MINUTE ITEM

This Calendar Item No. C04 was approved as Minute Item No. 4 by the State Lands Commission by a vote of 2 to 0 at its 11/21/83 meeting.

CALENDAR ITEM

C04

11/21/83
W 23260
PRC 6484
Reese

GENERAL PERMIT - PUBLIC AGENCY USE

APPLICANT: Oakley-Bethel Island Wastewater Management Authority
2280 Diamond Boulevard, Suite 440
Concord, California 94520

AREA, TYPE LAND AND LOCATION:
A 0.008-acre parcel of tide and submerged land, located in Marsh Creek, Contra Costa County.

LAND USE: Construction and maintenance of an effluent pipeline.

TERMS OF PROPOSED PERMIT:
Initial period: 30 years from August 1, 1983.

CONSIDERATION: The public health and safety, with the State reserving the right at any time to set a monetary rental if the Commission finds such action to be in the State's best interest.

BASIS FOR CONSIDERATION:
Pursuant to 2 Cal. Adm. Code 2003.

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CALENDAR PAGE 17
MINUTE PAGE 2566

PREREQUISITE TERMS, FEES AND EXPENSES:

Applicant is permittee of upland.

Filing fee has been received.

STATUTORY AND OTHER REFERENCES:

A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Adm. Code: Title 2, Div. 3; Title 14, Div. 6.

AB 884: 3/13/84.

OTHER PERTINENT INFORMATION:

1. The annual rental value of the site is estimated to be $100.

2. A final EIR was prepared and certified by Oakley-Bethel Island Wastewater Treatment Authority, pursuant to CEQA and the State CEQA Guidelines. Oakley-Bethel Island Wastewater Treatment Authority found that the project will not have a significant effect on the environment.

3. This project is situated on land identified as possessing environmental values in that the State Lands Commission stated all waterways under the Commission's jurisdiction have environmental significance. Staff finds this project to be compatible with Commission policy.

4. Inasmuch as the effluent pipeline crossing is in the public's best interest and due to the minimum staff time expended, staff recommends waiver of the processing fee.

APPROVALS OBTAINED:

United States Army Corps of Engineers,
California Department of Fish and Game,
Contra Costa County Flood Control District.

FURTHER APPROVALS REQUIRED:

None.

18
2567

EXHIBITS:
A. Land Description.
B. Location Map.
C. EIR Summary.

IT IS RECOMMENDED THAT THE COMMISSION:

1. DETERMINE THAT AN EIR HAS BEEN PREPARED AND CERTIFIED FOR THIS PROJECT BY THE OAKLEY-BETHEL WASTEWATER TREATMENT AUTHORITY.

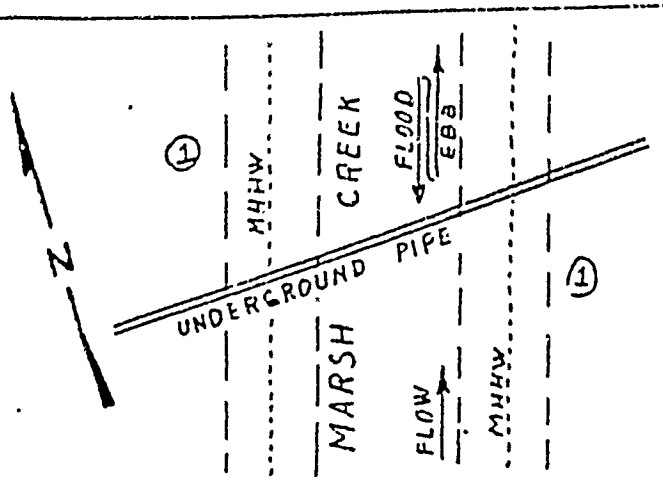
2. CERTIFY THAT THE INFORMATION CONTAINED IN THE EIR HAS BEEN REVIEWED AND CONSIDERED BY THE COMMISSION.

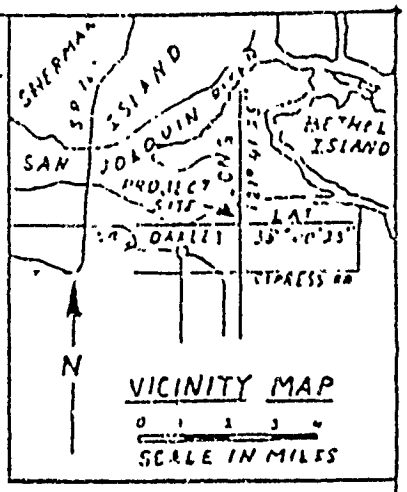
3. DETERMINE THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

4. FIND THAT THIS ACTIVITY IS SITUATED ON LAND IDENTIFIED AS POSSESSING ENVIRONMENTAL VALUES IN THAT THE STATE LANDS COMMISSION FOUND ALL WATERWAYS UNDER THE COMMISSION'S JURISDICTION HAVE ENVIRONMENTAL SIGNIFICANCE, BUT THAT THIS ACTIVITY IS COMPATIBLE WITH THAT FINDING AS IT APPLIES TO THE SUBJECT LAND.

5. AUTHORIZE ISSUANCE TO THE OAKLEY-BETHEL ISLAND WASTEWATER TREATMENT AUTHORITY OF A 30-YEAR GENERAL PERMIT - PUBLIC AGENCY USE, FROM AUGUST 1, 1983; IN CONSIDERATION OF THE PUBLIC HEALTH AND SAFETY, WITH THE STATE RESERVING THE RIGHT AT ANY TIME TO SET A MONETARY RENTAL IF THE COMMISSION FINDS SUCH ACTION TO BE IN THE STATE'S BEST INTEREST; WAIVE EXPENSE AND PROCESSING FEES FOR THIS TRANSACTION; FOR CONSTRUCTION AND MAINTENANCE OF AN EFFLUENT PIPELINE ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

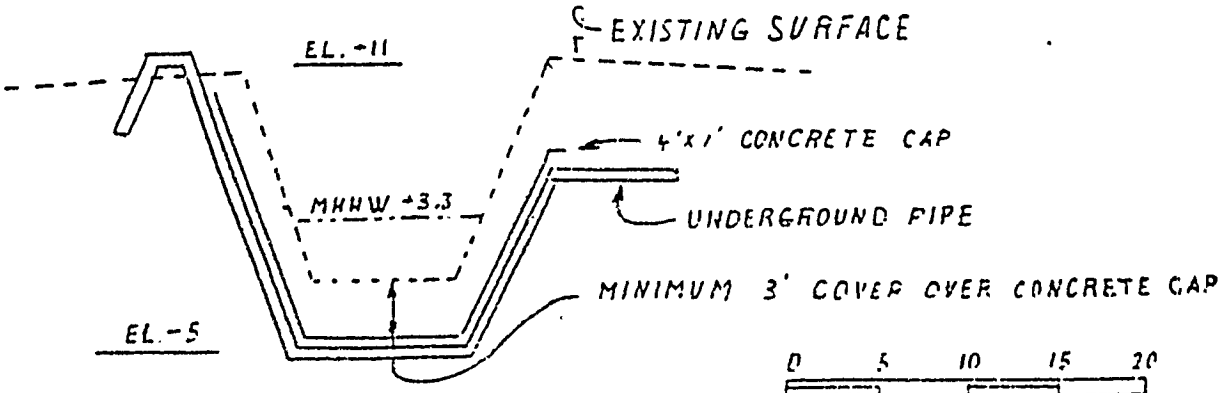
NO. 8280





PLAN

0 25 50 75 100
SCALE IN FEET



TYPICAL SECTION

0 5 10 15 20
VERTICAL SCALE IN FEET
0 25 50 75 100
HORIZONTAL SCALE IN FEET

PURPOSE: EXTEND
RECLAIMED WATER LINE
DATUM N.G.V.D. OF 1929
ADJACENT PROPERTY OWNERS
① CONTRA COSTA COUNTY
FLOOD CONTROL DISTRICT

PROPOSED PIPE INSTALLATION
IN MARSH CREEK
NEAR OAKLEY CALIF.
COUNTY OF CONTRA COSTA STATE CALIF.
APPLICATION BY OAKLEY-BETHEL ISLAND W.W. AUTH.
SHEET 1 OF 1 DATE 7/1/85

EXHIBIT "A"
LAND DESCRIPTION

BOOK PAGE 20
MINUTE PAGE 2569

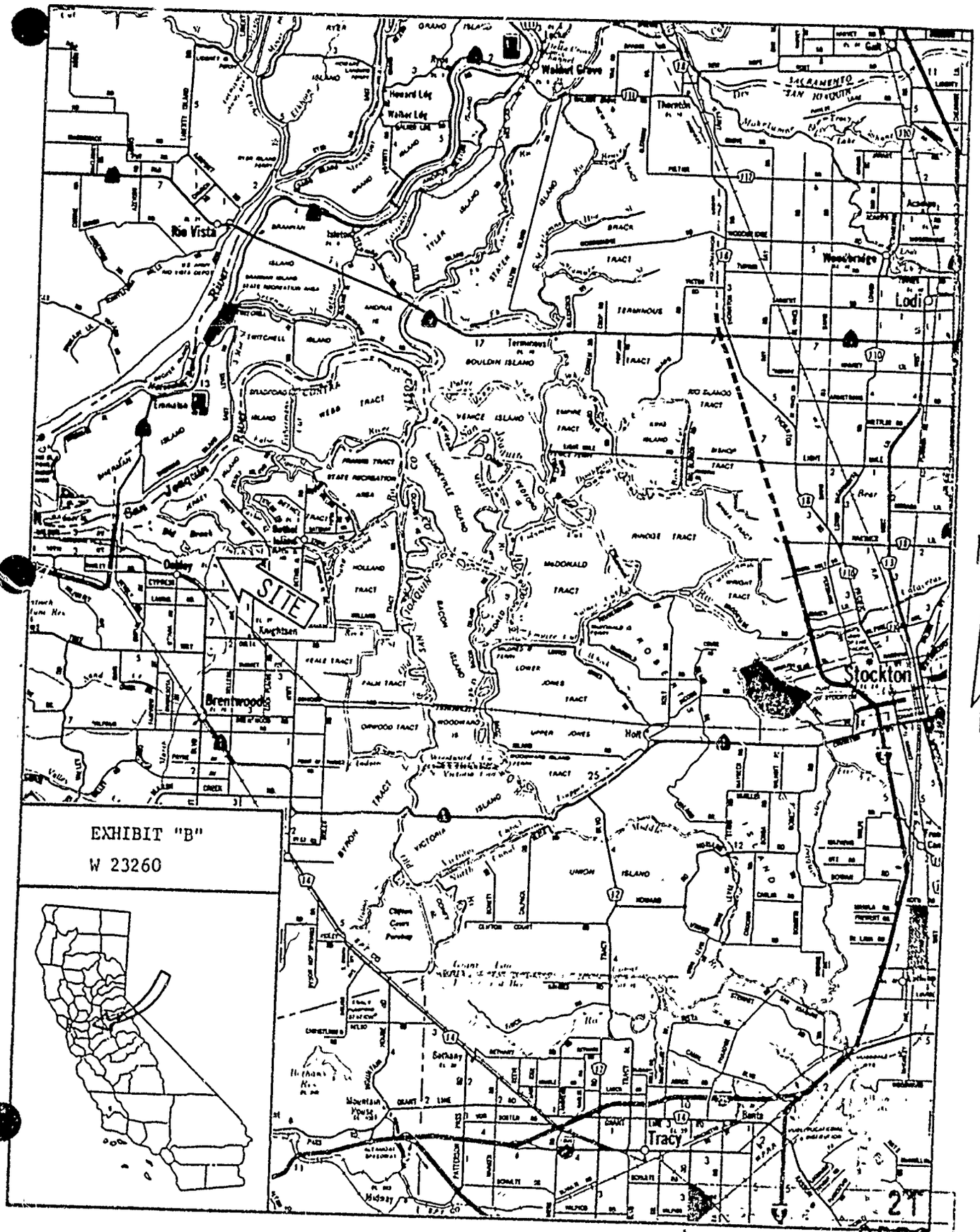


EXHIBIT "B"

W 23260

EXHIBIT "C" W 23260

EIR SUMMARY

This is a summary of the EIR/EIS entitled, "East/Central Contra Costa Wastewater Management Plan Environmental Impact Report and Statement".

1. Project Description - The project involves the development of a wastewater treatment and disposal system which will accommodate the current and projected future flows from the Oakley Sanitation District and County Sanitation District 15 service areas in a safe, reliable, economical and environmentally sound manner.

2. Facilities - The original EIR/EIS and the 1978 EIR Addendum provided for a proposed project having the following major facilities:

   - An 0.78 mgd treatment plant located immediately south of the existing OSD ponds.
   - A sixty-five acre storage pond, surrounded by a trapezoidal earthern berm approximately 66' wide at its base, 13' wide at the top, and an average height of 8'.
   - 229 acres of existing irrigated fields for which reclaimed effluent would be the primary source of water.
   - Approximately 2200' of distribution piping, with multiple outlets and valves, to distribute the reclaimed effluent along the southern edge of the irrigated field.
   - An auxiliary effluent pump station, situated at the southeast corner of the pond, utilizing a small, in-line electric-powered, centrifugal pump.
   - A leachate/overflow return pump station, situated at the northeast corner of the pond, utilizing a small, in-line, electric-powered, centrifugal pump.

   The facilities which are required to increase the hydraulic capacity of the system to 1.5 mgd and which are the subject of this EIR Summary are:

   - Increase the hydraulic capacity of the treatment plant to 1.5 mgd.
   - Provide as much as an additional 35 acres of storage ponds, for a total of 100 acres. Actual size to be

22
2571

determined by requirements of Emerson Dairy System. It is possible that no additional ponds will be required.

- Increase the capacity of the auxiliary reclaimed water pump from the storage ponds from 1500 to 2000 gpm.

- Addition of up to 431 acres of pasture and crop land east and southeast of the original 229 acres (the Emerson Dairy property east of Marsh Creek).

- Approximately 850' of 18" line to connect the Authority distribution piping to the existing Emerson Dairy irrigation system.

- An additional auxiliary reclaimed water distribution pump near Marsh Creek to provide for transfer to the Emerson Dairy irrigation system.

As documented in the 1978 EIR Addendum, the effluent from the treatment plant would flow by gravity to the proposed storage ponds. During periods of irrigation demand, the reclaimed effluent would flow by gravity, or low head pumping through the distribution main to the point of release to the fields. Depending on the demand, and specific irrigation schedules, reclaimed effluent would flow by gravity or low head pumping. from the Authority system to the existing Emerson Dairy irrigation system. The effluent would be distributed through the existing Emerson system to their fields.

The additional facilities described above would require the following construction:

- Treatment Plant - The physical size and location of the treatment plant would not change. The same construction would be required for the increased hydraulic capacity as for the originally planned plant. The only differences would be: (1) the installation of two 42" diameter screw pumps in place of the two 30" diameter screw pumps in the original plant; and (2) increasing the inplant piping between the process units.

- Additional Storage Capacity - The construction of additional storage would require construction of additional dikes. If the maximum of 35 acres of additional ponds are required, they will be constructed of imported soil material placed and compacted under controlled conditions to obtain a dense stable embankment. Adding of the maximum of 35 acres of storage would require approximately 45,000 cubic yards of material in addition to the 92,000 cubic yards for the 65 acres of ponds in the 1978 EIR Addendum.

- Increase Capacity of Auxiliary Pump - This change requires only minor enlargement of the piping and increasing the size of the pump. The location, size and basic construction of the pump station would be unchanged.

- Addition of 451 Acres of Land - The proposed land is currently, and has been for many years, in 125 acres of irrigated pasture, 180 acres of irrigated corn and oat crops, and 126 acres of corn, not currently irrigated. This land is the property of Emerson Dairy and would be used for disposal of reclaimed effluent under an agreement to be negotiated between Emerson Dairy and the Authority to deliver the reclaimed wastewater to Emerson Dairy for use in their existing irrigation system. No construction or change in the use of this land is contemplated.

- Line to Emerson Dairy - Approximately 600 feet of line would be installed in a trench across an irrigated field owned by the Authority. Following installation of the pipe, the trench would be backfilled and the surface restored. The remainder of the line, approximately 250 feet, would be a crossing of Marsh Creek. This crossing would be made under the creek channel. This would require trenching down the side slopes and across the bottom of the channel. The pipe would be installed and backfilled, and the channel restored in accordance with the requirements of the Contra Costa County Flood Control District. Construction of the crossing will be done in the summer to avoid work in the channel during flood season. Construction of the crossing will require a temporary dam and diversion of the low flows while the work is in progress. The channel would be restored to original condition on completion of the work.

- Pump Station to Emerson Dairy - This pump station will be identical in size, eight foot diameter concrete caisson, as the pump stations in the 1978 EIR Addendum. It will extend below ground surface approximately five feet, and above the surface a similar distance. The station will be located on Authority property near the west bank of Marsh Creek.

The added facilities for increased hydraulic capacity are estimated to consume 30,000 kwh of electrical energy annually.

3. Environmental Effects - The increase in hydraulic capacity to 1.5 mgd to accommodate the excessive I/I flows from CSD 15 could contribute to additional growth in the area.

24
2573

Some degradation of ambient air quality can be expected to result from site preparation activities, construction of the proposed storage facility, and excavation for effluent transmission lines. Increased ambient air particulate matter (dust) and emission loadings, associated with operation of mechanized construction machinery, can be expected to result from site preparation and excavation activities.

Construction of the proposed project would require the expenditure of an indeterminate amount of human and mechanical energy.

The import of building materials and supplies would necessitate an increase in traffic flow along the single access road to the proposed project site.

The construction zone of the proposed project could present a hazard to public safety. Open trenches are a potential danger to pedestrians; unattended construction machinery can be improperly operated by unauthorized persons; and stored construction materials are dangerous areas for site visitors, particularly playing children.

The presence of heavy earth moving equipment and other construction operations will undoubtedly disrupt the normal presence and activities of wildlife adjacent to the site during construction. This effect will be primarily in the area of storage ponds. The application areas will be disturbed only for the installation of distribution lines. There should be little or no disturbance on the Emerson Dairy land.

Water storage areas can be fertile breeding locations for insect pests, particularly mosquitos and midges. Mosquitos are known to be capable of transmitting diseases that are hazardous to the health of man.

Application of municipal wastewaters to land surfaces can have long-term detrimental effects upon soil layers.

Throughout the study area, groundwater (in non-continuous pockets and lenses) has been defined. Wastewater, which is almost always higher in Total Dissolved Solids (TDS) and Nitrogen than natural supplies, could conceivably contaminate these sources and render them useless for future uses. Additionally, bacterial contamination of groundwater could occur and lateral infiltration could adversely effect water quality of nearby Marsh Creek, or the Contra Costa Canal.

4. Mitigation Measures - Degradation of local ambient air quality arising from dust production could be mitigated by wetting down of bare exposed soils and restriction of excavation

activities during periods of high winds. Increased emission loadings, associated with operation of mechanized construction machinery, could be mitigated by shutting down all equipment not in actual use. This action would also have beneficial impacts upon energy consumption associated with construction of the proposed project.

Consumption of fossil derived fuels, associated with transport of construction materials, could be reduced by scheduling deliveries for off-peak travel hours. This action would reduce idle time likely to be incurred during heavy traffic periods and provide for the more efficient use of fuel.

Traffic congestion at the construction site, although not considered to pose a serious problem, could be reduced by scheduling delivery of building materials during off-peak traffic hours. Additionally, the provisions of a flagperson (if warranted) could assist in the smooth flow of traffic in the vicinity of the construction site.

Potential hazards to public safety, associated with the proposed project, could be mitigated by sealing the construction site from public access and posting of warning signs to alert site visitors to potential hazards.

The pond and application field facilities of the proposed project have the potential to provide an attractive habitat for the breeding of insect pests, particularly mosquito and midges. State Department of Health officials and local Mosquito Abatement District personnel have expressed concern for this potentiality, which is associated with many wastewater reclamation or reuse projects, and have issued a document entitled Criteria for Mosquito Prevention in Wastewater Reclamation or Disposal Projects (California State Department of Health, January 1978). This document states, in part, that:

> "...wastewater applied to land, not properly prepared to receive it, will unquestionably become a mosquito haven. This can give rise to encephalitis as well as severe pest mosquito infestation which could interfere with the use of the home, work place, recreation, production of livestock, and habitat of wildlife...."

Mosquito production can be controlled through several means, among which are: use of chemicals, biological controls, and manipulation of physical features. Of these, the Department of Health views physical manipulation as the best long-term solution, and recommends the following measures be taken in

wastewater management projects involving effluent reuse via land application:

- Land disposal areas should be graded to avert static water pools.
- Storage ponds should be designed to avoid small coves or irregularities.
- Storage ponds should be designed that all water can be removed and the pond cleaned of vegetation.
- Slopes of interior pond levees should be as steep as possible.
- Suitable means of access for maintenance vehicles utilized for removal of vegetation from interior level slopes should be incorporated in pond design.
- Ponds should be designed for a minimum depth of 4 feet.
- A periodic maintenance program, to remove vegetation and insure integrity of pond levees, should be undertaken.
- Standing water in ditches, furrows, or pipes should be avoided and suitable design measures undertaken to insure that such does not occur during normal operation.

These measures are functions of both design and operation of the proposed facility. While final design specifications are not yet prepared, preliminary design estimates have taken into account each of these recommended mitigation measures.

Application of wastewater to land surfaces can have long-term detrimental effects upon soil layers. Factors such as effluent quality, plant nutrient uptake, and soil assimilative capacity must be carefully weighed to determine appropriate application rates. Moreoever, attention to changes in soil characteristics must be monitored over the long term to insure that preliminary estimates are correct and that long-term damage does not occur.

Preliminary application rates, based upon Nitrogen and TDS effluent concentrations have been made by the Engineer and the local Agricultural Extension Service. Additionally, a soil monitoring program in cooperation with the Agricultural Extension Service, should be instituted by the Oakley-Bethel Island Wastewater Authority.

Measures should be undertaken, in the final design phase of the proposed project, to insure that lateral infiltration

of wastewater to the Contra Costa Canal does not occur. A final decision, on the appropriate safeguards against such an occurence, cannot be undertaken until more detailed soil and geological data is available.

5. Alternatives - This procedure was followed in the preparation of the original facilities plan and EIR/EIS. The 1978 EIR Addendum presents a discussion of possible alternatives to storage and disposal by evapotranspiration. These alternatives included:

   1. No project.

   2. Discharge to surface waters.

   3. Discharge to ground surfaces:

      a. Infiltration/percolation

      b. Evaporation/percolation

      c. Evapotranspiration

   4. Injection to deep sub-surface areas.

   These same alternatives were reviewed by the Authority in the spring of 1981 when faced with the high I/I flows from CSD 15. It was concluded that proceeding with the previously approved evapotranspiration system with the additional facilities identified in this EIR Addendum was the cost-effective alternative. This conclusion was reviewed and concurred in by the State Water Resources Control Board. Therefore, the detailed discussion of alternatives is not presented here. The reviewer is referred to the original EIR/EIS and the 1978 EIR Addendum identified in Chapter 1.

6. Significant Unavoidable Environmental Effects - The transport of soil cover and construction materials, excavation/landform transformation activities, and the operation of construction machinery would have impacts on regional air quality, and on existing wildlife, that cannot be totally eliminated if the proposed project is undertaken. Additionally, some impacts on regional and local transportation corridors and disruption of wildlife are unavoidable environmental effects which are likely to be most significant in close proximity to the construction site.

7. Significant Irreversible Environmental Changes - Construction of the proposed project would require the expenditure of human and mechanical energy, some of which would derive from irreplaceable fossil-fuel sources, and be unrecoverable. Additionally, construction of the proposed project would

involve the use of materials that are energy intensive in their production. The energy and raw materials involved in their manufacture would be impractical to recover and, therefore, lost forever for alternate uses.

8. Local Short-Term vs. Long-Term Productivity - The proposed project represents a dedication of the project site to a long-term beneficial use. The proposed project would also enhance the long-term productivity of the site, and reduce the demand on Delta waters for use in irrigation.

9. Growth-Inducing Impact of the Proposed Project - The proposed project has growth-inducing potential to the extent that the I/I flows from CSD 15 can be reduced by more than 50 percent. Such a reduction is very unlikely, thus the growth-inducing potential is theoretical.

29
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