

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of
Crestline Sanitation District for
Review of Order No. 6-78-23 of the
California Regional Water Quality
Control Board, Lahontan Region.
File No. A-200

ORDER NO. WQ 78- 12

BY VICE-CHAIRMAN MAUGHAN AND BOARD MEMBER ADAMS:

By its petition dated May 4, 1978, Crestline Sanitation District requested review of Order No. 6-78-23 of the California Regional Water Quality Control Board, Lahontan Region. Order No. 6-78-23 is an enforcement order, pursuant to California Water Code Section 13301, which was adopted April 13, 1978.

I. BACKGROUND

The Crestline Sanitation District (hereinafter the "District") collects, treats and disposes of domestic wastewater from the sewered areas of Crestline, Lake Gregory, Valley of Enchantment, and the Silverwood Lake recreational areas, all located in San Bernardino County. Three separate treatment plants, Houston Creek, Seeley Creek and Cleghorn, treat the District's wastewater. The approximate design capacities of these separate plants are .7, .2, and .2 million gallons per day (mgd), respectively. Effluent from these plants is discharged to a single outfall pipeline which conveys all of the treated wastewater to the Las Flores Ranch area, north Silverwood Lake. (Attached hereto as Appendix "A" is a map indicating the general configuration and location of these facilities.) The

effluent is disposed of by discharging to either pasture irrigation or to two sand filtration percolation beds located near the West Fork of the Mojave River. The waste discharge by the District is governed by waste discharge requirements contained in Order No. 6-77-67, adopted on June 30, 1977, pursuant to Water Code Section 13263, by the California Regional Water Quality Control Board, Lahontan Region (hereinafter the "Regional Board").

Due to heavy rainfall in the San Bernardino mountains during January, February, and March of 1978, large amounts of infiltration and inflow entered the District's sewage collection system. During January, February, and March of 1978, waste discharges contrary to the District's requirements in Order No. 6-77-67 occurred, including various discharges of untreated sewage into Lake Gregory and Seeley Creek, and discharges of disinfected secondary effluent to Houston Creek, Silverwood Lake and the West Fork of the Mojave River.

The Regional Board conducted a public hearing on April 13, 1978, prior to considering and adopting Order No. 6-78-23. At the hearing evidence generally concerning the improper waste discharges of the District, their causes, and correction efforts by the District was offered by the Regional Board staff, representatives of the District, the Department of Health, the Department of Water Resources, and San Bernardino County. The Regional

Board adopted Order No. 6-78-23 which directs that the District "cease and desist forthwith from discharging wastes contrary to requirements and discharge prohibitions..." and which prohibits "additional discharges to the sewer system by dischargers who did not discharge into the system prior to March 20, 1978", excluding certain enumerated projects and discharges. Order No. 6-78-23 contains the following findings, among others:

"6. Inspections and investigations by Board staff and reports received from the Crestline Sanitation District indicate that, during the months of January, February and March, 1978, the discharger has violated the discharge specifications listed in Finding No. 2, the discharge prohibitions listed in Finding No. 4 and Section 13376 of the Water Code."

"7. The cause of the violations that occurred in January, February and March, 1978, was excessive flow into the collection, treatment and disposal facilities."

"9. The discharger has violated and is threatening to violate the requirements and prohibitions listed in Findings Nos. 2 and 4 above and Section 13376 of the Water Code."

"10. Any increase in the discharge of waste will increase the violation or likelihood of violation of waste discharge requirements and will further unreasonably impair water quality."

Order No. 6-78-23 also directs the District to report to the Regional Board by May 1, 1978, and quarterly thereafter, describing progress made toward compliance with requirements, and provides authority for the Executive Officer of the Regional Board to request that the Attorney General take appropriate judicial enforcement action if the District fails to comply with the Order.

The District's Petition for Review contends generally that Order No. 6-78-23 is invalid and not supported by the evidence before the Regional Board, and, therefore, that Order No. 6-78-23 should be rescinded. Pursuant to the Notice of Hearing dated May 3, 1978, and the Amendment to Notice of Hearing dated May 9, 1978, a public hearing was held May 15, 1978, by the State Water Resources Control Board (State Board), Mr. Maughan and Mr. Adams presiding, to receive evidence relative to the adoption of Order No. 6-78-23. Pursuant to Water Code Section 13320(b), the evidence before us in this matter consists of the record before the Regional Board and other relevant evidence introduced at the hearing of May 15, 1978.

II. CONTENTIONS AND FINDINGS

It is not disputed that Crestline Sanitation District discharged wastes in violation of requirements during the first few months of 1978.^{1/} Neither does there appear to be any disagreement concerning the general cause of the various violations cited by the Regional Board^{2/}, i.e., sustained heavy seasonal rainfall which caused

1. See Regional Board Reporter's Transcript (R.T.) of April 13, 1978, hearing, at pages 34, 51-55; State Board Reporter's Transcript of May 15, 1978, hearing, at pages 101, 104, 107-109, 111-112 and Exhibits 1, 2, and A; and Petition of Crestline Sanitation District.

2. The District has described the causes in the hearings and in their petition. See Regional Board R.T. at pages 34, 40, 43, 49-50, and 66, and State Board R.T. at pages 103, 112, 125. The Regional Board made a finding as to the causes of violations, quoted herein at page 3.

large amounts of infiltration/inflow³ to the District's collection, treatment, and disposal facilities. However, the District asserts that Regional Board Order No. 6-78-23 is improper and contends in summary that the subject order violates the intent of various portions of the California Water Code and California Administrative Code and that certain findings of the order are not supported by the evidence presented to the Regional Board. These issues are discussed separately below.

- A. Are significant discharges in violation of requirements by Crestline Sanitation District threatened or likely to continue?

Among other enforcement mechanisms, the California Water Code provides in Section 13301 for the adoption of cease and desist orders directing compliance with appropriate requirements. Compliance may be obtained in one of three ways, as Section 13301 states:

"When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that

3. The term infiltration/inflow refers to waters, which are not wastewaters, entering the District's collection and conveyance system either from underground sources (infiltration), such as high groundwater, or from surface flows (inflow), such as streams or surface stormwater drainage, and contributing to the flows which must be treated and disposed of. No attempt has been made to separate the volume of flow in the District's system which is attributable to inflow from that due to infiltration, nor is it necessary to do so here.

those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action."

State Board regulations, in particular Section 2240, et seq., of Title 23, California Administrative Code, provide additional guidance to the Regional Boards in the application of cease and desist orders. Section 2240 recommends the usage of cease and desist orders as follows:

"A cease and desist order should be issued whenever significant violations of waste discharge requirements or prohibitions are threatened or such violations are occurring or have occurred and there is a likelihood that the violations will continue in the future."

It is the position of the District that, notwithstanding the cited violations of requirements, the Regional Board's adoption of a cease and desist order was improper, because the District had promptly corrected the problems causing violations, and because the District has an extensive ongoing water quality control program adequate to prevent the recurrence of any such violations.

To address this issue we must determine first whether the evidence presented to the Regional Board and to the State Board indicates that significant violation(s) of discharge requirements have occurred and are threatened in the near future. Second, we must consider whether the means chosen for obtaining compliance was appropriate, i.e., the direction to comply "forthwith".

Although it is admitted that waste discharges contrary to requirements have occurred, neither the Water Code nor the State Board's regulations define "significant" as the term is used in Section 2240 of the Board's regulations, cited above, with respect to violations of waste discharge requirements. For the issues to be determined herein it is sufficient to indicate that "significant" relates to the relative seriousness of a violation in its effect on water quality and means other than a "technical" violation, such as a violation of monitoring or reporting requirements or sampling and analysis variation within the standard of tolerance for error of the testing procedure. As a general matter we must consider repeated raw sewage discharges to surface waters in close proximity to dwellings and discharges of secondary effluent to surface waters used for unrestricted water contact recreation and for domestic supply to be violations which are "significant" to water quality and to the public health. This description fits the violations of requirements by the District. We consider such violations to be significant, notwithstanding any dilution of wastes that may have occurred due to seasonal rainfall and run-off.

Given the nature of the violations cited and the measures taken to correct them, are such violations likely to recur during or after the next moderate rain-storm in the Crestline area of the San Bernardino mountains (i.e., even if arguably last season's rainfall is considered unusually heavy⁴/)? For the reasons set forth below, we conclude that it was proper for the Regional Board to issue a cease and desist order. However, it is our opinion that, due to the nature and history of violations of requirements in this case, it was not appropriate to direct compliance "forthwith". Based on our review of the record, we are convinced that compliance should be directed in accordance with an appropriate time schedule, as authorized by Water Code Section 13301. We propose to modify Regional Board Order No. 6-78-23 by adopting such a time schedule as a part of this order.

4. At the hearing of May 15, 1978, some evidence was presented concerning the severity and frequency of individual storms during the 1977-78 winter season and the period of recurrence of this type of season. This evidence supports the general conclusion that the precipitation total and storm pattern were somewhat unusually high and frequent, respectively, although individual storms were generally not of a magnitude exceeding between 10 and 20 year recurrence frequency. (State Board R.T. of May 15, 1978, at pages 34-35, 101-102, and 127.)

However, requirements of Order No. 6-77-67 of the Regional Board indicate that the facilities should be protected against waters of up to 100 year storm or flood frequency. See Lahontan Regional Board Order No. 6-77-67, Section I.D.3. No objection to this requirement was raised when Order No. 6-77-67 was adopted, or immediately thereafter.

The District's violations of requirements are described in detail in the record before us (see footnote 1, infra), as are its facilities. It is only necessary here to indicate certain facts relative to these subjects that are significant to our conclusions. To the extent that improper discharges occurred due to equipment failure, including broken laterals, main or outfall pipes or manholes, the District corrected the failures as soon as possible after discovery, including relocating a portion of the outfall line where it parallels Highway 138. However, certain inadequacies have been exposed in the District's facilities as a result of the precipitation which occurred during 1977-78, which support the issuance of a cease and desist order with a time schedule.

Evidence in the record suggests that certain areas will continue to be substantially likely to experience waste discharges contrary to requirements absent preventive measures in addition to the District's described programs for water quality control in general and for infiltration/inflow correction specifically as presented to the Regional Board. Testimony concerning these preventive measures was received by the State Board at the May 15, 1978, hearing. Specifically the problem areas include the collection system in the Seeley Creek area, identified as generally the area contained in Assessment District No. 5; the collection system in the Lake Gregory area, identified as generally the area contained in Assessment Districts Nos. 1, 2, 3, and 4; and the need to provide additional capacity in (or to relocate)

the disposal facilities located at the Las Flores Ranch. These problem areas are discussed below.

The Seeley Creek area collection system experienced several problems during the past winter, which are attributable in part to its location close to the bed of Seeley Creek. In addition to actual equipment failures, certain portions of the system were exposed by storm flows, which washed away protective coverings, making these parts of the system vulnerable to breakage when additional flows occur in Seeley Creek. However, at least some additional protection of the laterals and pipelines is necessary prior to the next moderate storms in the area to remove the threat of discharge.

The Lake Gregory area collection system presents a problem of continuing inflow/infiltration, despite the District's ongoing program, due to its age and what has been demonstrated to be a low point in the system which is particularly weak. The age of some lines may make it difficult to control infiltration/inflow adequately without replacing them. In addition to whatever replacement of lines is determined to be necessary, steps must be taken to prevent backup and overflow of the system at its low point. The District has proposed the installation of a pump station to prevent overflow from the manhole located

north and west of Lake Gregory. (See State Board R.T. at pages 113, 125-126, 130, 135.)

A number of the District's violations of requirements occurred at the site of final disposal of the wastes. From the testimony received by both the State and Regional Boards it appears that these improper waste discharges were not solely the result of the high flows in the system due to infiltration/inflow. The outfall line close to the disposal area suffered breaks which should be prevented in the future by installation of a pressure relief valve, and the sand filtration/percolation ponds, which are the primary disposal area when the wastewaters cannot be disposed of by irrigation, do not have actual disposal capacity equal to design disposal capacity. Their capacity can be increased either by adding pond area or by relocating the disposal area to obtain better percolation capability. (See State Board R.T. at pages 135-136.) The District apparently recognizes the need to correct deficiencies in the disposal system before a new rainy season again increases wasteflows by the addition of infiltration/inflow, although correction was not proposed at the time of the Regional Board hearing. (See Regional Board R.T. at pages 39, 52-53.)

Finally, a potential area for future discharge violation has been identified in that portion of the District's 21 inch outfall line that parallels Highway 138. This portion of the outfall is located on the downhill side of the highway right-of-way, since the District was denied permission to install it on the uphill side. Testimony before the Regional Board indicated that slippage of the

highway caused the break in the outfall and consequently the discharge of secondary effluent which reached Lake Silverwood. The portion of the outfall which failed has been relocated to the uphill side of the highway right-of-way. This area of the outfall presents a difficult problem as to both the assessment of potential for future failure and appropriate measures to protect it from future failure. Recognizing these difficulties, this particular potential area of violations does not form part of our basis for upholding the Regional Board's cease and desist order or for the adoption of a time schedule.^{5/}

In addition to the above discussed problems, evidence presented by the District to the Regional Board indicated the time necessary for control and prevention of infiltration/inflow received in the facilities to be 10 years.^{6/} The District presented evidence concerning funds

5. We must nonetheless urge both the District and the Regional Board to continue to seek protective measures for this outfall, which might include providing protection for the highway bank from rainfall saturation to prevent slippage.

6. Regional Board R.T. at pages 49-50.

expended in the recent past and funds budgeted for the near future to their infiltration/inflow program. This program includes further identification of infiltration and inflow problems, television examination of portions of the collection system, and sealing of loose joints, connections and manholes.^{7/}

Certain portions of the District's collection system which have not been identified beyond a general indication of their location, were constructed up to 25 years ago and may contribute a significant portion of the infiltration which enters the collection system.^{8/} The majority of the District's facilities, however, were constructed sometime during the period from 1972 through 1975. With respect to the general infiltration/inflow problem identified by the District and the program developed to address it, no evidence has been received to establish the following: the extent and location of work accomplished in the recent past to seal the system, the portion of the system which remains to be surveyed and to have problem areas sealed, a schedule for accomplishing phases of the program or for attending to the worst problem areas first, or a schedule of work necessary to update or complete any necessary infiltration/inflow inventory.

7. This program does not include examination of privately owned portions of the collection system, such as individual house laterals.

8. See State Board R.T. especially pages 117, 125-126, 130-131.

It is clear from the evidence that was presented that correction of infiltration/inflow is a long-term project, involving several years, even though it will not be necessary to examine and seal the entire system. (See footnote 6) Until an assessment of the problem is complete and the program identifies by schedule the areas to be addressed, it will not be possible to determine whether the infiltration/inflow program is in fact adequate to prevent discharges contrary to requirements such as have occurred in the past.

Given the above discussed evidence indicating the substantial likelihood of continued difficulty in meeting requirements, we cannot conclude that it was improper for the Regional Board to find in Order No. 6-78-23 that the District was threatening to violate requirements (see page 3, infra), and to order the District to cease and desist from discharging wastes contrary to requirements.

As discussed above, there are certain remedial and preventive measures that can be taken by the District to relieve the threat of discharge in violation of requirements, which were discussed and described during the hearing of May 15, 1978. This evidence was not presented to the Regional Board prior to the adoption of Order No. 6-78-23. Section 2243 of the State Board regulations, appearing in Title 23, California Administrative Code, indicates generally when it is appropriate to direct compliance with a cease and desist order "forthwith" and when a time schedule

is appropriate.^{9/} In this case the Regional Board did not have information on which to base a time schedule, although the violations of requirements were indicated to have been caused in significant part by problems which would take substantial time to cure. During the May 15, 1978, hearing some evidence was presented upon which to establish an appropriate time schedule. Cease and desist orders requiring compliance "forthwith" with requirements should be used sparingly and are most appropriate to address what are considered emergency situations or violation of requirements which can be corrected immediately. State Board regulations provide that "forthwith" means "as soon as is reasonably possible". (Section 2243(a), Title 23, California Administrative Code.) The determination of what is a reasonable period of time for compliance becomes a question of fact which may finally be determined judicially, making an order directing "forthwith" compliance difficult to enforce in the absence of a clear emergency or ability to correct the problem. Therefore, it is appropriate to substitute a time schedule for the "forthwith" compliance date contained in the Regional Board's order.

9. Section 2243, Title 23, California Administrative Code, states as follows in pertinent part: "(a) A time schedule should always be included in a cease and desist order unless there is a lack of information upon which to base a schedule in which case the discharger should be instructed to comply forthwith..."

In accordance with evidence introduced at the hearing of May 15, 1978, the following time schedule is proposed for inclusion in Order No. 6-78-23:

TIME SCHEDULE

<u>Task</u>	<u>Date</u>	<u>Report Compliance Due</u>
Install interim facilities to prevent violations at the Las Flores Ranch disposal area.	12/1/78	12/15/78
Modification or reinforcement of manholes which are subject to streamflow to prevent inflow and repair of failed manhole in Seeley Creek.	10/1/78	10/15/78
Installation of facilities (such as concrete blanketing) to protect laterals which failed, have been exposed, or are in imminent danger of failure due to streamflow.	10/1/78	10/15/78
Installation of facilities to prevent overflow of collection system north and west of Lake Gregory.	12/1/78	12/15/78
Develop plan and schedule to provide additional disposal capacity.	3/1/79	3/15/79
Update and complete assessment or inventory of infiltration/inflow problems.	4/1/79	4/15/79
Prepare infiltration/inflow plan of action indicating problem areas and time for corrective action.	7/1/79	7/15/79

Items 5 and 7 above (i.e., the planning items) will necessitate future modification of this time schedule by the Regional Board in order to impose dates for the ultimate installation of facilities determined to be necessary.

Failure of the discharger to **comply** with the above schedule should be referred to the Attorney General for appropriate enforcement action.

- B. Will increase in the discharge of waste increase the violation or likelihood of violation of waste discharge requirements and further unreasonably impair water quality?

The Regional Board found that increases in the discharge of waste by additional connections to the community sewer system would result in increased violations or an increased likelihood of violations of waste discharge requirements. Based upon this finding, the Regional Board prohibited additional discharges to the system by those who had not discharged thereto before March 20, 1978. The District contends that the evidence before the Regional Board is not sufficient to support the connection ban and does not meet the requirements of pertinent State Board regulations. We agree.

The staff report presented to the Regional Board on April 13, 1978, indicated the difficulty of establishing whether there would be increased violations of discharge requirements -- either increased in frequency or magnitude -- and increased impairment of water quality from the number of additional discharges to the system that the

District could expect in the absence of a connection ban.^{10/}
The primary cause of violation of requirements in this case is infiltration/inflow; not overloading of the system as a result of an excessive number of connections to the treatment or conveyance facilities. Without more evidence of the impact of additional discharges to the system on violations of waste discharge requirements we can not justify the connection ban. In this case, unless there was evidence to correlate the effect of a given number of additional discharges to a specific section of the system on the likelihood of increased violations of requirements (since certain limited areas of the District's collection and conveyance system appear to be the source of continuing problems) a connection ban would not be appropriate. We can find no evidence of this nature in the record. To be appropriate, a connection ban must be supported by more than speculation and conjecture about the possible effect of additional discharges. We find it necessary, therefore, to rescind the prohibition against additional discharges contained in Order No. 6-78-23.^{11/}

10. The District indicated both before the Regional Board and before the State Board that somewhat fewer than 300 additional discharges to the community sewer system annually could be expected based upon the historical rate of issuance of building permits in the area and the direction from the County to septic tank users to hook up to the sewer system. (State Board R.T. at pages 44, 86-87, 117, 121, 127-128, 137-138; Regional Board R.T. at pages 68 and 92.)

11. Our rescission of the connection ban for lack of evidence makes it unnecessary to address the District's contention that the requirements of Section 2244.3, Title 23, California Administrative Code, for removal of a connection ban have been met.

C. The District contends that the Regional Board's adoption of Order No. 6-78-23 violated the intent of the Porter-Cologne Act and applicable portions of the California Administrative Code.

In addition to the above-discussed contentions, the District's petition states generally that Order No. 6-78-23 is unreasonable and violates the Porter-Cologne Act (Water Code Division 7, Section 13000 and following) and Section 2240 through 2245 of the California Administrative Code in that it fails to relate reasonable water quality improvement and economic considerations to the propriety of enforcement action concerning violations of requirements. Its position appears to be that compliance with the directive to cease and desist "forthwith" from violation of requirements, if that order stands, cannot be accomplished without termination or severe limitation of other important aspects of the District's overall water quality control program.^{12/} Essentially Petitioner claims that unless Order No. 6-78-23 is rescinded "limited resources of petitioner must be directed toward attempted compliance with an order which cannot reasonably be complied with rather than a constructive plan."

It is true that the Porter-Cologne Act will permit some reasonable change in water quality. (See Water Code Sections 13000 and 13001.) Also, Water Code Section 13241 specifically provides for the inclusion of economic considerations in the establishment of water quality objectives in water quality control plans.

12. See Crestline Sanitation District Petition dated May 4, 1978, page 2.

It is also true, however, that once waste discharge requirements are adopted in order to implement an applicable water quality control plan, the Regional Board may take any enforcement action within its statutory authority which in its discretion it finds necessary and appropriate. Appropriate enforcement action may include the construction of emergency or interim facilities, as described in Section 2245¹³/; time schedules for construction and installation of necessary facilities to meet requirements; and connection bans where appropriate to prevent increased impairment of water quality until consistent compliance with requirements can be achieved. The history of the District's efforts to improve water quality control facilities and their operation in the Crestline area is not in question. However, when waste discharge violations occur, corrective measures may be required in addition to or in lieu of the discharger's planned programs. A general water quality control effort in the past will not serve to justify or to license improper discharges of raw sewage or treated effluent at the expense of the public health and water quality. The discharger has the responsibility of determining which of its programs will receive funding, how much, and when. Likewise, the discharger must accept the consequences of those decisions.

13. Section 2245 states, in pertinent part: "(a) Each discharger should be expected to construct emergency facilities or modify existing plant operations to achieve rapid compliance (c) Extra cost of such facilities is not a reasonable excuse for failure to construct them...."

As discussed above, we consider the Regional Board's adoption of a cease and desist order pursuant to Water Code Section 13301 a reasonable and appropriate response to violations of waste discharge requirements in this case, except as modified by this order. For all the reasons set forth above, we do not consider Lahontan Regional Board Order No. 6-78-23, as modified hereinafter by this order, to violate the intent of the Porter-Cologne Act or applicable State Board regulations contained in the California Administrative Code.

III. CONCLUSIONS

After review of the record, and for the reasons heretofore expressed, we have reached the following conclusions:

1. The Regional Board's issuance of an enforcement order pursuant to Water Code Section 13301 was an appropriate mechanism for achieving compliance with waste discharge requirements by the Crestline Sanitation District, in that based upon the evidence presented the Regional Board properly found that violations of requirements had occurred and that violations of requirements were continuing or threatened to continue.
2. Given the nature of the violations of waste discharge requirements by the Crestline Sanitation District and the measures necessary to prevent their recurrence, the adoption of a time schedule is the appropriate means of obtaining compliance with waste discharge requirements and the cease and desist order.

3. The evidence in the record before the Regional Board is not sufficient to support the inclusion in Order No. 6-78-23 of a prohibition against additional discharges to the Crestline Community sewer system.

IV. ORDER

IT IS HEREBY ORDERED THAT:

1. The Crestline Sanitation District Petition for Review of Order No. 6-78-23 of the California Regional Water Quality Control Board, Lahontan Region, is denied in part and granted in part.

2. Section 1 on page 3 of the Order No. 6-78-23 of the California Regional Water Quality Control Board, Lahontan Region, is amended as follows:

The Crestline Sanitation District cease and desist from discharging wastes contrary to requirements and discharge prohibitions listed in Findings Nos. 2 and 4 above and Section 13376 of the Water Code in accordance with the time schedule set forth on page 16 of State Board Order No. WQ 78-12.

3. Sections 2 and 3 on page 3 of Order No. 6-78-23 of the California Regional Water Quality Control Board, Lahontan Region, are rescinded.

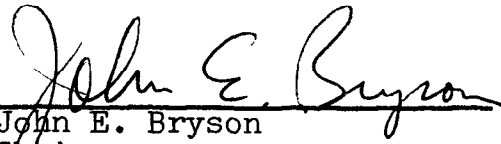
4. Order No. 6-78-23 as amended by this order is remanded to the California Regional Water Quality Control Board, Lahontan Region, for administration consistent with the terms of this order.

Dated: JUN 15 1978


I Concur:



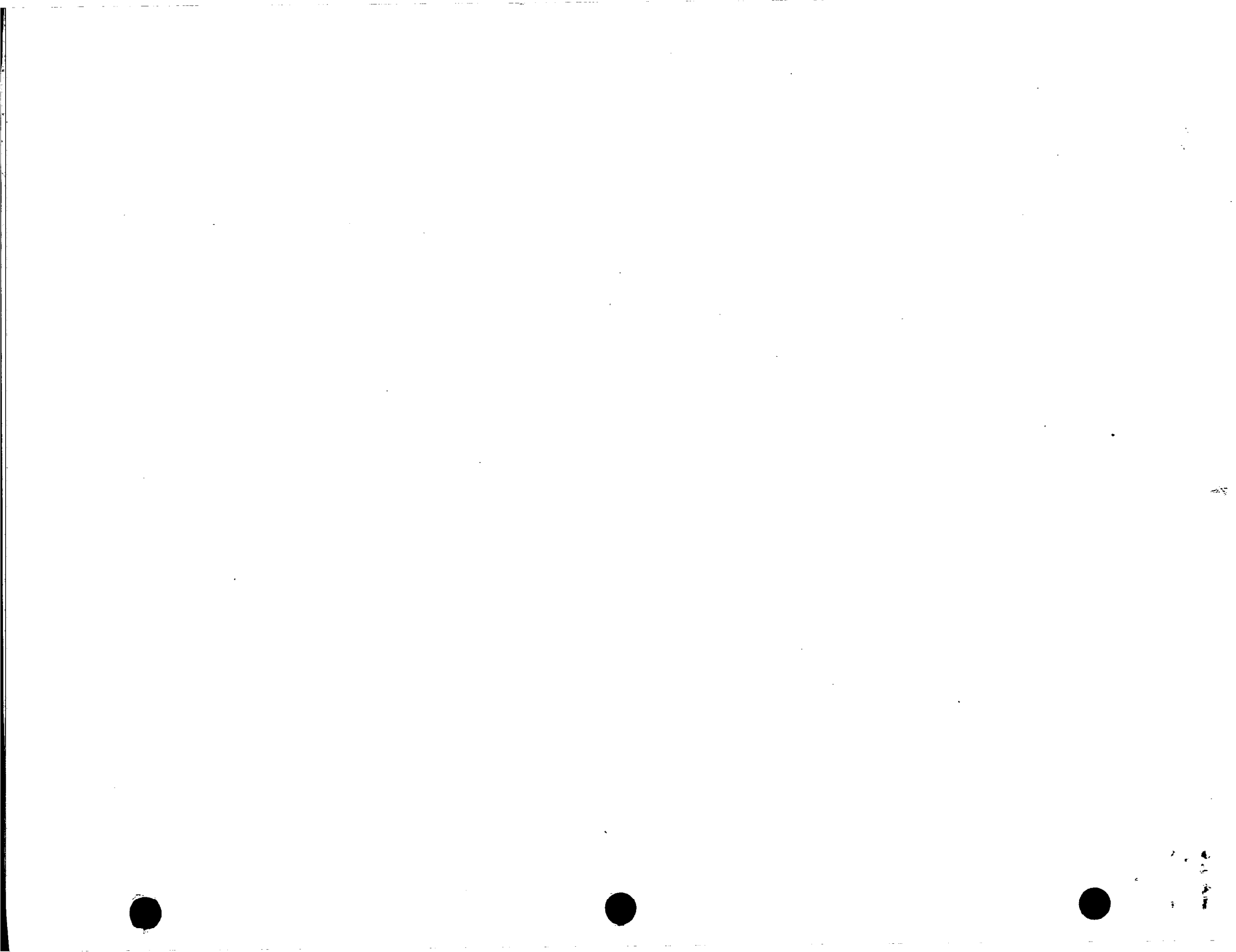
W. Don Maughan
Vice-Chairman



John E. Bryson
Chairman

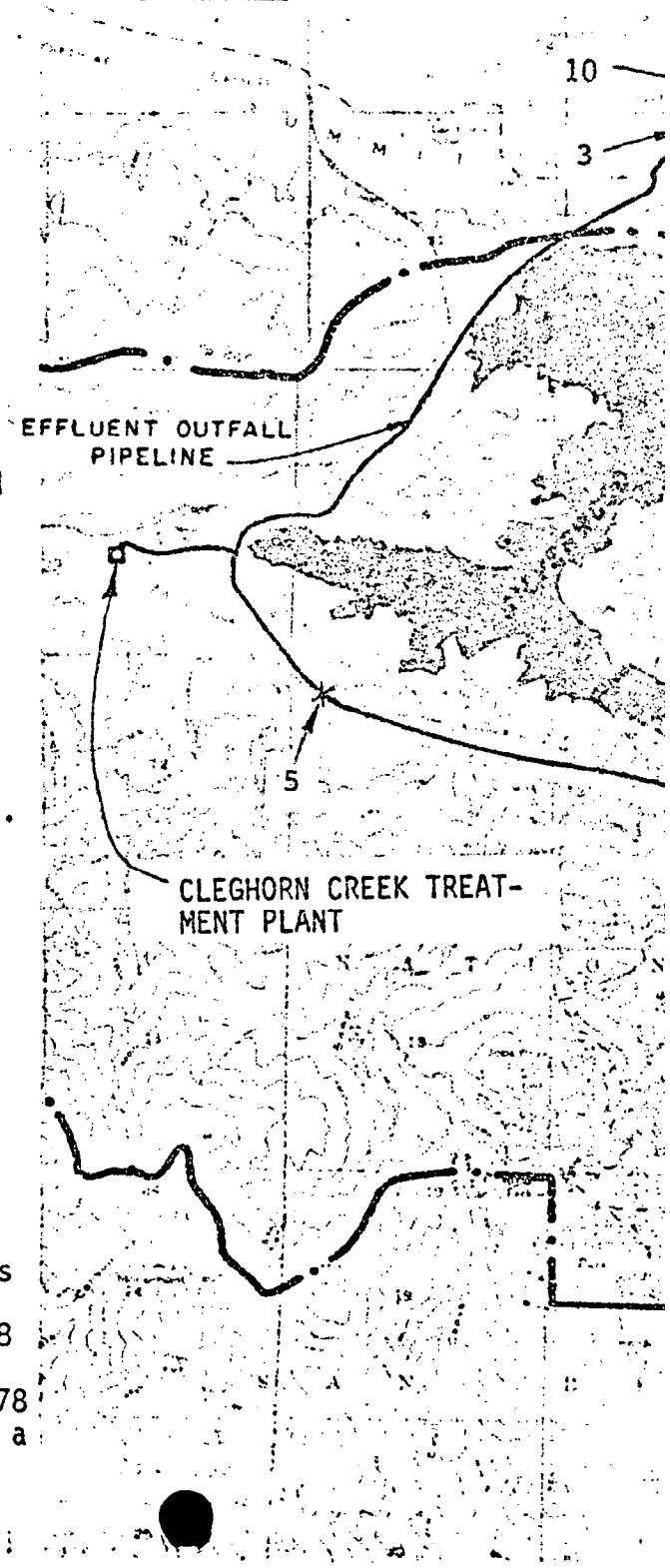


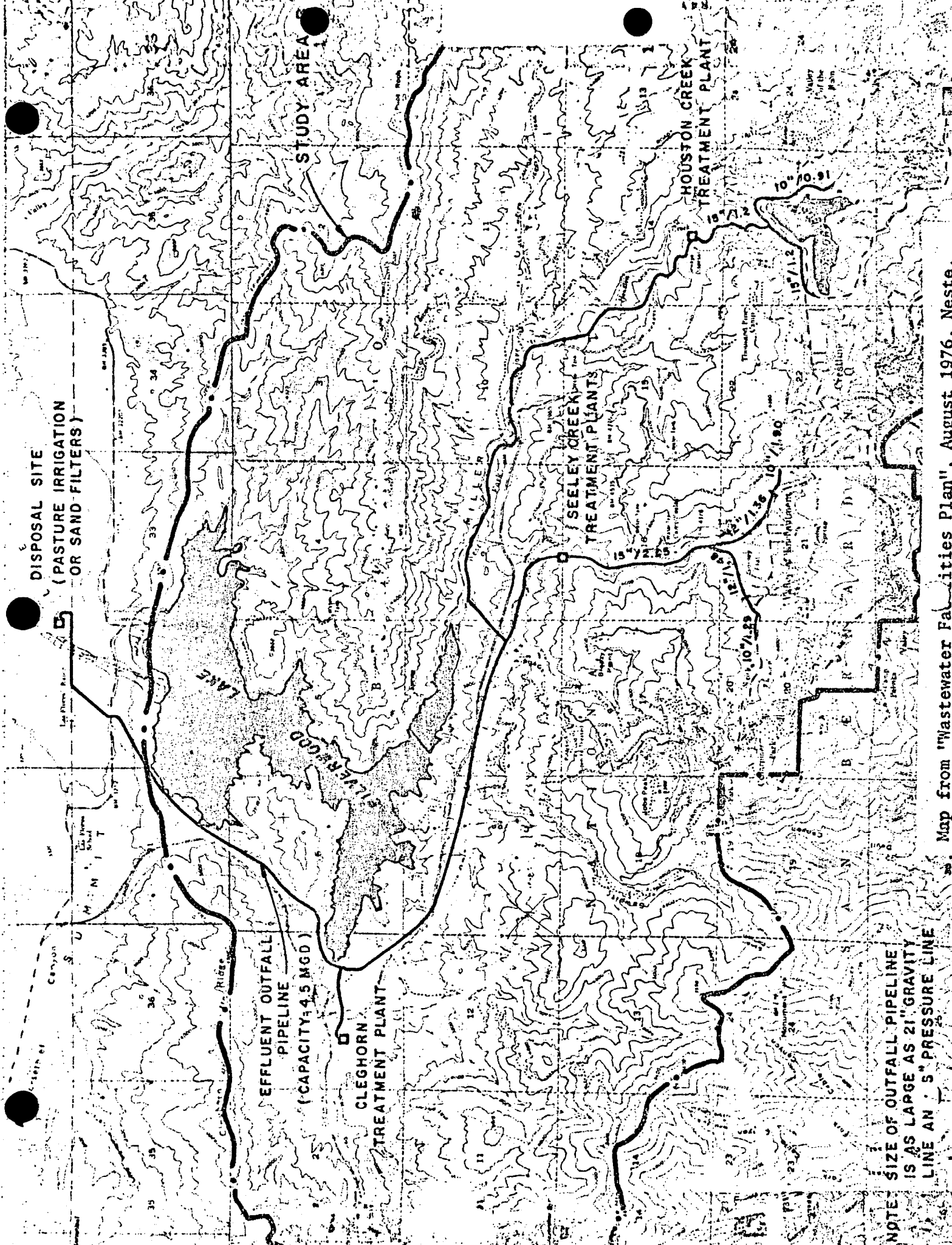
W. W. Adams
Member



LOCATIONS OF CRESTLINE

1. Location where the outfall line broke on January 16, 1978 and was repaired by January 18, 1978.
2. Location of manhole which experienced overflows on February 9, March 2, March 4 and March 5, 1978.
3. Location where the outfall line broke on February 10, 1978 and was repaired by March 10, 1978.
4. Area where broken house laterals allowed raw sewage to enter Seeley Creek during February and March 1978.
5. Location where the outfall line broke on March 9, 1978 and was repaired by March 15, 1978.
6. Location where effluent from Seeley Creek plant was discharged to Seeley Creek on March 10 through March 15, 1978.
7. Location where effluent from the Houston Creek plant was discharged to Houston Creek on March 10 through March 15, 1978.
8. Location where the outfall line broke on March 22, 1978 and was repaired by March 24, 1978.
9. Location where the outfall line broke on April 1, 1978 and was repaired by April 4, 1978.
10. There was a discharge from the Las Flores sand filter underdrains to the Mojave River which occurred from January 16, 1978 through January 18, 1978 and April 7, 1978 through April 11, 1978. On January 17, 1978 the sand filter dike failed also causing a discharge to the Mojave River. The dike repaired by January 18, 1978.





NOTE: SIZE OF OUTFALL PIPELINE IS AS LARGE AS 21" GRAVITY LINE AND 5" PRESSURE LINE

Map from "Wastewater Facilities Plan", August 1976, Neste, Brudin & Stone.