

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of )  
STUART LESSMUELLER for Review of )  
Denial of Exemption from Waste )  
Discharge Prohibition by the )  
California Regional Water Quality )  
Control Board, Santa Ana Region. )  
Our File No. A-232. )

Order No. WQ 80-14

BY THE BOARD:

On March 30, 1979, the California Regional Water Quality Control Board, Santa Ana Region (Regional Board), denied the request by Stuart Lessmueller (Petitioner) for exemption from the prohibition of discharge from subsurface leaching or percolation systems within the Yucaipa-Calimesa area. Petitioner sought the exemption for an on-site package treatment plant for a 40 to 45 unit apartment complex which he is proposing to construct on 4.8 acres. On April 30, 1979, the State Board received a petition from Mr. Lessmueller seeking review of the Regional Board's denial of his request for exemption. Petitioner then decided to seek Regional Board reconsideration of his request on the basis of new evidence. The petition to the State Board was, therefore, held in abeyance pending Regional Board reconsideration. On August 31, 1979, the Regional Board denied the petitioner's request for reconsideration and the petition to the State Board was reactivated.

Failure to grant an exemption from a Basin Plan prohibition is not one of the Regional Board actions specifically

reviewable by the State Board after a petition by an aggrieved person. (California Water Code Section 13320(a).) However, the State Board may, on its own motion, review a Regional Board action in implementing a Basin Plan. Because of the factors which were used as a basis for denial of the petitioner's request for the exemption, we feel it is appropriate for us to review the Regional Board's action in this instance.

For purposes of our review, the evidence before the State Board consists of the record before the Regional Board prior to its actions on both March 30, 1979, and August 31, 1979. On August 31, 1979, the Regional Board also acted to amend the date for compliance with the waste discharge prohibition for the Yucaipa-Calimesa area and to modify the criteria for exemption from the prohibition. On July 3, 1980, the State Board took action on these proposals. Our decision today is based in part on our review of those issues.

#### I. BACKGROUND

The petitioner's discharge would take place in the Yucaipa-Calimesa area which is in the San Timoteo sub-basin of the upper Santa Ana River watershed. The beneficial uses of this area, according to the Water Quality Control Plan Report, Santa Ana River Basin (Basin Plan) are municipal and domestic supply, agricultural supply, industrial service supply and industrial process supply. The discharge of waste within the Yucaipa-Calimesa area (Yucaipa Valley County Water District), from sub-surface leaching or percolation systems installed after July 1,

1973, is prohibited.<sup>1/</sup> "An exemption to this prohibition may be granted after presentation by the proposed discharger of geologic and hydrologic evidence that the leaching or percolation disposal of waste will not, individually or collectively, result in a pollution or nuisance."<sup>2/</sup>

In addition, the discharge of waste within the Yucaipa-Calimesa area by all subsurface leaching or percolation systems, including those installed prior to July 1, 1973, is prohibited after July 1, 1980.<sup>3/</sup> "An exemption to this prohibition may be granted whenever the Regional Board finds that the continued use, operation or maintenance of septic tanks, cesspools, or other means of subsurface leaching or percolation systems, in the particular area, will not, individually or collectively, directly or indirectly, affect water quality."<sup>4/</sup>

On June 15, 1973, the Regional Board adopted guidelines for the administration of the exemption provisions provided for in the Basin Plan. According to the guidelines, commercial properties<sup>5/</sup> may not be considered for an exemption if the peak

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1. Water Quality Control Plan Report, Santa Ana River Basin, Part I, Vol. I, p. 5-66.
  2. Ibid.
  3. Water Quality Control Plan Report, Santa Ana River Basin, Part I, Vol. I, p. 5-66; Regional Board Resolution No. 77-87, Amending the Water Quality Control Plan Report, Santa Ana River Basin, March 18, 1977.
  4. Water Quality Control Plan Report, Santa Ana River Basin, Part I, Vol. I, pp. 5-66, 5-67.
  5. According to the guidelines, commercial property includes multiple family unit developments of two or more units, i.e., the 40 to 45 unit apartment complex proposed by petitioner.

waste loads exceed the volume of human waste equivalent to that generated from a three-bedroom, two-bath dwelling as defined by the Uniform Plumbing Code. The staff of the Regional Board determined that the proposed discharge would exceed the volume of waste from a three-bedroom, two-bath home and, therefore, denied the petitioner's request for exemption. In accordance with the guidelines for exemption, the petitioner filed a request for review of the staff determination with the Regional Board. On March 30, 1979, and August 31, 1979, the Regional Board upheld the staff's denial of the petitioner's request for exemption.

## II. CONTENTIONS AND FINDINGS

A. The petitioner contends that his proposed project will satisfy all of the specific concerns raised by the Regional Board and, therefore, meets the criteria for exemption from the prohibition, as defined in the Basin Plan. The record indicates that the Regional Board had five major reasons for questioning the adequacy of the petitioner's proposal. We will consider each concern separately.

1. Staff of the Regional Board concluded that the petitioner failed to show that the proposed plant can meet the probable waste discharge requirement effluent ammonia-nitrogen limitation of 14 mg/l as nitrogen.

The petitioner proposes installation of a Nottingham "Hygi-Aeration" Sewage Treatment Plant, Model HA-25. This type of plant uses an extended aeration activated sludge process. One of the design parameters for an extended aeration plant is a mean cell residence time of 15 to 30 days. Our research indicates

that under these conditions the effluent ammonia concentration as nitrogen would be approximately 1 to 2 mg/l.<sup>6/</sup> Data which was submitted by the petitioner from a similar plant at the Wrightwood Methodist Camp, although quite limited, confirms the above analysis.<sup>7/</sup> We, therefore, conclude that the plant, if properly operated, can meet the effluent ammonia-nitrogen limitation of 14 mg/l as nitrogen.

2. Staff of the Regional Board also concluded that the petitioner did not adequately substantiate that the discharge from the proposed plant will be able to meet a limitation of 230 mg/l incremental increase in filterable residue.

The Basin Plan for the Santa Ana Basin establishes that the increment of "salt added" by domestic and industrial users should average approximately 230 mg/l TDS for the entire Basin.<sup>8/</sup> The Regional Board has, therefore, almost universally prescribed a 230 mg/l increment increase limitation for filterable residue in waste discharge requirements. In the past, the Regional Board has contended that through control of the use of regenerative water softeners, a municipality can ensure that its domestic wastes meet the 230 mg/l limitation. We find no reason to presume that the petitioner would have any more or less difficulty

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6. Process Design Manual for Nitrogen Control, U.S. EPA Technology Transfer Series, October 1975, p. 3-20.
  7. Letter from Craig Smith, consulting engineer for petitioner, to the Regional Board dated July 6, 1979.
  8. Water Quality Control Plan Report, Santa Ana River Basin, Part I, Vol. 1, 1975, p. 5-10.

than any other discharger of domestic wastes in assuring that this limitation is met.

The petitioner states that on-site regenerative water softeners will not be used in the apartment complex. In addition, rental leases will prohibit the use of cleaning and laundry products that result in high levels of filterable residue. Regional Board staff question the enforceability of these proposed prohibitions. However, as discussed above, we would expect the petitioner to experience the same degree of success as any other discharger in imposing such restrictions. Therefore, we conclude that there is insufficient evidence to support the Regional Board's concern relative to this matter.

3. The site upon which the apartment complex is to be built slopes toward the south with approximately a 10-percent grade. The southern one-third of the parcel lies within Wildwood Creek and is bounded by the San Bernardino Flood Control Channel. It was therefore concluded by Regional Board staff that the proposed treatment plant site and subsurface disposal system are subject to flooding.

We find this concern adequately dealt with in a letter to the Regional Board dated July 6, 1979, from petitioner's engineering and geology consultant, Craig Smith. The consultant's statement that a 100-year flood would be at the lower edge of the bank of the creek is confirmed by a map entitled, "Flood Plan Information, Wilson and Wildwood Creek, San Bernardino County", prepared by the U. S. Army Corps of

Engineers, June 1972. Neither the proposed treatment plant site nor the subsurface disposal system site are within this area which is subject to 100-year flooding. In a conservative analysis, we estimate that once every 10 years floodwater would approach within 60 feet of the leachline area -- and even then the waters would only be in this area for a short period of time. Therefore, we do not find that good cause exists for concern about potential flooding of the treatment plant or leachfield area.

4. The Regional Board staff questioned the adequacy of the size of the leachfield disposal area.

The slowest percolation rate for the disposal area reported by the petitioner was 10.9 min./in. A minimum leachfield area for this percolation rate should be 5,750 square feet.<sup>9/</sup> A development of approximately 60 bedrooms would require 10,500 square feet.<sup>10/</sup> Since the petitioner has proposed a leachfield with a design capacity in excess of 11,500 square feet, we conclude that it would be adequately sized to percolate the effluent from the treatment plant without threat of surfacing.

However, we find that there is some possibility that effluent from the disposal area could flow laterally to the creek bank. The petitioner asserts that there is a layer of fine-grained silty sand along the creek bank. It is not known how continuous this layer is or its thickness or permeability. If it has sufficient low permeability and areal extent, there

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9. The Manual of Septic Tank Practices, U. S. Department of Health, Education and Welfare, 1957, p. 47.

10. Ibid, p. 9.

is a possibility that water disposed of through the proposed percolation system will flow downward to this layer, then laterally to the creek bank. There should be further exploration, therefore, of this silty sand layer either by inspection along the stream bank or by backhoe to ensure that the effluent would not move laterally.

5. Although the Regional Board does not have a formal policy requiring public agency operation and maintenance of private commercial facilities, Regional Board members considered this as a factor in their refusal to grant the petitioner's request for exemption.<sup>11/</sup> The petitioner sought to have the proposed treatment plant operated by the appropriate local agency, the Yucaipa Valley County Water District. However, that agency no longer accepts responsibility for operation and maintenance of on-site wastewater disposal facilities, and denied petitioner's request.<sup>12/</sup>

The proponent of a privately operated facility should be given an opportunity to provide the Regional Board with those specific assurances that would satisfy the Board's concerns. The record does not reflect what specific actions would have been acceptable to the Regional Board as means of assuring proper

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11. Tape recording of that portion of the August 31, 1979 meeting of the Regional Board relevant to the request of Stuart Lessmueller for exemption from the Yucaipa-Calimesa prohibition.
  12. The petitioner originally sought capacity in the secondary treatment plant which is going to be constructed by the Yucaipa Valley County Water District. However, initial capacity within the community sewerage system had been fully subscribed; hence, petitioner proposed an on-site treatment plant.



operation and maintenance. If, for example, the Regional Board seeks assurance of continued, reliable maintenance of the facility, consideration should be given to requiring the petitioner to secure a performance bond. Other conditions, such as employment of a licensed treatment plant operator may be appropriate. Until these factors are explored more fully and explicitly, we find it premature to conclude that competent operation and maintenance is not possible.

B. As a result of our review of the above factors and the evidence before us, we conclude that if this facility was to be properly operated in a non-prohibition zone area and if the effects of other discharges in the area were not a factor, operation of the facility would not result in a pollution or nuisance.<sup>13/</sup> However, the plant is proposed for operation in an area of prohibition. In reviewing a proposed amendment to the Basin Plan revising the effective date of the Yucaipa-Calimesa area prohibition, we concluded that there is substantial evidence that discharge of waste from individual disposal systems at a density of more than one system per acre would result in violation of water quality objectives, impair present or future beneficial uses of water, cause pollution, nuisance or contamination, and will unreasonably degrade the quality of the waters of the State.<sup>14/</sup>

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13. This conclusion is contingent upon adequate resolution of our concerns about lateral flow of effluent to the creek bank as discussed on page 7 of this order.
  14. State Water Resources Control Board Resolution No. 80-45, Remanding for Reconsideration an Amendment to the Water Quality Control Plan for the Santa Ana River Basin (8), Revising the Effective Dates and Establishing, Modified Criteria for Exemptions from the Yucaipa-Calimesa Prohibition, adopted July 3, 1980.

Therefore, collective discharges for an indefinite period of time even if from properly operated facilities, would unreasonably degrade the quality of the water in the Yucaipa-Calimesa area. In light of the problems which would be created on a cumulative basis by permitting discharges such as the one proposed by the petitioner, we must deny his request for long-term operation of an on-site package treatment plant.

However, petitioner's proposed facility may be appropriate for use on a short-term basis. As discussed in detail above, we do not agree with many of the conclusions that were drawn by the Regional Board as to the viability of successful operation of the proposed facilities. In remanding the proposed change in the effective date for compliance with the Yucaipa-Calimesa area prohibition, which was before us for approval on July 3, 1980, we directed the Regional Board to reconsider the criteria for granting exemptions to the prohibition. In view of our analysis herein, the Regional Board should also reconsider petitioner's proposal. If our concern about lateral flow of the effluent to the creek bank and the Regional Board's concern about adequate operation and maintenance of the facility can be satisfied, a finding that the leaching or percolation disposal of waste from the proposed facility on a short-term basis, will not individually or collectively, result in a pollution or nuisance appears to be appropriate. Any exemption, of course, should only be given until capacity is available in the treatment plant to be constructed by the Yucaipa Valley County Water District. Our recommendations herein are contingent upon evidence satisfactory to the Regional

Board that the Water District is proceeding expeditiously with construction of a secondary treatment plant with adequate capacity to treat waste from petitioner's project and upon amendment of the date for compliance with the prohibition which is contained in the Basin Plan.<sup>15/</sup>

### III. CONCLUSIONS

The Regional Board should reevaluate the request for exemption in light of the factors discussed above.

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15. The Basin Plan presently prohibits discharge by subsurface leaching or percolation systems after July 1, 1980. However, the Regional Board is considering amending the compliance date to a time when construction of the secondary treatment plant will be completed.

ORDER

IT IS, THEREFORE, ORDERED that the Regional Board reconsider the request for exemption in accordance with the factors discussed in this order.

Dated: August 21, 1980

/s/ Carla M. Bard  
Carla M. Bard, Chairwoman

/s/ William J. Miller  
William J. Miller, Vice-Chairman

/s/ L. L. Mitchell  
L. L. Mitchell, Member

/s/ Jill B. Dunlap  
Jill B. Dunlap, Member

/s/ F. K. Aljibury  
F. K. Aljibury, Member