

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2003-0099

FOR
NEWPORT PACIFIC CAPITAL COMPANY, INC
ARBOR MOBILE HOME PARK WASTEWATER TREATMENT FACILITY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring domestic wastewater, treated effluent, seepage pits, leachfields, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer. Regional Board staff shall approve specific sample station locations prior to implementation of sampling activities.

All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form.

Field test instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

The Discharger shall collect samples of the influent prior to treatment by the package plant. Influent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow ¹	gpd	Metered	Daily	Monthly
Biochemical Oxygen Demand	mg/l	Grab	Monthly	Monthly

¹ Daily flow measurements shall be recorded to determine the volume of wastewater influent each day.

EFFLUENT MONITORING

The Discharger shall conduct effluent monitoring of the wastewater prior to discharge to the seepage pits or gravelless leachfield. Effluent monitoring shall include, at a minimum, the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Settleable Solids	mL/L	Grab	Weekly	Monthly
Total Suspended Solids ¹	mg/L	Grab	Weekly	Monthly

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Biochemical Oxygen Demand	mg/l	Grab	Weekly	Monthly
Total Dissolved Solids	mg/l	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	mg/l	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	mg/l	Grab	Quarterly	Quarterly
Standard Minerals ²	mg/l	Grab	Annually	Annually

¹ Total Suspended Solids shall be determined with a Whatman glass fiber filter with a nominal pore size of 1.58 µm.

² Standard Minerals shall include, at a minimum, the following elements and compounds: Barium, Boron, Calcium, Iron, Magnesium, Manganese, Sodium, Potassium, Chloride, Sulfate, Total Alkalinity (including alkalinity series), and Hardness.

DISPOSAL AREA MONITORING

The Discharger shall conduct a visual inspection of the seepage pits and gravelless leachfield on a daily basis. The operator shall record which seepage pits or leachfields are receiving wastewater. Evidence of surfacing wastewater, poorly draining seepage pits, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. If surfacing wastewater or poorly draining leachfields are observed, the condition shall be noted and the need for system repair evaluated.

GROUNDWATER MONITORING

Beginning with the first quarter of 2004, the Discharger shall conduct the following groundwater monitoring program. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

Prior to sampling, groundwater elevations shall be measured and the wells shall be purged at least three well volumes until pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated. Samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency³</u>
Groundwater Elevation ¹	0.01 Feet	Measurement	Quarterly
Depth to Groundwater	0.01 Feet	Calculated	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
PH	S.U.	Grab	Quarterly
Total Dissolved Solids	mg/l	Grab	Quarterly
Nitrate as Nitrogen	mg/l	Grab	Quarterly
Ammonia as Nitrogen	mg/l	Grab	Quarterly
Total Coliform Organisms ²	MPN/100 ml	Grab	Quarterly

- ¹ Groundwater elevation shall be based on depth to water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
- ² Using a minimum of 15 tubes or three dilutions
- ³ Groundwater monitoring begins with the first quarter 2004.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, effluent, and disposal area monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. A map identifying all seepage pits and gravelless leachfield areas.
4. If requested by staff, copies of laboratory analytical report(s); and
5. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Report

The Discharger shall establish a quarterly sampling schedule for effluent monitoring and groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly reports is due by May 1st) each year. The Quarterly Report shall include the following:

1. Results of effluent and groundwater monitoring. The results of regular monthly monitoring reports for March, June, September and December may be incorporated into their corresponding quarterly monitoring report;

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and a discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the fourth quarter monitoring report. The Annual Report will include all monitoring data required in the monthly/quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular quarterly monitoring report for the last quarter of the year;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. Results of effluent and groundwater annual monitoring;
4. A description of any activity to control vegetation in the leachfield area;
5. A statement of when the O&M Manual was last reviewed for adequacy, and a description of any changes made during the year;
6. A summary of maintenance and repairs activities which were performed on the collection system; and
7. A discussion of any compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements.

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

_____ 6 June 2003
(Date)

TRO: 6/6/03

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0099

WASTE DISCHARGE REQUIREMENTS

FOR
NEWPORT PACIFIC CAPITAL COMPANY, INC.
ARBOR MOBILE HOME PARK WASTEWATER TREATMENT FACILITY
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. On 10 July 2002, Newport Pacific Capital Company, Inc. (Discharger) submitted a Report of Waste Discharge (RWD) for an existing wastewater treatment system that treats and disposes of domestic wastewater generated by homes in the Arbor Mobile Home Park (MHP) in San Joaquin County.
2. The facility is at 19690 N. Highway 99, Acampo in Section 30, T4N, R7E, MDB&M as shown on Attachment A, which is attached hereto and made part of this Order by reference. The facility is on Assessor's Parcel Number 017-080-53.
3. Arbor MHP was constructed in the early 1970's, and was initially regulated by Waste Discharge Requirements (WDRs) No. 72-295; due to budget constraints, the County took over primary oversight of the facility. Because of wastewater spill complaints received in 2002, the State has reissued WDRs for the facility.
4. Arbor MHP is a 25.4-acre residential subdivision with 173 residential parcels. Originally, the property was developed for retired people; in the mid-1980s the owners of the MHP changed the residency requirements allowing families to live in the MHP. All the available residential spaces have been occupied.
5. Domestic wastewater is also discharged to the system by Arbor Storage Complex (ASC), which is located at 19666 N. Highway 99. ASC rents storage space to the public. The amount of wastewater discharged is unknown but anticipated to be low because the site has few residents. The location of the piping is unknown.
6. The Discharger owns and operates the wastewater system and is responsible for its proper design, operation, and maintenance.

EXISTING FACILITY AND DISCHARGE

7. The MHP wastewater collection system consists of approximately 8,500 feet of 4, 6, and 8-inch diameter pipe. Clean-outs are located at approximately 200-foot intervals and at each angle point in the collection system to facilitate cleaning. The original plans for the MHP indicate the pipe materials are cast iron or asbestos cement, however that has not been confirmed.

8. Wastewater is delivered to the system headworks by gravity. The headworks lift station consists of six-foot diameter concrete pipe approximately 12 feet deep that is covered with a concrete slab. Two 40-gpm grinder pumps are installed at the bottom of the lift station. The pumps operate on level controls controlled by float switches.
9. Wastewater is treated using a Nottingham Hygi-Aeration Sewage Treatment Plant Model No. HA25. The treatment capacity of the system is 45,000 gallons per day (gpd). The system is operated as an extended aeration facility.
10. Clarifiers are constructed of reinforced precast concrete with a capacity of 2,500 gallons. The clarifiers are equipped with baffles, a sloped bottom, a sludge airlift pump, a skimmer airlift pump, and a v-notch weir on the outlet. Clarified effluent flows to polishing tanks; settled sludge is either returned to the aeration tank or it is discharged to the sludge storage tank. The skimmer pump discharges to the first aeration tank. Sludge wasting is scheduled by the operator based on system performance.
11. Wasted sludge is stored in the Sludge Storage Tank, which consists of two 2,000 gallon concrete tanks. The sludge is aerobically digested in the Sludge Storage Tank.
12. Treated wastewater is discharged to a distribution tank that allows the operator to select the destination of the wastewater. The operator manually adjusts the flow to the disposal areas and rotates the effluent flow as necessary. Treated wastewater is discharged to 60 seepage pits and a Biodiffuser (a gravelless trench system). A schematic of the wastewater treatment system is presented on Attachment B, which is attached hereto and made part of this Order by reference.
13. The facility is equipped with 60 seepage pits. Each seepage pit is approximately five feet in diameter and 25 feet deep. All seepage pits have removable inspection covers for monitoring and maintenance purposes. The seepage pits are spaced 12-feet on center. Each seepage pit provides approximately 393 ft² of potential absorption area with a total of 23,580 ft² for the 60 seepage pits.
14. The facility is also equipped with a gravelless leachfield that was installed in 2001. The system consists of four sets of gravelless leaching chambers estimated to have been installed approximately five-feet below the surface. The gravelless leachfield provides a total of approximately 1,344 ft² of potential absorption area.
15. Good practice and Section 3.3.2.b of the San Joaquin County Public Health Services Environmental Health Division Sewage Standards requires 100-percent of open land equal to the size of the installed sewage system available for future use if needed. The Discharger does not comply with this requirement.
16. The RWD states that the package plant treatment capacity is approximately 45,000 gpd, which should be adequate for the 173 homes.
17. On 11 February and 17 February 2003, the Discharger collected samples of the water supply and treated wastewater to evaluate the increase in concentrations of TDS, sodium, and chloride. The sample data from each monitoring event are presented below.

<u>Constituent</u>	<u>Units</u>	11 February 2003		17 February 2003	
		<u>Water Supply</u>	<u>Wastewater</u>	<u>Water Supply</u>	<u>Wastewater</u>
Total Dissolved Solids	mg/l	220	350	260	380
Sodium	mg/l	14	47	15	49
Chloride	mg/l	14	44	14	48

18. On 27 February 2002, Regional Board staff inspected the facility at the request of the San Joaquin County Department of Environmental Health and found the system to be failing. Wastewater surface spills were evident at the site and the seepage pits were full of wastewater.
19. In response to the failing system, the Discharger improved operational controls to limit suspended solids discharged to the seepage pits. Monitoring was conducted to evaluate the performance. The following data indicates the system performance improvements:

<u>Month</u>	<u>Units</u>	Influent		Effluent		Removal %	
		<u>BOD</u>	<u>TSS</u>	<u>BOD</u>	<u>TSS</u>	<u>BOD</u>	<u>TSS</u>
February 2002	mg/L	121	90	74	50	39	44
March 2002	mg/L	128	138	89	115	30	20
April 2002	mg/L	119	128	37	47	69	63
May 2002	mg/L	162	153	16	15	90	90

20. An operation and maintenance manual, "*Arbor MHP Waste Water Treatment Facility*," was prepared for the system and included in the RWD. The manual does not address reporting requirements that are necessary to assure compliance with this Order and therefore must be updated.

COLLECTION SYSTEM

21. A collection system "overflow" is a discharge to ground surface or to surface water from the collection system, wastewater treatment system, or disposal area. Temporary storage or collection facilities may be utilized during maintenance operations and discharges to these facilities are not considered overflow events, provided that the waste is fully contained and properly disposed of.
22. Potential causes of overflows within this system include grease blockages, root blockages, debris blockages, sewer line flood damage, vandalism, storm or groundwater inflow/infiltration, lack of capacity, power failures, and contractor caused blockages.
23. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, nutrients, oxygen demanding organic compounds, oil and grease, and other wastes. Sanitary sewer overflows can cause temporary exceedences of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.
24. The Discharger is expected to take all necessary steps to adequately maintain and operate, and thereby prevent overflows from, its collection system. A reasonable means to accomplish this is to

update and implement an operation and maintenance manual that includes overflow prevention and response features.

SITE SPECIFIC CONDITIONS

25. The mean annual rainfall, based on data from Lodi weather station, is 17.57-inches per year.
26. All portions of the Arbor MHP are outside of the 100-year flood zone.
27. Stormwater that falls on the site is collected and discharged to a stormwater storage pond.
28. The site lies within the Lower Mokelumne Hydrologic Area No. 531.20, as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
29. According to the Soil Conservation Service's Soil Survey of San Joaquin County, surface soil at the wastewater treatment facility consists of Kingdon fine sandy loam, alluvium derived from granitic rock sources.
30. The topography of the site and surrounding area is fairly level. Elevation of the site is approximately 60 feet above mean sea level.
31. The Discharger states that groundwater occurs approximately 50 feet below ground surface based on information from a nearby site.
32. Potable water for the MHP is provided by an on-site well. Water quality samples were collected on 30 May 2001. The water quality is summarized in the following table:

<u>Constituent</u>	<u>Units</u>	<u>Concentration</u>
Total Hardness	mg/L	144
Sodium	mg/L	13.7
Chloride	mg/L	13.0
Nitrate (as NO ₃)	mg/L	5.4
Electrical Conductivity	µmhos/cm	323

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

33. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to Section 13263(a) of the CWC, waste discharge requirements must implement the Basin Plan.
34. Surface water drainage from the site is to the Mokelumne River.
35. The beneficial uses of the Mokelumne River from Camanche Reservoir to the Sacramento-San Joaquin Delta are: agricultural supply; water contact recreation; non-contact water recreation;

warm freshwater habitat; cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.

36. The beneficial uses of the underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

ANTIDegradation ANALYSIS

37. State Water Resources Control Board (SWRCB) Resolution No. 68-16 (hereafter Resolution 68-16 or the “Antidegradation Policy”) requires the Regional Board in regulating the discharge of waste to maintain high quality waters of the state (i.e., background water quality) until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board’s policies (e.g., quality that exceeds water quality objectives). In addition, the policy requires discharges to high quality waters to implement best practicable treatment or control of the discharge.
38. The Regional Board finds that the Discharger has not demonstrated that it is to the maximum benefit to the people of the State of California to degrade groundwater, and therefore groundwater degradation is not allowed under this Order. If the Discharger is degrading groundwater and subsequently elects to make the demonstration that the degradation meets the conditions of State Board Resolution No. 68-16, then the Regional Board will reopen this Order.
39. This wastewater treatment facility provides treatment and control of the discharge that includes advanced treatment, disposal to the seepage pits and gravelless leachfield, and evaporation and percolation as disposal methods.
40. Wastes that pass through the treatment system are discharged to the seepage pits or gravelless leachfield; the soil then treats some of the remaining wastes. The amount of treatment depends on the waste type and concentrations, soil type and depth, percolation rates, wastewater application rates, and depth to groundwater. Some waste constituents may migrate through the soil column to the underlying groundwater. Groundwater monitoring is appropriate and necessary to monitor the effectiveness of treatment within the soil column and assure groundwater quality consistent with terms specified herein.

OTHER

41. The State Water Resources Control Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment plant facilities are such that all stormwater runoff is collected in the stormwater pond. Because there is no storm water discharge, the Discharger is not required to obtain coverage under General Permit No. CAS000001.

42. The action to update WDRs is exempt from the provisions of CEQA, in accordance with Title 14, California Code of Regulations, Section 15301.
43. Section 13267(b) of the CWC provides that:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached “Monitoring and Reporting Program No. R5-2003-0099” are necessary to assure compliance with these waste discharge requirements. The Discharger operates facilities that discharge waste subject to this Order.

44. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the State or County pursuant to CWC section 13801, apply to all monitoring wells.
45. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27, CCR, section 20005, et seq. (hereafter Title 27). While the wastewater system is exempt from Title 27, the data analysis methods of Title 27 may be appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.
46. The discharge authorized herein and the treatment and storage facilities associated with the discharge, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27. The exemption, pursuant to Title 27 section 20090(a), is based on the following:
 - a. The waste consists primarily of domestic sewage and treated effluent;
 - b. The waste discharge requirements are consistent with water quality objectives; and
 - c. The treatment and storage facilities described herein are comparable in function to a municipal wastewater treatment plant.

47. Pursuant to CWC section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

PUBLIC NOTICE

48. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
49. The Discharger and interested agencies and persons were notified of the intent to prescribe waste discharge requirements for this discharge, and provided an opportunity to submit written views and recommendations and to be heard in a public meeting.
50. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that, pursuant to CWC sections 13263 and 13267, the Arbor Mobile Home Park and Newport Pacific Capital Company, Inc. its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and some methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.]

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated waste is prohibited.
3. Surfacing or spillage of wastewater at the treatment system or in the seepage pits area is prohibited.
4. Discharge of waste classified as 'hazardous' under Title 23, CCR, Section 2521, or as 'designated' under CWC Section 13173 is prohibited, including any discharge of sludge.
5. Seepage pits located closer than 150 feet from a public well or 100 feet from all other wells are prohibited. Wells installed under the supervision of a California licensed Engineer or Geologist for the purpose of monitoring the effect of wastewater disposal on groundwater quality are exempted from this prohibition.

B. Discharge Specifications

1. The monthly average flow shall not exceed 45,000 gallons per day.

2. The wastewater treatment and disposal area shall not cause pollution or a nuisance as defined by Section 13050 of the California Water Code.
3. Public contact with wastewater in the disposal area shall be precluded or controlled through such means as fences and signs, or acceptable alternatives.
4. No waste constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
5. Objectionable odor originating from the treatment and disposal system shall not be perceivable beyond the limits of the treatment and disposal system's area.
6. All treatment, storage, and disposal areas shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
7. Application of wastewater shall be confined to the seepage pits and gravelless leachfield area defined in this Order.
8. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
9. The Discharger shall remove vegetation in the seepage pit and gravelless leachfield area as needed to prevent threat of root intrusion into the system.
10. The wastewater treatment system shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow, inflow and infiltration, and design seasonal precipitation during the winter months. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
11. Installation of new seepage pits and leach lines shall be performed in accordance with the requirements of this Order and the San Joaquin County Environmental Health Department Sewage Standards.

C. Effluent Limitations

1. Effluent discharged to the seepage pits shall not have a pH less than 6.5 or greater than 8.5. Shock treatments of the seepage pits with chemicals to reduce biological plugging shall be described and approved prior to use.
2. Wastewater discharged to the seepage pits or gravelless leachfield shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
TDS	mg/L	400	600

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
TSS ¹	mg/L	40	80
BOD	mg/L	40	80

TDS denotes Total Dissolved Solids. TSS denotes Total Suspended Solids.
 BOD denotes 5-day Biochemical Oxygen Demand.
 TSS shall be determined with a Whatman glass fiber filter with a nominal pore size of 1.59 µm.

D. General Solids Disposal Specifications

Sludge means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the facility.

1. Sludge and solid waste shall be removed from screens, tanks, clarifiers, etc. as needed to ensure optimal plant operation.
2. Treatment and storage of sludge shall be confined to the treatment facility property, and shall be conducted in a manner that precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
3. Any storage of residual sludge or solid waste at the facility shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the Groundwater Limitations of this Order.
4. Residual sludge and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27 CCR, Division 2, Subdivision 1. Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.

E. Groundwater Limitations

The discharge, in combination with other site-derived sources, shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality.

F. Provisions

1. All of the following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared by a registered professional as described by Provision F.2.

- a. By **4 September 2003**, the Discharger shall submit and implement an Operation and Maintenance (O&M) Plan for the wastewater system. The O&M Plan shall instruct field personnel on how to manage the day-to-day discharge operations to comply with the terms and conditions of this Order and how to make field adjustments, as necessary, to optimize the effectiveness and life of the seepage pits and preclude nuisance conditions (e.g., surfacing wastewater). It shall also include a troubleshooting flowchart with recommended remedial actions and a description of notification requirements. The O&M Plan shall address management of the wastewater system in sufficient detail to optimize compliance with this Order. The Discharger shall ensure that an up-to-date O&M Plan is readily available to operating personnel at all times, and that personnel are familiar with it.

- b. By **6 October 2003**, the Discharger shall submit a *Collection System Operation, Maintenance, Overflow Prevention, and Response Plan* (CSR Plan) that describes the actions designed to prevent or minimize the potential for overflows. The Discharger shall maintain the CSR Plan in an up-to-date condition and shall amend the CSR Plan whenever there is a change (e.g., in the design, construction, operation, or maintenance of the collection system) that materially affects the potential for overflows, or whenever there is an overflow. The Discharger shall ensure that the up-to-date CSR Plan is readily available to operating personnel at all times and that the personnel are familiar with it.
 - i. At a minimum, the operation and maintenance portion of the CSR Plan shall contain or describe the following:
 1. Detailed maps of the collection system;
 2. A detailed listing of elements to be inspected, a description of inspection procedures and inspection frequency, and sample inspection forms;
 3. A schedule for routine inspection of all pipelines, valves, and other key system components. The inspection/testing program shall be designed to reveal problems that might lead to accidental spills and ensure that preventive maintenance is completed;
 4. Provisions for repair or replacement of defective equipment.
 - ii. At a minimum, the overflow prevention and response portion of the CSR Plan shall contain or describe the following:
 1. Identification of areas of the collection system that historically have overflowed and an evaluation of the cause of the overflow;
 2. Maintenance activities that can be implemented to address the cause of the overflow and means to prevent future overflows;
 3. Procedures for responding to overflows designed to minimize the volume of overflow that enters surface waters, and minimize the adverse effects of overflows on water quality and beneficial uses; and

4. Steps to be taken when an overflow or spill occurs, and procedures that will be implemented to ensure that all overflows and spills are properly identified, responded to and reported to appropriate agencies, and if necessary, the public.

GROUNDWATER EVALUATION

- c. By **4 September 2003**, the Discharger shall submit a workplan for the characterization of groundwater quality at the disposal area. The workplan shall describe the installation of at least three groundwater monitoring wells to allow evaluation of the groundwater quality to adequately characterize background water quality and potential groundwater impacts from the wastewater discharge. Every monitoring well shall be constructed to yield representative samples from the uppermost layer of the uppermost water bearing zone and to comply with applicable well standards. The workplan shall be consistent with, and include the items listed in, the first section of Attachment C, "*Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*"
 - d. By **28 February 2004**, the Discharger shall submit a groundwater well installation report. The report shall be consistent with, and include the items listed in, the second section of Attachment C.
 - e. By **30 June 2005**, the Discharger shall submit a *Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data from each monitoring well. Determination of groundwater quality shall be made using the methods described in Title 27, Section 20415(e)(10), and data from at least four consecutive quarterly (or more frequent) groundwater monitoring events.
 - f. If the *Groundwater Quality Study Report* shows that groundwater exceeds Groundwater Limitations, then within **120 days** of the Executive Officer's request the Discharger shall submit a technical report in the form of a *Wastewater System Evaluation Report and Implementation Workplan*. The technical report shall include a comprehensive evaluation of treatment and control measures that address full mitigation of the source of the exceedance(s). The report shall describe treatment and control alternatives studied, the alternative(s) recommended for implementation, and any specific methods the Discharger proposes to monitor and assure continuous optimal performance, the source of funding, and proposed schedule for implementation. The recommended improvements and implementation schedule are subject to the Executive Officer's approval, but the schedule for full implementation shall be as short as practicable and not exceed two years unless specifically approved by the Regional Board.
2. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for, that describe the conduct of investigations and studies, or that contain technical conclusions and

recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.

3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2003-0099, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
5. The Discharger shall use the best practicable treatment and control techniques, including proper operation and maintenance, to assure compliance with terms of this Order.
6. In event of overflow from the collection system, the Discharger shall take all necessary remedial action to control and limit the volume of wastewater discharged, and terminate the overflow as rapidly as possible. Necessary remedial actions may include, but are not limited to, the following:
 - a. Interception and rerouting of sewage flows around the collection line failure;
 - b. Vacuum truck recovery to the extent practical of sanitary sewer overflows and wash down water;
 - c. Cleanup of sewage-related debris at the overflow site;
 - d. Disinfection and posting of the area.
7. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."
8. The Discharger shall not allow waste-free wastewater to be discharged into the wastewater collection, treatment, and disposal system. Waste-free wastewater means rainfall (roof gutters, yard drainage), groundwater, cooling waters, and condensates that are essentially free of wastes.
9. The Discharger shall submit to the Regional Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharge shall state the reasons for such noncompliance and provide an estimate of

the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board in writing when it returns to compliance with the time schedule.

10. In the event of any change in control or ownership of land or waste discharge facilities described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
11. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or recession of this Order.
12. When it appears that the wastewater system is showing signs of failure (sustained wastewater in seepage pits at or near the maximum design depth), then the Discharger shall increase the frequency of observation monitoring and shall initiate rehabilitation or construction of new disposal facilities.
13. A copy of this Order shall be kept at the facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
14. The Regional Board will review this Order periodically and will revise requirements when necessary.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 6 June 2003.

THOMAS R. PINKOS, Executive Officer

INFORMATION SHEET

ORDER NO. R5-2003-0099
NEWPORT PACIFIC CAPITAL COMPANY
ARBOR MOBILE HOME PARK WASTEWATER TREATMENT FACILITY
SAN JOAQUIN COUNTY

Introduction

Arbor Mobile Home Park (MHP) is at 19690 N. Highway 99 Acampo. Wastewater originates from residential sources consisting of 173 mobile homes, the nearby Arbor Storage Complex, and a clubhouse. The MHP is completely occupied, therefore wastewater flow rates are anticipated to remain stable in the future. The present discharge flow rate is approximately 45,000 gallons per day.

Wastewater System

Raw sewage is collected in the collection system and conveyed by gravity to the wastewater treatment plant. The Arbor MHP wastewater treatment plant is an activated sludge package plant. Wastewater is discharged from the package plant to polishing tanks then is disposed of in seepage pits or gravelless leachfields. There are a total of 60 seepage pits and one gravelless leachfield area. Seepage pits and the leachfield are rotated between resting and in-service on a regular basis.

Wasted sludge is discharged to the sludge storage tank where it is aerobically digested. The digested sludge is hauled to the City of Lodi regional wastewater treatment system as needed.

The seepage pits are 60-inches in diameter and 25-feet deep with a perforated PVC pipe positioned in the center of each well. The pipe is positioned in the center of each well with crushed rock packed around the pipe and on the bottom of the well. The unsaturated zone between the bottom of each well and the shallowest reported groundwater level is approximately 25 feet.

The Discharger has experienced failure in the disposal area due to high concentrations of suspended solids in the effluent, which resulted in reduced permeability and reduced infiltration. In response to the failure, the Discharger has improved operation of the system to reduce the concentration of suspended solids in the effluent. This Order requires the Discharger to prepare an Operation and Maintenance Plan, an Effluent Collection System Plan, a Groundwater Well Installation Workplan, a Groundwater Well Installation Report, and a Groundwater Quality Study Report.

Effluent Limitations

Effluent limitations are included in the WDRs. The limits address total dissolved solids (TDS), total suspended solids (TSS), and biochemical oxygen demand (BOD). The limits were included to allow the Discharger to continue operation of the wastewater treatment system while groundwater quality data is collected. The effluent limits were selected based on the treated wastewater concentrations.

Total Dissolved Solids

The TDS limitation is based on TDS concentrations in the water supply and treated wastewater. The use of the water by residents results in a TDS concentration increase of approximately 125 mg/L. The limit was set at 400 mg/L (monthly average) and 600 mg/L (daily maximum) based on two sample

events that characterized the supply water and the treated wastewater. TDS concentrations of 350 mg/L and 380 mg/L were reported in the treated wastewater.

Although there is no reliable groundwater quality information at this time, it is anticipated that continued discharge below the effluent limitation would be protective of the groundwater quality because some attenuation is anticipated in the unsaturated zone and a portion of the TDS may consist of biodegradable dissolved solids. Therefore, the discharge of wastewater with moderate increases of TDS in treated wastewater is acceptable

Total Suspended Solids

TSS was included as an effluent limitation because the site has historically discharged wastewater with elevated concentrations of TSS, which resulted in plugging the seepage pits. The reduced permeability of the seepage pits resulted in inadequate disposal capacity and spills of wastewater to the ground surface. By limiting the TSS concentration to the seepage pits, it is expected that disposal capacity can be maintained.

The limit was set at 40 mg/L (monthly average) and 80 mg/L (daily maximum) because the Discharger demonstrated that effluent quality could be reliably achieved as reported in the RWD. It is anticipated that continued discharge below the effluent limitation would be protective of the seepage pit infiltration capacity.

Biochemical Oxygen Demand

BOD was included as an effluent limitation for the same reason as TSS. Discharge of excessive BOD will result in plugged seepage pits and inadequate capacity.

The limit was set at 40 mg/L (monthly average) and 80 mg/L (daily maximum) because the Discharger demonstrated that effluent quality could be reliably achieved as reported in the RWD. It is anticipated that continued discharge below the effluent limitation would be protective of the seepage pit infiltration capacity.

Antidegradation

The antidegradation directives of Section 13000 of the California Water Code require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses and not others. Policies and procedures for complying with this directive are set forth in the Basin Plan (including by reference State Water Board Resolution No. 68-16, "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation" Policy).

Resolution 68-16 is applied on a case-by-case, constituent-by-constituent basis in determining whether a certain degree of degradation can be justified. It is incumbent upon the Discharger to provide technical information for the Regional Board to evaluate that fully characterizes:

- All waste constituents to be discharged;

- The background quality of the uppermost layer of the uppermost aquifer;
- The background quality of other waters that may be affected;
- The underlying hydrogeologic conditions;
- Waste treatment and control measures;
- How treatment and control measures are justified as best practicable treatment and control;
- The extent the discharge will impact the quality of each aquifer; and
- The expected degradation below water quality objectives.

In allowing a discharge, the Regional Board must comply with CWC section 13263 in setting appropriate conditions. The Regional Board is required, relative to the groundwater that may be affected by the discharge, to implement the Basin Plan and consider the beneficial uses to be protected along with the water quality objectives essential for that purpose. The Regional Board need not authorize the full utilization of the waste assimilation capacity of the groundwater (CWC 13263(b)) and must consider other waste discharges and factors that affect that capacity. The Discharger has not supplied the above information and therefore this Order does not allow the groundwater to be degraded.

Although this discharge has been occurring for years, the groundwater has not yet been monitored to determine if the discharge has caused an impact. In addition, certain aspects of waste treatment and control practices have not been and are unlikely to be justified as representative of best practicable treatment and control (BPTC). Reasonable time is necessary to gather specific information about the discharge and to make informed, appropriate, long-term decisions. Because the Discharger has not demonstrated that the treatment and disposal of the wastewater meets the criteria of Resolution No. 68-16, this Order states that no degradation of the groundwater is allowed. The Discharger is required to implement groundwater monitoring, and if degradation is detected, then will be expected to identify and implement BPTC practices to minimize or prevent the degradation.

Monitoring Requirements

Section 13267 of the CWC authorizes the Regional Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the state. In recent years there has been increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment civil administrative liability where appropriate.

The proposed Order requires certain influent and effluent monitoring as well as groundwater monitoring. In order to adequately characterize its wastewater effluent, the Discharger is required to monitor for settleable solids, total suspended solids, BOD, TDS, and nitrogen compounds. Standard minerals monitoring is required on an annual basis.

The Title 27 zero leakage protection strategy relies heavily on extensive groundwater monitoring to increase a discharger's awareness of, and accountability for, compliance with the prescriptive and performance standards. With a high volume, concentrated, uncontained discharge to land, monitoring takes on even greater importance. Title 27 regulations pertaining to groundwater monitoring and the detection and characterization of waste constituents in groundwater have been in effect and successfully implemented for many years. No regulation currently specifies similar criteria more suitable for a situation where extensive infiltration into groundwater occurs. However, where, as here, such infiltration occurs, it is appropriate that the Title 27 groundwater monitoring procedures be extended and applied on a case-by-case basis under Water Code section 13267.

The Discharger must monitor groundwater for representative constituents present in the discharge and capable of reaching groundwater and violating the groundwater limitation. The Discharger is required to install a network of groundwater monitoring wells to adequately characterize background water quality and potential groundwater impacts from the wastewater discharge. Due to cost considerations, the Discharger is not required to analyze the groundwater for every constituent that is present in wastewater. Instead, the Discharger is to analyze for representative constituents. If degradation is detected, then the Discharger would be required to fully define the extent of degradation, which would include analyzing the groundwater for other constituents (e.g., boron, chloride, sodium, etc.)

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. Additional information must be developed and documented by the Discharger as required by schedules set forth in the proposed Order. As this additional information is obtained, decisions will be made concerning the best means of assuring the highest water quality possible and that could involve substantial cost. It may be appropriate to reopen the Order if applicable laws and regulations change, but the mere possibility that such laws and regulations may change is not sufficient basis for reopening the Order. The CWC requires that waste discharge requirements implement all applicable requirements.

Surface water drainage is to the Mokelumne River.