciation rate. This further reduces the cost estimate for the Rocha project by approximately *$340,000.*

7. *BVCA thinks the County's assigned value for the Rocha property is too low, they claim Mr. Rocha says $1.3 million.*

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We have no information to contradict a certified property appraisal, completed by a registered appraiser that specializes in agricultural properties. This value is further confirmed by Rocha's 1990 lease/purchase agreement with a previous tenant in which he contractually agreed to sell the property at a cost of $480,000. This property could not have appreciated 200% in 9 years.

Even if we were to take into consideration a higher value as BVCA indicates, under comments discussed under #6 above, appreciation of a more expensive property over 20 years at 2%, this actually lowers the Rocha project cost even further. If we assume a 2% appreciation rate with a sale value of $1.3 million, the resale value in 20 years would be approximately $1.93 million. This further reduces the cost estimate for the Rocha project by $630,000.

8. *BVCA thinks biotic mitigation costs are too low?*

We are using generic figures quoted from HLA that assume a range of $75,000 to $100,000 per acre for this type of biotic mitigation plan. BVCA has not informed us as to where they saw or heard a different figure so we can research this discrepancy. A higher per acre mitigation cost would also increase the WLF alternative even further.

9. *Ag. Mitigation cost should have been $12,000/acre not $8,000.*

The $12,000/acre value approved in the permit was prorated for the additional 10 acres placed into open space (north ravine) as requested by CA Fish and Game, Army Crop of Engineers, and the Coastal Commission staff during our mitigation plan discussions and negotiations.

10. *Watsonville land lease price is too high.*

BVCA was at the Watsonville City Council meeting on January 12, 1999 and we think it was very clear that the City Council expects a significant benefit to the City in exchange for their cooperation on this project. Offering only $50 per acre per year, as BVCA suggested would not be a benefit. This land was previously zoned for agriculture and Watsonville would at least look at the land value as low end ag land (similar in value to Rocha). One Council member even asked how much we would be paying for the Rocha site and the implication we heard was "What is our land worth to the County". Even at half our estimated price per acre, the overall project cost would only be reduced by *$200,000.*

Phone conversations with Watsonville staff has resulted in a series of issues that they feel their Council must consider in order to finalize their decision on not only lease pricing but other mitigation measures they would like the County to absorb in exchange for use of their site. These are discussed in a separate attached report.

11. *Does this project require a new EIR?*

Yes, the Planning Department has informed us that a new CEQA process would be required for this project. At a minimum a supplemental EIR to both the County and City

landfill EIRs would be needed, as a new set of impacts would have to be formally analyzed. This is a new project was not envisioned in either the County's or the City's landfill EIR or the landfill operations. It is not clear why BVCA and their counsel has questioned every minute CEQA related detail of the Rocha EIR, but is completely willing to overlook CEQA/EIR regulations for an alternative project.

12. *Why is there a 600'foot setback from the Higakiproperty adjacent to the Watsonville site?*

Under the best case scenario, we have calculated the minimum stockpile setback for noise to be approximately 600'. This is the minimum set back needed to comply with County noise ordinances restricting noise increase to no more than 10 decibels, a true background noise analysis could yield a more stringent set back requirement. Under any circumstance, the noise impact from the WLF alternative would be greater than with the Rocha project. A 1300' - 1800' separation from residences is much better than a 600' separation, plus the Rocha project is primarily contained within a ravine, further reducing noise travel.

13. *Why not rent the conveyor for <u>two years</u> (only need one), remove and use trucking to return to landfill.*

We have not gotten a price on rental of the longer conveyor, but assume 3 times the Rocha conveyor ($18,000 per month) at $54,000 per month x 12 months = $648,000. The conveyor acquisition savings would be approximately $1,200,000. The down side is that return trucking costs are $9.8 million vs $3.8 million for the Rocha project, a net difference of $6.0 million. This option would still be $5.0+ more expensive than the Rocha project. Full use of a conveyor would be the most logical option to consider.

Why not *rent the conveyor for <u>two years</u> (only need one), remove during idle period* (6-7 *years) and re-rent for duration of soil return (12 years).*

Based on the estimated rental costs previously discussed and confirming statements from conveyor suppliers, a conveyor lease is only cost effective if the lease period is less than 2 years. After 2 years it becomes more cost effective to purchase the conveyor and the added resale value also improves the economics.

14. *The conveyor length is being questioned BVCA thinks EIR or some other document quotes the conveyor as being only 600' and that this is being used for air quality analysis.*

The conveyor to the Rocha site has always been estimated at 1500'-1800'. 900'-1100' fixed section, + 600' of portable and 70'-80' stacker. Air quality analysis for conveyors has nothing to do with the conveyor length, but rather the number of soil transfer points along the conveyor. ie. A 1000' conveyor with 5 transfer points will generate more dust than a 2000' conveyor with 1 transfer point.

15. *BVCA is concerned over lack of their participation in inter-agency meetings.*

Their have been no meetings to date with Watsonville or other agencies. Our intent was to bring the feasibility report to the Board for their consideration first. We need Board direction whether or not to move forward with Watsonville alternative given the facts

associated with this alternative. While the Watsonville site alternative appears feasible, there are a different set of impacts and public costs that the Board must weigh before directing staff to change course on this project. We are avoiding the added public expense of negotiating with Watsonville and initiating a new CEQA and permitting process until the Board makes a final decision.

16. *What about trucking to recycle area and then use conveyor over the tracks.*

Trucking to the recycle area has the same basic impacts as trucking the entire way to the Watsonville site: increased air quality impacts and increased trucking costs. Stopping at the Recycle center will only reduce the trucking distance by about 20%. Considering the higher cost for trucking soil to this site, the costs would still be significantly higher than the Rocha project.

In addition, we are not even sure that bridging could be accomplished, given that we cannot reasonably engineer a stable bridge buttress on top of 80'-100' of refuse fill. We also would need to elevate the conveyor crossing a minimum of 18' over the track and there is an existing 8'-12' grade separation between the landfill and the tracks. Given the engineering complexities that would have to be overcome and the lack of any significant savings for this alternative, over the full conveyor alternative, this is not a viable option.

17. *Project benefits to agriculture,*

This is the one positive advantage to use of the Watsonville site. The Watsonville site is no longer zone for agriculture and therefore would result in no temporary or permanent loss of ag land as this loss has already been accounted for. It is the Board's decision to weight this benefit over the other impact issues that separate these two alternatives. Unfortunately, loss of ag land is a nearly unavoidable consequence of landfill operations in this county, as most parcels, large enough to accommodate a landfill or related activities, are agricultural in nature, or physically inaccessible (mts/foothills).

18. *Leave Module 5 soil on site and use for Module 4 operations to reduce off-site storage needs.*

It is in the County's best interest to minimize off-site hauling as much as possible, as this reduces cost. We agree that some amount of the Module 5 excavation could be left in place during the interim life of Module 4 (est. 30K cy per year for 4 years = 120,000 cy).

However, our current plans are to remove all the Module 5 soils in conjunction with Module 4, so we can construct both Module 4 and 5 simultaneously and save the estimated $500,000 in added costs we are facing with the modified construction schedule (3 modules vs 2). As we have stated before, the addition of a third landfill construction series (as opposed to the planned two) would result in an estimated $500,000 or more in added engineering, CQA, construction management, contractor mobilization costs, and loss of economies of scale.

As it stands now we have to construct Module 6 and are in the process of excavating over 300,000 cubic yards from the Module 6 area and storing it on the Module 4 area. At some

point we will have to move this material again to a soil storage site or the landfill stockpile. At an estimated $2.00 per cubic yard, this amounts to over $600,000 in added cost for double handling soils that has already been incurred as a result of the project delays.

19. *Can we move conveyor load-out hopper closer to WLF, ie. near module 4/5 interface or on top of Module 3?*

On top of Module 3 not recommended, as drive over hopper needs to be on stable ground not refuse. The southern Module 4/5 interface is possible, but could pose problems with public access to Modules 3 and 6 that will have to be reviewed. This alignment may also interfere with future plans for Construction and Demolition material recycling operations necessary to reach the State's 50% landfill diversion goal by the end of 2000. If it can be done, this would reduce the conveyor length by about 1200 feet (18% less), net cost reduction estimated at about $350 - $400,000 (18% of $1.8 million). This scenario could also be applied to the Rocha project and reduce the operational cost for that project as well. For discussion and cost comparison purposes, we have assumed this alternate conveyor location in the revised cost estimates for both the approved Rocha project and the WLF alternative.

20. *Move heavy equipment crossing to northeast end of closed landfill where BCE is narrower?*

We strongly recommend against this as there is a railway curve in this area. Union Pacific was specific about line of sight concerns and absolutely no crossings at or near curves. The County should not accept this added liability in light of Union Pacific's expressed concerns.

But if we were to do this the net reduction in impacts to the BCE would be about a 0.5 to 0.7 acre, including the conveyor route impacts which cannot be fully defined due to the density of vegetation in this area.

21. *Route heavy equipment crossing under southern RR trestle?*

Staff has reviewed this option and is would be the most beneficial alternative as it eliminates the safety issues with the at-grade crossing. There are, however, several significant issues with this alternative crossing that must be weighed:

a. The grade immediately above and below trestle is very steep and composed of silt and sand likely resulting from erosion. There is also an indication of an old slide in this area, supported by a large volume of silty sand deposited near the trestle.

b. There is insufficient clearance below the trestle. In order to meet the clearance requirements for our equipment the trestle would require significant improvements.

County staff met with representatives from Union Pacific on April 7, 1999, including the Manager of Train Maintenance and Engineering, to discuss the trestle under crossing. They agreed that we could place a conveyor under the trestle with minor modifications. But due to the extreme age of the trestle and old style design

they said no traffic would be allowed without significant reconstruction of the trestle, up to and including complete replacement with a concrete trestle, installation of crash walls, drainage improvements, and construction of retaining walls to support the trestle undercut needed to accommodate the under crossing.

c. Unknown soil conditions may require special engineering to accommodate roads and bridge modifications (retaining walls, piles, extra wide road for added equipment weight support), top soil in area is very fine and loose sands, with possibility of an old slide.

d. The actual biotic impact area may be greater than CH2M Hill's conservative estimate of 0.5 acres, due to soil conditions, hillside saturation (seepage), and undefined existing grades due to vegetation obscured aerial topography. Any one of these conditions could require an added taking of the Biotic Conservation Easement (BCE) in to correct slope stability problems or met minimum access grades for equipment and the conveyor.

e. Cost estimates cannot be finalized without geotechnical borings and design level engineering evaluation at an estimated cost of $35-$45,000, but it is safe to say that the bridge modifications alone could range from several hundred thousand to over $2 million if full trestle replacement is required by Union Pacific. Union Pacific has also informed the County that bridge retrofitting or replacement can only be done by Union Pacific crews and their construction crews have priority projects backed up at least l-2 years.

f. The County will have to reimburse Union Pacific for all the down time on the line during bridge construction work. They could not give us an estimated cost of this financial impact.

22. *Where will the County conduct mitigation for the BCE taking?*

We do not have a mitigation site for the WLF biotic impacts and the overall costs could be higher to acquire such land, if it cannot be accomplished on county land or the WLF. Our best estimate would be a cost of $25-$75,000 to acquire a parcel or easement that meets the size and hydrogeological conditions necessary to accommodate a sustainable riparian/wetland mitigation site.

23. *BVCA has been expressing their air quality concerns to the Monterey Bay Unified Air Pollution Control District (MBUAPCD).*

On March 30, 1999 the MBUAPCD issued a permit to construct for the Rocha site project. In advance of issuing this permit the MBUAPCD staff conducted extensive modeling and analysis of the air quality impacts for this project and concluded that it would meet their standards under the mitigation conditions, as approved.

BVCA concerned over air quality issues, questioning Air District's approval and expressing concerns over air impacts. The WLF alternative being proposed by BVCA will result in increased air quality impacts over those associated with the Rocha project.

Preliminary calculations contained within the Feasibility Study, when combined with the existing air quality impacts from public travel, will exceed the MBUAPCD standards and could require a Statement of Overriding Consideration in the CEQA process, or at a minimum increased dust mitigation expenses. It is not clear why BVCA is both pushing for a project that has a greater air quality impact, and at the same time petitioning the Air District for reconsideration of the Rocha site project, due to lesser air quality impacts.

24. During the April 4, 1999 meeting with BVCA another WLF alternative was proposed. This alternative called for movement of soil to WLF with the conveyor as considered in the Feasibility Study, but with a creative variation for returning soil. After initial review of their suggestion it appears to be somewhat lower in cost. The attached, revised cost analysis includes a preliminary estimate of the cost which appears to be about $1.3 million less than the conveyor option (Al) considered in the Feasibility Study. Soil would be

BUENA VISTA LANDFILL SOIL MANAGEMENT PROJECT
SUMMARY OF COST ESTIMATES FOR WATSONVILLE SITE OPTIONS
(BUENA VISTA COMMUNITY ASSOCIATION RECOMMENDATIONS)

			Cost Differential	Project Cost % increase
C1.	Rocha Site with Conveyor (County permitted project)	$6,419,672	$0	0%
C2.	Rocha Site with 2-Way Conveyor System (BVCA Alternative)	$5,673,798	-+ $745,875	-12%
A5.	Watsonville Site with Conveyor/Trucking Combination (BVCA Alternative)	$8,132,767	+ $1,713,095	27%
	A5. Cost Increase Over BVCA Suggested Rocha Alternative, C2:		+ $2,458,970	43%

returned, via a short conveyor from the WLF to the top of the closed BVLF, loaded into trucks and hauled the remaining distance to the active landfill site. Most of the savings would be in the reduced conveyor acquisition costs.

The down side to this alternative is that it is more labor intensive, has a much higher and longer term air quality impact due to the long trucking haul route, still requires a Union Pacific crossing approval (see #21 above for a detailed discussion), and as with all the WLF alternatives, requires a significant taking within the protected Biotic Conservation Easement.

This appears to be the most feasible of the alternatives, but as discussed in detailed above there are still many hurdles to resolve and no guarantee that the City of Watsonville will cooperate.

On a similar note many of the suggestions made by BVCA were constructive and under either scenario have provided some beneficial improvements to either project. As an example you will find an alternative cost analysis to the Rocha project that calls for leaving the conveyor in place and returning the soil to the County landfill on the conveyor instead of by truck. Not only would this further reduce truck traffic on Buena Vista Drive and air quality impacts, but the cost savings would be substantial, approximately $745,000 less than the current Board approved Rocha project.

As you can see from the table above and in the attached cost analysis revisions their is still a significant difference in costs between the projects. However, BVCA should be commended for their hard work in helping us define and improve upon the WLF alternative and at the same time providing valuable comments on how to improve upon the Rocha site project.

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BUENA VISTA LANDFILL SOIL MANAGEMENT PROJECT
SUMMARY OF COST ESTIMATES FOR WATSONVILLE SITE OPTIONS
(BUENA VISTA COMMUNITY ASSOCIATION RECOMMENDATIONS)

			Cost Different&l	Project Cost % increase
C1.	Rocha Site with Conveyor (County permitted project)	**$6,350,672**	$0	0%
C2.	Rocha Site with 2-Way Conveyor System (BVCA Alternative)	$5604,798	-+ $745,875	-12%
A5.	Watsonville Site with Conveyor/Trucking Combination (BVCA Alternative)	**$8,132,767**	+ **$1,782,095**	28%
	A5. Cost Increase Over BVCA Suggested Rocha Alternative, C2:		+ **$2,527,970**	45%

C = County approved project, A = Watsonville site alternative

C1. ROCHA SITE WITH CONVEYOR SYSTEM

Off-Site Soil Storage Volume (Rocha): 1,050,000 cubic yards

Excavation & Stockpiling

Heavy Equipment/Labor[1]

	units	hourly rate	est. hours/day
Scraper'	3	$ 230.00	8.0
Motorgrader	1	$ 76.00	1.0
Dozer	2	$ 152.00	8.0
Loader	1	$ 123.00	1.0
Water Truck	1	$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4	minutes
Bank yards per/scraper load	33	cubic yards
Total yards/day	8,837	cubic yards/day
Working days required	119	days
Months (6 days/wk + 10% weather delay)	5.1	months

Heavy Equipment/Labor Costs[3]

Scraper	$	655,864
Motorgrader	$	9,030
Dozer	$	288,961
Loader	$	14,614
Water Truck	$	48,477
Contractor mark-up (15%)	$	152,542
Equipment/Labor Totals:	**$**	**1,169,488**

Capital/O&M Costs

Land acquisition[4]	$	700,000	
Land resale value[5]	$	(1,040,000)	
Conveyor bridge	$	**235,000**	
Conveyor bridge resale value (50%)	$	(117,500)	
Conveyor lease ($18,000/mo x 12 mo)[6]	$	216,000	
Conveyor O&M ($0.01 l/If/hour of operation)[7]	$	**19,552**	
Conveyor power costs (est. $250/day)	$	29,704	
Biotic mitigation ($100,000/acre x 2.4 acres)	$	240,000	(acreage recalculated)
Biotic monitoring ($15,000/yr x 5 yrs)	$	75,000	
Irrigation (mitigation/erosion control)	$	60,000	
Agricultural mitigation ($8000/acre)	$	240,000	(30 acres)
Noise Mitigation		n/a	
Site improvements	$	410,000	
Contractor mark-up (15%)		246,750	
Capital Costs Total:	**$**	**1,314,506**	

Total Excavation/Stockpile Costs: $ 2,483,994

Soil Return to Landfill

Heavy Equipment/Labor[8]	units	hourly rate	est. hours/day
Dump Truck	1	$ 70.00	1.7
Motorgrader	1	$ 76.00	0.5
Loader	1	$ 123.00	1.7
Dozer	1	$ 152.00	1.7
Water Truck	1	$ 51.00	0.5

Load Cycles

Dump truck round trip (incl. load cycle)'	8.7 minutes
Bank yards per/dump truck load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	1.7 hours
Working days to remove stockpile"	5,833 days

Heavy Equipment/Labor Costs"

Dump Truck	$	709,386
Motorgrader	$	221,667
Loader	$	1,246,493
Dozer	$	1,540,382
Water Truck	$	148,750
Equipment Totals:	**$**	**3,866,678**

Total Soil Return Costs: $ 3,866,678

TOTAL ESTIMATED PROJECT COST: $ 6,350,672 [ROCHA SITE WITH CONVEYOR]

1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
2. Limit to 3 scrapers per project EIR analysis.
3. Assume contracted services.
4. Rocha appraisal update 10/16/98.
5. Per BVCA recommendation, assume appreciated resale value of land over 20 years at 2% annually.
6. Assume 12 months for conveyor lease to allow some flexibility for operional conditiuons.
7. $0.01 l/If/hour of operation based on manufacturers estimate and 1,870 If of conveyor.
8. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
9. Average round trip haul distance may be slightly shorter in practice dependent upon delivery location on landfill.
10. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
11. No mark-up, assume County crews.

C2. ROCHA SITE WITH 2-WAY CONVEYOR SYSTEM

Off-Site Soil Storage Volume (Rocha): 1,050,000 cubic yards

Excavation & Stockpiling

Heavy Equipment/Labor[1]

	units	hourly rate	est. hours/day
Scraper[2]	3	$ 230.00	8.0
Motorgrader	1	$ 76.00	1.0
Dozer	2	$ 152.00	8.0
Loader	1	$ 123.00	1.0
Water Truck	1	$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4	minutes
Bank yards per/scraper load	33	cubic yards
Total yards/day	8,837	cubic yards/day
Working days required	119	days
Months (6 days/wk + 10% weather delay)	5.1	months

Heavy Equipment/Labor Costs[3]

Scraper	$	655,864
Motorgrader	$	9,030
Dozer	$	288,961
Loader	$	14,614
Water Truck	$	48,477
Contractor mark-up (15%)	$	152,542
Equipment/Labor Totals:	$	1,169,488

Capital/O&M Costs

Land acquisition[4]	$	700,000	
Land resale value[5]	$	(1,040,000)	
Conveyor bridge	$	235,000	
Conveyor bridge resale value (10%)	$	(23,500)	
Conveyor purchase [6]	$	504,000	
Conveyor O&M ($0.01 l/lf/hour of operation)'	$	19,552	
Conveyor power costs (est. $250/day)	$	29,704	
Biotic mitigation ($100,000/acre x 2.4 acres)	$	240,000	(recalculated acreage)
Biotic monitoring ($15,000/yr x 5 yrs)	$	75,000	
Irrigation (mitigation/erosion control)	$	60,000	
Agricultural mitigation ($8000/acre)	$	240,000	(30 acres)
Noise Mitigation		n/a	
Site improvements	$	410,000	
Contractor mark-up (15%)		246,750	
Capital Costs Total:	$	1,696,506	

Total Excavation/Stockpile Costs: $ 2,865,994

C2. ROCHA SITE WITH 2-WAY CONVEYOR SYSTEM

Soil Return to Landfill

Heavy Equipment/Labor[8]	units		hourly rate	est. hours/day
Scraper	1	$	160.00	1.1
Motorgrader	1	$	76.00	0.5
Dozer	1	$	152.00	0.5
Loader	1	$	123.00	0.5
Water Truck	1	$	51.00	1.1

Load Cycles

Scraper round trip (incl. load cycle)	5.4	minutes
Bank yards per/scraper load	15	cubic yards
Average yardage needed per day	180	cubic yards
Average load out time per day	1.1	hours
Working days to remove stockpile"	5,833	days

Heavy Equipment/Labor Costs[11]		
Scraper	$	1,003,758
Motorgrader	$	221,667
Dozer	$	443,333
Loader	$	358,750
Water Truck	$	327,250
Equipment Totals:	**$**	**2,354,758**

Soil Return O&M Costs

One time cost to reverse conveyor system"	$	80,000
Conveyor O&M ($0.01 1/lf/hour of operation)[13]	$	129,046
Conveyor power costs (est. $30/day)	$	175,000
O&M Totals:	**$**	**384,046**

TOTAL ESTIMATED PROJECT COST: $ 5,604,798 [ROCHA SITE WITH CONVEYOR]

1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
2. Limit to 3 scrapers per project EIR analysis.
3. Assume contracted services.
4. Rocha appraisal update 10/16/98.
5. Per BVCA recommendation, assume appreciated resale value of land over 20 years at 2% annually.
6. $280 per foot average cost ($1,800,000 / 6,500' WLF conveyor purchase)
7. $0.01 I/lf/hour of operation based on manufacturers estimate and 1,870 If of conveyor.
8. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
9. Average round trip haul distance may be slightly shorter in practice dependent upon delivery location on landfill.
IO. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
11. No mark-up, assume County crews.
12. Reverse all idler arms, move drive trains to opposite end of each section, change elevations at all transer points, and move loadout pit

A5. WATSONVILLE LANDFILL SITE - CONVEYOR & TRUCKING COMBO.

Off-Site Soil Storage Volume: 1,050,000 cubic yards

Excavation & Stockpiling

Heavy Equipment/Labor[1]

	units	hourly rate	est. hours/day
Scrape?	3	$ 230.00	8.0
Motorgrader[3]	1	$ 76.00	1.5
Dozer	2	$ 152.00	8.0
Loader[3]	1	$ 123.00	1.5
Water Truck	1	$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4	minutes
Bank yards per/scraper load	33	cubic yards
Total yards/day	8,837	cubic yards/day
Working days required	119	days
Months (6 days/wk, 10% weather delay)	5.1	months

Heavy Equipment/Labor Costs[4]

Scraper	$	655,864
Motorgrader	$	13,545
Dozer	$	288,961
Loader	$	21,922
Water Truck	$	48,477
Contractor mark-up (15%)	$	154,315
Equipment Totals:	**$**	**1,183,084**

Capital/O&M Costs

Land lease[5]	$	400,000	
Land resale value		n/a	
Conveyor bridge (H. Slough)[6]	$	200,000	
Conveyor bridge resale (50%)	$	(100,000)	
Conveyor system lease ($53,000/mo x 12 mo)[7]	$	636,000	
Conveyor O&M ($0.01 l/lf/hour of operation)*	$	55,416	
Conveyor power costs (est. $400/day)	$	47,526	
Conveyor Purchase for soil return (400')[16]	$	152,000	
Railroad undercrossing	$	200,000	(could be much higher, U.P. not able to provide cost at this time)
Railroad protective Liability Insurance ($8/yr)		n/a	
Biotic mitigation ($100,000/acre x 1.5 acres)'	$	150,000	
Biotic monitoring ($7,500/yr x 5 yrs)	$	37,500	
Irrigation (mitigation/erosion control)	$	30,000	
Agricultural mitigation ($8000/acre)		n/a	
Noise mitigation"	$	50,000	(Higaki berm)
Site improvements"	$	205,000	
Re-engineering and supplemental EIR	$	210,000	
County staff time for re-permitting	$	60,000	
Contractor mark-up (15%)	$	213,150	
Capital Costs Total:	**$**	**2,546,592**	

Total Excavation/Stockpile Costs: $ **3,729,676**

Soil Return to Landfill

Heavy Equipment/Labor[12]

	units		hourly rate	est. hours/day
Scraper	1	$	160.00	1.1
Motorgrader	1	$	76.00	1.0
Dozer	1	$	152.00	0.5
Loader	1	$	123.00	0.5
Water Truck	1	$	51.00	2.9
Dump Truck	1	$	70.00	2.9

Load Cycles - Stockpile to Conveyor Hopper

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	1.1 hours
Working days to remove stockpile[13]	5,833 days

Load Cycles - Conveyor Off-Load to Active Landfill

Dump truck round trip (incl. load cycle)	14.7 minutes
Bank yards per/dump truck load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	2.9 hours
Working days to remove stockpile[13]	5,833 days

Heavy Equipment/Labor Costs[14]

Scraper	$	1,003,758
Motorgrader	$	443,333
Dozer	$	443,333
Loader	$	358,750
Water Truck	$	873,117
Dump Truck	$	1,198,396
Equipment Totals:	**$**	**4,320,688**

Soil Return O&M Costs

Conveyor O&M ($0.01 1/lf/hour of operation)[15]	$	27,603
Conveyor power costs (est. $12/day)	$	70,000
Conveyor resale (20 yrs old, 10% orig. value)	$	(15,200)
O&M Totals:	**$**	82.403

Total Soil Return Costs: $ 4,403,091

TOTAL ESTIMATED PROJECT COST: $ **8,132,767** [WATSONVILLE LANDFILL SITE CONVEYOR & TRU

1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
2. Limit to 3 scrapers per project EIR, assumes no increase in total vehicle miles traveled as compared to Rocha site.
3. Motorgrader and Loader hours of operations increased to account for added travel time between sites.
4. Assume contracted services.
5. $1,000/acre/yr, 20 acres, 20 years)
6. Assume similar bridging costs as Rocha, but without architectural coverings,
7. 5300' WLF conveyor/1800' Rocha conveyor x $18,000 per mo quote for 1800' conveyor = $53,000 per mo lease extimate.
8. $0.01 1/lf/hour of operation based on manufacturers estimate and 5,300 If of conveyor.
9. Mitigation for estimated loss of 0.5 acres of riparian habitat (at 3:1 ratio per Coastal Commission) due to construction of

conveyor access road and bridge undercrossing clearance cutback. No mitigation site defined, possible added cost to acquire.

10. Noise mitigation for Higaki property per BVCA recommendation, estimated cost for construction of 500' (l) x 100'(w) x 30'(h) berm.
11. Site improvements for Watsonville are estimated to be 50% less than Rocha without sub-drain system, subject to geotechnical review.
12. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
13. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
14. No mark-up. County crews.
15. $0.01 l/If/hour of operation based on manufacturers estimate and 400 If of conveyor.
16. $280 per foot average cost ($1,800,000 / 6,500' WLF conveyor purchase) + cost of drive-under hopper for loading dump trucks @ $40,000.

EQUIPMENT CYCLES

Assumptions: Scraper & dump truck have similar speeds and accelerations

Loaded/downhill:	15 mph
Loaded/uphill:	7.5 mph
Empty/downhill:	20 mph
Empty/uphill:	10 mph
Efficiency Factor:	1.3 (accounts for speed variations due to terrain and road conditions)

ROCHA PROJECT

Scraper cycle from borrow area to conveyor hopper & back

(same for Rocha conveyor and Watsonville conveyor at both ends)

Ave. travel distance:	600 ft. (one-way)'						
Load time:						2.0	minutes
Loaded/downhill:	600 ft.	@	15	mph	=	0.5	minutes
Loaded/uphill:	ft.	@	7.5	mph	=		minutes
Unload time:						1.0	minutes
Empty/downhill:	ft.	@	20	mph	=		minutes
Empty/uphill:	600 ft.	@	10	mph	=	0.7	minutes
				Straight cycle time:		4.1	
				Efficiency factor:		1.3	
				Estimated cycle time:		**5.4**	**minutes**

Dump truck cycle from Rocha to center of landfill (mod. 3) & back

Ave. travel distance:	**1600 ft.** (one-way)						
Load time:						2.0	minutes
Loaded/downhill:	800 ft.	@	15	mph	=	0.6	minutes
Loaded/uphill:	800 ft.	@	7.5	mph	=	1.2	minutes
Unload time:						1.5	minutes
Empty/downhill:	800 ft.	@	20	mph	=	0.5	minutes
Empty/uphill:	800 ft.	@	10	mph	=	0.9	minutes
				Straight cycle time:		6.7	
				Efficiency factor:		1.3	
				Estimated cycle time:		8.7	**minutes**

WATSONVILLE - BVCA OPTION

Scraper cycle from borrow area to conveyor hopper & back

(same for Rocha conveyor and Watsonville conveyor at both ends)

Ave. travel distance:	600 ft. (one-way)'						
Load time:						2.0	minutes
Loaded/downhill:	600 ft.	@	15	mph	=	0.5	minutes
Loaded/uphill:	ft.	@	7.5	mph	=	0.0	minutes
Unload time:			0			1.0	minutes
Empty/downhill:	ft.	@	20	mph	=	0.0	minutes
Empty/uphill:	600 ft.	@	10	mph	=	0.7	minutes
				Straight cycle time:		4.1	
				Efficiency factor:		1.3	
				Estimated cycle time:		5.4	**minutes**

Dump truck cycle from conveyor on closed landfill to cneter of landfill (mod 3) & back

Ave. travel distance:	4400 ft. (one-way)						
Load time:						1.0	minutes
Loaded/downhill:	2000 ft.	@	15	mph	=	1.5	minutes
Loaded/uphill:	2400 ft.	@	7.5	mph	=	3.6	minutes
Unload time:			0			1.5	minutes
Empty/downhill:	2400 ft.	@	20	mph	=	1.4	minutes
Empty/uphill:	2000 ft.	@	10	mph	=	2.3	minutes
				Straight cycle time:		11.3	
				Efficiency factor:		**1.3**	
				Estimated cycle time:		**14.7**	**minutes**

1. Haul distance to hopper reduced per BVCA suggestion, place at southern intersection of Mod 4/5.

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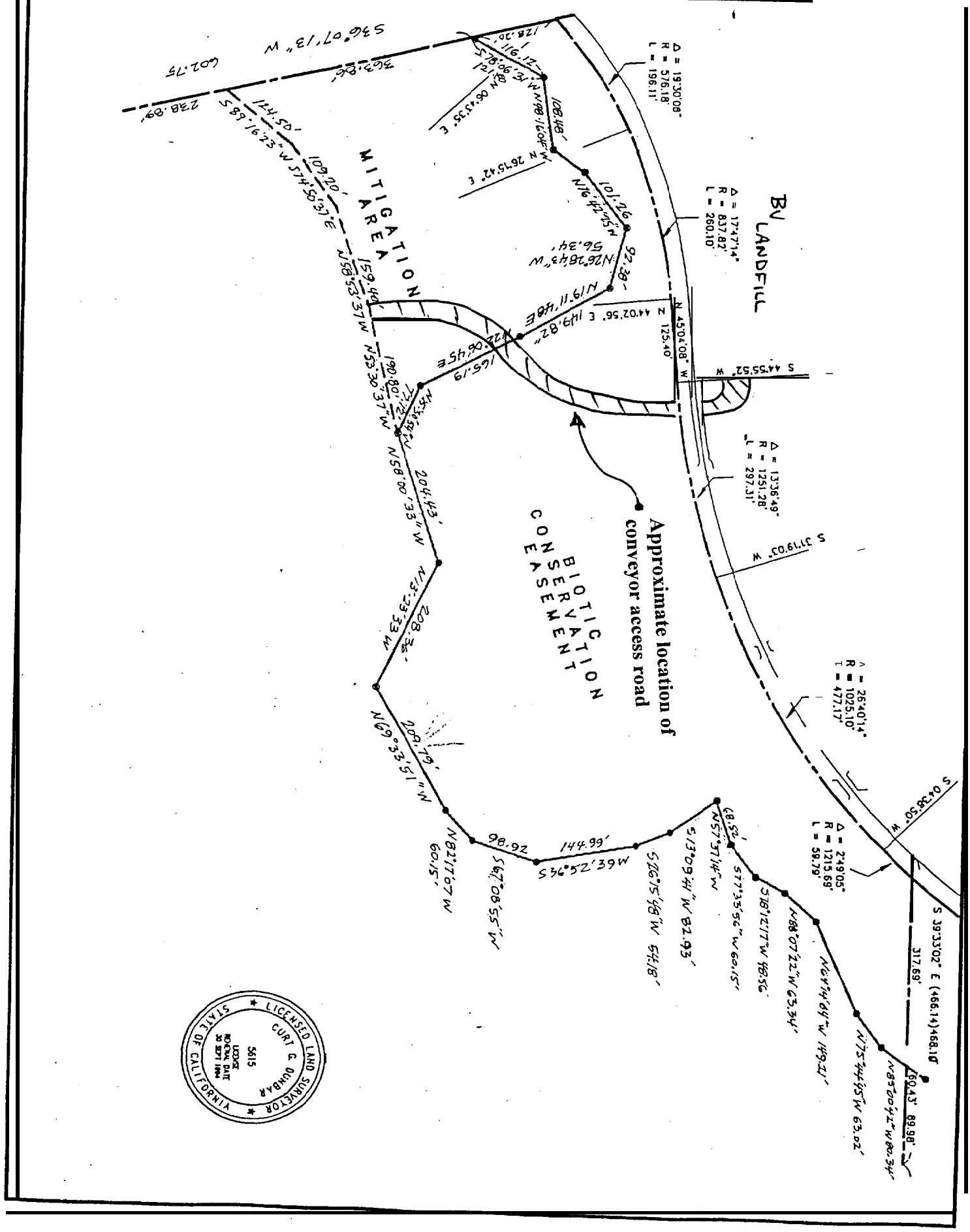
Attachment 3



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County of Santa Cruz

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DIRECTOR OF PUBLIC WORKS

APPROVED AND FILED
BOARD OF SUPERVISORS
DATE: March 23, 1999
COUNTY OF SANTA CRUZ
SUSAN A. MAURIELLO
EX-OFFICIO CLERK OF THE BOARD
BY _____ DEPUTY

AGENDA: MARCH 23, 1999

March 22, 1999

SANTA CRUZ COUNTY BOARD OF SUPERVISORS
701 Ocean Street
Santa Cruz, California 95060

SUBJECT: BUENA VISTA LANDFILL SOIL MANAGEMENT PROJECT

Members of the Board:

Your Board is in receipt of a staff report on the feasibility of utilizing the Watsonville landfill expansion site for the Buena Vista Landfill Soil Storage Project. This feasibility study was completed at the direction of the California Coastal Commission and as required under Condition A. 12 of Coastal Zone Permit, No. 98-0650. This item was scheduled for your Board's consideration and action on the March 23, 1999, agenda. Representatives of the Buena Vista Community Association (BVCA) received copies of this report on March 18, 1999. On March 19, 1999, BVCA requested this item be deferred to a later Board agenda in order to allow additional time for its review and comment on the report.

In light of this request, we are recommending deferral of Board deliberation on this item to the April 13, 1999, agenda. Moving this item to the April 13, 1999, agenda will also result in a one to two month deferral of the Coastal Commission's final actions on this project.

It is therefore recommended that the Board of Supervisors take the following actions:

1. Accept and file the staff report on the Buena Vista Landfill Soil Management Project.

2. Defer deliberation on this report to the April 13, 1999, Board hearing.

Yours truly,

John A. Fantham
Director of Public Works

RPM:mg

RECOMMENDED FOR APPROVAL:

County Administrative Officer

copy to: California Coastal Commission
Buena Vista Community Association, c/o Jonathan Wittwer
David Koch, City of Watsonville
County Counsel
Public Works (Ray Dodson)
Rim Tschantz, Planning Department
Ana Demorest, CH2M Hill

BCM