

**PRIMA DESHECHA LANDFILL
AMENDED
2001 GENERAL DEVELOPMENT PLAN**

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GLOSSARY OF ACRONYMS

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ACOE	United States Army Corps of Engineers
amsl	Above mean sea level
AWMA	Aliso Water Management Agency
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CIWMB	California Integrated Waste Management Board
CIWMP	County Integrated Waste Management Plan
CUP	Conditional Use Permit
DFG	California Department of Fish and Game
EIR	Environmental Impact Report
ERF	Energy Recovery Facility
FESA	Federal Endangered Species Act
GDP	General Development Plan
HBP	Harbors, Beaches and Parks
HHWCC	Household Hazardous Waste Collection Center
IWMD	County of Orange Integrated Waste Management Department
JTD	Joint Technical Document
lbs/cy	Pounds per cubic yard
LCRS	Leachate collection and recovery system
LEA	Local Enforcement Agency
mcy	Million cubic yards
MOU	Memorandum of Understanding
MPAH	Master Plan of Arterial Highways
NCCP	Natural Community Conservation Plan
NEO	NEO California LLC
NPDES	National Pollution Discharge Elimination System

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GLOSSARY OF ACRONYMS

OCCP	Orange County Circulation Plan
PFRD	County of Orange Public Facilities & Resources Department
ppm	Parts per million
RDSI	Report of Disposal Site Information
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison Company
SCAQMD	South Coast Air Quality Management District
SDG&E	San Diego Gas and Electric Company
SDRWQCB	San Diego Regional Water Quality Control Board
SERRA	Southeast Regional Reclamation Authority
SWFP	Solid Waste Facility Permit
SO _x	Sulfur oxides
SWAT	Solid Waste Assessment Test
tpd	Tons per day
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WDRs	Waste Discharge Requirements
WMU1	Waste Management Unit 1
WMU2	Waste Management Unit 2

SECTION 1.0
INTRODUCTION

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1.0 INTRODUCTION

1.1 SITE DEVELOPMENT HISTORY

In February, 1973, the Orange County Board of Supervisors (Board of Supervisors) directed the adoption of a multi-use concept of refuse disposal/recreational development to establish the Prima Deshecha Landfill. At that time, it was determined that a master park plan was not necessary for the site. The disposal of municipal solid waste was initiated in 1976, in an area now known as Waste Management Unit 2 (WMU2). In December, 1976, a planning consultant was retained to prepare a General Development Plan (GDP) to combine both recreational and refuse disposal plans for the site.

An Interim Project Report/Environmental Impact Analysis for the Prima Deshecha site was submitted in August, 1978 to the County of Orange (County) Harbors Beaches and Parks (HBP) Commission. The report contained an Interim Plan and two ultimate Alternative Schematic Plans. Alternative 2 (an 81 million cubic yard refuse plan covering 800 acres of landfill area and 200 acres of borrow area for a total of 1,000 acres) was recommended by the Commission and subsequently adopted by the Board of Supervisors in December, 1978. That Alternative Schematic Plan was further refined and provided the basis for the 1979 Prima Deshecha GDP as well as the initial and current Solid Waste Facilities Permit (SWFP) No. 30-A-0019 for the site. In 1980, the disposal operations were moved to a second active area known as Waste Management Unit 1 (WMU1).

In 1994, an updated draft GDP was prepared and described in a Program Environmental Impact Report (EIR 548) which was certified in November, 1995. The draft 1995 GDP itself was not approved pending additional landfill design considerations to be negotiated with the City of San Clemente. Negotiations with the City of San Clemente were completed and the Board of Supervisors approved a Memorandum of Understanding (MOU) with the City of San Clemente on July 1, 1997. The MOU-approved design features have been incorporated into this 2001 GDP, which replaces the 1979 GDP and serves as the future planning guide for the Prima Deshecha site. Also incorporated into this 2001 GDP are related design and operations conditions for development of the landfill within the jurisdiction of the City of San Juan Capistrano. These are

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documented in a MOU approved by the Board of Supervisors on September 12, 1995 and a Conditional Use Permit (CUP) approved by the City of San Juan Capistrano on December 5, 1995. The previously proposed 1995 GDP has been modified in an effort to ensure compliance with the design and operational conditions for both Cities while also remediating a landslide which occurred in May, 1998 in a stockpile area south of the Prima Deshecha Cañada stream. This modification has resulted in enlarging the limit of the Zone 1 landfill plan and re-routing to the south a portion of the stream impacted by the landslide. This results in a total landfill area for the entire site of approximately 800 acres, as compared to 1,000 acres in the approved 1979 GDP.

The 2001 Prima Deshecha GDP was further modified as an outcome of negotiations between the County and Rancho Mission Viejo, LLC (RMV), the adjacent landowner to the north and east of the Prima Deshecha Landfill property. These negotiations resulted in a Settlement Agreement and Covenant and Declaration of Restrictions (collectively referred to herein as RMV agreements) on 945 acres comprising the eastern portion of the Prima Deshecha property. The RMV agreements identify a Landfill Operations Area and Restricted Area on the eastern 945 acres of the Prima Deshecha Landfill (referred to in the RMV agreements as the Burdened Property) and specify conditions and restrictions for each of those areas. One design change to the 2001 GDP due to the RMV agreements is a reduction in the Zone 4 refuse footprint previously established at 412 acres to 409 acres. The total Zone 4 area remains the same at 473 acres. The agreements also identify RMV's Benefited Property and place conditions on a No-Build Area within the Benefited Property adjacent to and east of the Prima Deshecha property. These agreements also contain requirements for La Pata Avenue funding, maintenance and litter control. Reference is made to the RMV agreements and conditions placed on the Prima Deshecha Landfill property in this GDP, where appropriate.

EIR 575 addresses environmental impacts resulting from the 2001 GDP for the property, which includes replacing the existing long term plan for the landfill, recreational uses and traffic circulation. EIR 575 also addresses near-term activities planned for the next phases of landfill development.

1.2 SITE LOCATION

The 1,530-acre Prima Deshecha Landfill site is located in south Orange County (see Figure 1). The County-owned site includes acreage within the jurisdictions of

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the cities of San Juan Capistrano (570 acres) and San Clemente (133 acres). The remaining 827 acres are within unincorporated Orange County. The operator of the site, County of Orange Integrated Waste Management Department (IWMD), has prepared a GDP for the site. The GDP is a planning document to guide coordinated long-term implementation of both interim and ultimate site development uses.

The Prima Deshecha site lies in the hills of southeastern Orange County. Ground elevations on the site range from 230 feet above mean sea level (amsl) at the southwest boundary of the site to a maximum elevation of 1,125 feet amsl at the northeast boundary of the site. The Prima Deshecha Cañada watercourse traverses the site from the northeast to the southwest. Two major utility easements, including a 150-foot wide San Diego Gas and Electric (SDG&E) easement and a 200-foot wide Southern California Edison (SCE) easement, extend through the central portion of the site which separate the western (Zone 1) and eastern (Zone 4) components of the landfill property. These features are illustrated in Figure 2.

1.3 CURRENT SITE STATUS

WMU1 (see Figure 2), as well as newly lined waste disposal areas, Phases A and A1, located directly east and north of WMU1, respectively, overly 170 acres of the western portion of the site and is located entirely within the City limits of San Juan Capistrano. Landfilling of municipal solid waste with some biosolids (i.e., digested sewage sludge) continues at the site, with a total in-place refuse volume (as of January, 2001) of 13.1 million cubic yards (mcy). Refuse has also been landfilled in WMU2 (see Figure 2), a 33-acre portion of the site located east of the current entrance facilities in unincorporated Orange County. The in-place refuse volume (as of January, 2001) in WMU2 is approximately 1.5 mcy. The first lined waste disposal area for the site, referred to as Phase A, was developed in 1998 and is located east of WMU1. Landfilling has proceeded easterly into Phase A and north into Phase A1. WMU1 is currently used as the wet weather disposal area.

The Prima Deshecha Landfill is a state-designated Class III facility which is permitted for the disposal of non-hazardous municipal solid waste and biosolids. No liquid or hazardous wastes are accepted or proposed for on-site disposal. The IWMD currently operates under Waste Discharge Requirements (WDR 93-86 and WDR 89-102) issued by the San Diego Regional Water Quality Control Board (SDRWQCB), a SWFP (No. 30-AB-0019) issued by the County Health Care Agency, Environmental Health Division which is the Local Enforcement

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Agency (LEA) and concurred on by the California Integrated Waste Management Board (CIWMB), and CUP 95-4 issued by the City of San Juan Capistrano, as well as other permits required for environmental monitoring and control systems.

In addition to the landfilling operations, related facilities and activities at the site include:

- Personnel facilities, site office, and equipment maintenance facilities.
- An energy recovery facility (ERF) that converts landfill gas to electricity.
- A Household Hazardous Waste Collection Center (HHWCC) and a facility for the temporary storage of hazardous materials.
- One fee booth and two scales.
- A landfill gas collection and flaring system for the site, which consists of vertical and horizontal extraction wells, collection piping and a flaring facility.
- Groundwater monitoring wells located in the vicinity of the current and future refuse disposal areas.
- A groundwater extraction system located downstream of WMU1, consisting of a pump station and four groundwater extraction wells within the alluvial material of the Prima Deshecha Cañada watercourse.
- Temporary bridge/underpass for landfill operations.
- A leachate collection and recovery system (LCRS) for the lined areas, including a 10,000 gallon collection tank.

Since the site began operations in 1976, there has been substantial residential development in the area, particularly to the south within the City of San Clemente. The 2001 GDP takes the current and projected proximity of urban development into account.

1.4 SUMMARY OF THE 2001 GDP

The Prima Deshecha 2001 GDP provides for the effective management of multiple uses on the site, including solid waste disposal, various regional park and recreational uses, and implementation of a key arterial highway and road extension included in the Master Plan of Arterial Highway (MPAH), Orange County Circulation Plan (OCCP), and Circulation Elements of the Cities of San Juan Capistrano and San Clemente.

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The GDP divides the total 1,530-acre site into five zones for planning purposes as shown on Figure 3 and briefly described below:

Zone Descriptions

- Zone 1:** This zone includes the currently active refuse disposal area. In approximately 18 years, as of January, 2001, or the year 2019, the Zone 1 landfill would be completely filled. After closure activities have been completed, satisfactory access established, and sufficient settlement has occurred, the ultimate recreational uses as identified in a needs analysis could be implemented.
- Zone 2:** This zone identifies all of the recreational trails that traverse the property. On-site city trails around Zone 1 can be used throughout the development of Zones 1 and 4 as long as the protection of public health and safety can be provided. Trails depicted along the perimeter of Zone 4 will be available during filling operations of Zone 1, but will be closed to the public during the filling operations in Zone 4. The trails along the perimeter of Zone 4 are restricted by the RMV agreements to ten (10) feet below and to the south and west of the existing ridgeline between the Prima Deshecha property and adjacent RMV property. The GDP proposes to eventually connect the County trail along Zone 4 with on-site City trails proposed along Zone 1 to provide a complete loop for trail users. Discussions commencing in January, 2001 with representatives of the Cities of San Clemente and San Juan Capistrano are focused on identifying specific trail alignments around Zone 1. These on-site trail connections would not occur until Zone 4 is closed and a trail crossing under future La Pata Avenue is provided to the south.
- Zone 3:** This zone contains native vegetation, including coastal sage scrub habitat used by the California gnatcatcher, and mixed chaparral. The intent of the GDP is to retain the majority of Zone 3 in a native state. Some habitat enhancement could be implemented, where portions of these areas have been disturbed in the past or to compensate for lost habitat associated with the development of the GDP or with other development in Orange County.

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- Zone 4: This zone is planned for future refuse disposal after Zone 1 is filled to capacity. Two western boundaries for this zone have been defined. The boundary ultimately established depends on whether the Zone 4 landfill or La Pata Avenue is constructed first (see Figures 3A and 3B). This zone is to remain undisturbed during development of Zone 1, and following its closure, serve as the final refuse disposal site on the property. Following closure of Zone 4, planned for the year 2067 and after sufficient settlement has occurred, implementation of the ultimate recreational activities can begin. These activities would be determined through a needs analysis and park plan undertaken near the time of closure. The current post-closure designated use for Zone 4 is a regional park.
- Zone 5: This zone encompasses the area of disturbance for construction of La Pata Avenue. The boundaries of Zone 5 were defined based on a conceptual alignment design and the assumption that La Pata would be constructed prior to the Zone 4 landfill (see Figure 3A). Should the Zone 4 landfill be constructed first (Figure 3B) and based on the final design for La Pata, the area of disturbance for La Pata would be modified.

The GDP does not specify a defined set of uses for the remaining property outside the boundaries of the five zones. This property is currently used for ancillary landfill operations (i.e., landfill gas flare facility, ERF), landfill infrastructure (i.e., scalehouse, field offices) and viewshed protection. In the future it could accommodate additional uses such as biological mitigation, flood control facilities, recreational trail staging area(s) and open space buffer.

The landfill plan for Zones 1 and 4 provides for approximately 116.8 mcy of remaining refuse capacity (as of January, 2001). The total site capacity, including an in-place refuse volume of 14.6 mcy in Zone 1 and WMU2 (as of January, 2001), is 131.4 mcy (see Table 1, page T-1). Features accommodated by the GDP for continued development of the landfill include a liner and LCRS in future areas of the landfill zones, relocation of the HHWCC, continued expansion of the landfill gas control system, modifications to the landfill gas control flare station, an ERF and potential acquisition of potable water (which will be the subject of subsequent environmental analysis). The GDP also identifies locations for detention basins and permanent LCRS facilities. Recreational uses

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would ultimately be provided in two of five zones on the site. The GDP also accommodates the extension of Camino de los Mares and La Pata Avenue through the site, consistent with approved alignments shown on the MPAH.

1.5 PURPOSE AND NEED FOR THE PROJECT

The shortage of landfill space in the urban areas of Southern California is well documented and the value of the Prima Deshecha site as a permitted landfill to the Southern California region is to be preserved and protected.

A GDP is a planning document to guide coordinated long-term implementation of both interim and ultimate site development uses. The GDP for the Prima Deshecha site also provides for effective management of multiple uses on the site which include solid waste management, regional park and recreational development and completion of a major link in the MPAH. The GDP enables concurrent implementation of these activities through a phasing program which allows multiple uses to be adequately separated or buffered during site development.

The GDP describes numerous operational needs, planning issues, opportunities and constraints, which have influenced the configuration and phasing of the GDP. It should be recognized that meeting solid waste disposal needs is the most important function on the site and will take precedence over other possible uses. To that end, the general development concept is for the site to function primarily as a solid waste disposal facility and, secondly, to provide interim and ultimate recreational opportunities for the general public. No priority issue is foreseen with implementation of the MPAH, which is accommodated by the two landfill zones.

1.6 PROJECT OBJECTIVES OF THE GENERAL DEVELOPMENT PLAN

Implementation of the 2001 Prima Deshecha GDP is intended to achieve several solid waste management, circulation and recreation objectives. The objectives identified below were utilized in the preparation of the GDP, particularly with regard to the landfill design and operations.

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1.6.1 SOLID WASTE MANAGEMENT OBJECTIVES

- Optimize the use of the site as a long-term waste disposal facility.
- Provide for consistency with the County of Orange Integrated Waste Management Plan (CIWMP), adopted County and applicable City General Plans, zoning regulations and compliance with City MOU design and operational conditions.
- Provide a long-term, regional solid waste management facility with appropriate safeguards to protect public health and safety as well as water, air, soil and other important resources which exist on-site and on surrounding property.

1.6.2 CIRCULATION OBJECTIVES

- Provide for regional as well as local access to landfill operations and recreational activities on the site.
- Accommodate adopted MPAH arterial highway alignments through the site.

1.6.3 RECREATION OBJECTIVES

- Identify preferred activities that include a variety of passive and limited active recreational uses which respond to the changing recreational needs in the region.
- Provide a phased recreation concept for implementation of both interim and ultimate recreational uses as solid waste management activities allow.
- Consider recreation goals and objectives of the Orange County Master Plan of Regional Parks as well as with those identified in the San Juan Capistrano and San Clemente General Plans.
- Provide opportunities for the benefit of the public to develop and operate recreation facilities within the regional park.
- Preserve regionally significant habitat on the site which will be set aside as natural reserves and which can be utilized throughout the region for educational purposes.
- Provide essential linkages to the existing multiple use trails in the area which will also serve the recreation elements of the GDP.

SECTION 2.0
GDP ELEMENTS

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2.0 GDP ELEMENTS

The 2001 Prima Deshecha GDP encompasses the following three elements:

- Landfill Plan
- Circulation Plan
- Recreation Plan

The 2001 Prima Deshecha GDP provides for the effective management of multiple uses on the site, including solid waste disposal, implementation of key arterial highway and road extensions included in the MPAH, OCCP, and Circulation Elements of the Cities of San Juan Capistrano and San Clemente and various regional park and recreational uses.

The three elements are considered together in the 2001 GDP in order to ensure compatibility of the existing, interim and ultimate uses on the site as well as to achieve the goals and objectives of approved local and regional plans and policies. It is important to note that unless stated otherwise, references made to the GDP refer to all three of the elements listed above.

2.1 LANDFILL PLAN

2.1.1 INTRODUCTION

The 2001 GDP divides the total 1,530-acre site into five zones for planning purposes as shown on Figure 3. Two zones are designated for landfilling. The 125-acre WMU1 landfill is located within Zone 1 which ultimately provides for 271 total acres (see Figure 4) to be filled over approximately 18.1 years (from January, 2001). The total acreage for Zone 1 including non-refuse cut areas is 319 acres (as depicted on Figure 3). Zone 4 is designated for the development of a future landfill area in the east central portion of the site (see Figure 4). Zone 4 consists of 409 acres (including the original 33-acre disposal area, WMU2) to be filled with refuse and would be in active operation for approximately 48.3 years following the closure of Zone 1. The total acreage for Zone 4 including non-refuse cut areas is 473 acres (as depicted on Figure 3).

The Prima Deshecha landfill is permitted to accept up to 4,000 tons per day (tpd).

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The site life for Zone 1 is based on an incremental increase in the disposal rate of 2,500 tpd in 2000 to 4,000 tpd by year 2014, and 4,000 tpd thereafter. The site life for Zone 4 is based on a daily refuse inflow rate of 4,000 tpd. Details on these assumptions are presented in Section 2.1.2.

The entrance facilities, field offices, ERF and landfill gas flare station are located in the north central portion of the site just west of Zone 4. The HHWCC, which is utilized to collect household hazardous waste (HHW) generated by households within the County, is currently located in Zone 1 and is planned to be relocated near the field offices. The collected HHW is temporarily stored on-site and disposed off-site or recycled appropriately. The HHW is not disposed in the landfill.

2.1.2 DESIGN CRITERIA

Prior to preparing refined plans for the future landfill operations in Zones 1 and 4, a number of landfill design criteria were developed. The criteria balanced applicable regulatory standards with surrounding land use compatibility and on-site environmental considerations. Although these criteria reduce the potential capacity of the site for landfilling, the GDP does provide for a substantial landfill life of approximately 66 years, as of January, 2001. The established criteria are considered critical to creating an optimal relationship between waste disposal operations and other site uses.

The landfill development criteria consider grading and height limits, site capacity, and design issues, as described in the following sections.

Landfill Grading and Height Limits

The first step in preparing plans for landfilling operations was to determine the boundaries of areas that could be available for landfilling. Establishment of the landfill footprints was primarily driven by geotechnical recommendations for slope stability. Consideration was also given to avoiding environmentally sensitive areas, ridgelines, areas that had high visibility from current and future development, transmission line corridors and future roadway easements. The Southern California Edison Company (SCE), San Diego Gas and Electric Company (SDG&E) and existing and future public roadway easements through the site were to be avoided in establishing refuse boundaries. Grading and

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height limits imposed by the Cities of San Clemente and San Juan Capistrano, as stated in MOU's with these Cities and by the RMV agreements discussed in Section 1.1, are reflected below:

City of San Clemente Requirements

Grading and Height Limits:

- The final grading elevation in Zone 1 is to be at a height below the level of the ridgeline behind Zone 1 as viewed from Truman Benedict Elementary School located at 1251 Sarmentoso, San Clemente, California 92673.
- The final grading elevation of Zone 4 is to be no higher than 1,010 feet, thereby minimizing the visual impact to residents of the City.
- It is understood that the side slopes of the landfill may be steeper than what is reflected in EIR No. 548 as may be determined by the County to be necessary to offset landfill capacity lost due to the height limits described above and in the MOU.

Zone Boundary Adjustments:

- The boundaries of Zone 1 to be adjusted from the Zone 1 boundaries described in EIR No. 548, with the understanding that additional boundary adjustments may be required for Zone 1 due to geotechnical conditions, drainage, and other environmental constraints provided such adjustment does not result in a final grading plan with a height limit greater than that specified above and in the MOU.
- The boundaries of Zone 4 to be adjusted as may be determined by the County to be necessary to offset landfill capacity lost due to the height limits described above and in the MOU, provided that any additions to the landfill resulting from the modification of the Zone 4 boundaries are not visible from within the City limits.

City of San Juan Capistrano Requirements

For that portion of the site within the boundaries of the City of San Juan Capistrano, the following conditions apply:

- According to the CUP, the permittee shall not extend any portion of the landfilling operation above the plane or outside the surface area of the fill design as established by the GDP, Prima Deshecha Landfill and the MOU

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executed between the City and County. "Landfilling operation" refers to that portion of the subject property in which waste is to be permanently placed and then buried under daily, interim and final cover material.

- According to the CUP, with the exception of previously established on-site borrow areas, the permittee shall excavate cover material only within the refuse disposal limits established by the GDP. This condition does not prohibit excavations outside those areas for the purposes of constructing drainage structures or noise abatement devices; performing work necessary to abate hazards to public or private property; or assuring slope stability.
- According to the MOU, the County will install and maintain final landfill which result in no silhouetting above and along the General Plan - designated "major ridgeline" which forms the northern and western edges of the landfill site boundary such that no landfill operations or placement of landfill materials will visually encroach upon the designated General Plan ridgeline or be viewed from Ortega Highway.

Rancho Mission Viejo, LLC (RMV) Requirements

The RMV agreements contain grading and fill restrictions on a Landfill Operations Area and a Restricted Area within 945 acres of the east portion of the Prima Deshecha Landfill to minimize effects of the landfill operation on RMV's Benefited Property to the north and east of the landfill property.

A Covenant and Declaration of Restrictions:

- Height Restriction – The height of any waste or refuse placed within the Landfill Operations Area shall not exceed one thousand and ten (1,010) feet above mean sea level unless and until appropriate measures (including any measures required by Applicable Laws) are taken to screen from view any portion of such waste or refuse that is visible from RMV's Benefited Property.
- Design Adjustments – The County shall adjust the design of any landfill within the Burdened Property and/or take such other steps as may be necessary to prevent or mitigate any landfill-related costs and impacts on the Benefited Property.
- Site Grading and/or Soil Filling – The County may perform site grading and/or soil filling (to maximize capacity) within the Restricted Area in support of Landfill Operations so long as the same are not visible from the Benefited Property.
- Ridgeline Buffer – So as to maintain a buffer zone and natural barrier to minimize viewing, noise, dust, litter, and other effects, if any, of Landfill Operations on the Benefited Property, the height and natural contour of the existing ridge lines most immediately contiguous to the boundary line between the Prima Deshecha Landfill property and the RMV Benefited Property shall

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not be materially modified by the County; provided, nothing in this provision shall preclude the installation and maintenance of landscaping along said ridge line.

Settlement Agreement:

- **Zone 4 Phasing of Landfill Activities** – County anticipates that landfill operations within the Landfill Operations Area will occur in phases moving in a west to east progression, and that the placement of refuse within the easterly portion of the Landfill Operations Area will not commence until after the year 2025. County, shall in good faith, consider any alternatives or suggestions tendered by RMV prior to materially altering the general west-to-east phasing scheme.
- **Viewshed Analysis** – County is required to conduct a viewshed analysis with respect to the impacts of Zone 4's development on the RMV Benefited Property, and, if needed, prepare and implement a viewshed protection and landscaping plan ("VPL Plan").

Based on these limitations, two landfill zones have been established which represent approximately 800 total acres of the 1,530-acre site (see Figure 4). Zone 1 consists of a total of 319 acres in the western portion of the site, of which 271 acres will be refuse fill areas. The final landfill grades for Zone 1 are below the major ridgelines which form the northern and western edges of the landfill site boundary as viewed from Ortega Highway, the valleys of San Juan Capistrano and the Truman Benedict Elementary School in San Clemente. Line of sight cross-sections for the Zone 1 final grades are presented in Figures 5, 6 and 7 from a viewpoint in San Juan Capistrano and from the Truman Benedict Elementary School in San Clemente.

Zone 4 provides a total of 473 acres in the east central portion of the site for future landfill development. The Zone 4 refuse fill area including that area previously filled in WMU2, is 409 acres. The Zone 4 landfill has a maximum elevation of 1,010 feet as previously described in EIR 548 and in accordance with MOU requirements of the City of San Clemente. The Zone 4 footprint has been established to minimize the need for landslide stabilization mitigation. Zone 4 final slopes and deck area have been modified to provide a more natural, undulating appearance.

Criteria Used to Determine Site Capacity

The following site capacity criteria was developed for planning purposes to

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estimate the associated site life and potential impacts of landfilling on regional traffic, air quality, etc.:

- Incremental increase in average daily refuse input of 2,500 tpd from January 1, 2001 to December 31, 2003; 3,000 tpd from January 1, 2004 to December 31, 2008; 3,500 tpd from January 1, 2009 to December 31, 2013; and 4,000 tpd from January 1, 2014 to the end of the Zone 1 life.
- Zone 4 average daily refuse input assumed to be 4,000 tpd.
- Average daily refuse input includes up to 350 tpd of biosolids, over a six-day week. The biosolids input meets or exceeds the current and projected needs of the South Orange County Wastewater Authority (SOCWA) and other agencies.
- Average effective density of waste in-place for Zones 1 and 4 of 1,333 lbs/cy; no net export or import of soil for cover material.
- Soil cover material usage based on a volume ratio of disposed refuse to cover soil of 4:1, including the use of tarps, greenwaste, or other alternative daily covers.
- The capacity and life of the site could be increased or decreased based on changes in landfill design standards and regulations, changes in daily cover use and final cover requirements, changes to the assumed refuse inflow rates and other similar changes.

Another provision to protect the future solid waste disposal capacity of landfills in California is the California Integrated Waste Management Act of 1989 (AB 939) requirement to maximize the diversion of recyclable materials from landfilling. Materials such as plastics, paper, aluminum and vegetative matter, if not landfilled, can result in a substantial reduction in the amount of refuse deposited in landfills. In consideration of the policy to use landfill capacity for revenue by importing refuse from adjacent counties, the current estimates for solid waste disposal under the GDP represent an estimated maximum disposal rate for the near future, notwithstanding implementation of the AB 939 requirements for the diversion of recyclable materials from landfilling.

Criteria Related to Site Design

The following principal design criteria for development of the landfill are based on State minimum standards:

- Minimum top deck slope of three (3) percent.

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- Finished surface slopes of 3:1 between benches, 3.5:1 gross (see Figure 8).
- Interior interim surface slopes - 3.5:1.
- Access roadway width - 50 feet.
- Maximum access roadway slope – seven (7) percent.
- Cut slopes inclined as permitted by geology and liner stability. The maximum depth will be used under these constraints.
- Bottom slope – two (2) percent minimum and maximum as permitted by fill stability and constructability.
- Maintenance and drainage benches - 15 feet wide measured level from the flow line. Final maintenance and drainage benches - spaced at 40-foot vertical intervals, assuming 20-foot lifts.

Geotechnical Design Criteria

The Prima Deshecha site is part of the Peninsular Ranges Province of Southern California. Exposed bedrock materials consist predominantly of marine and nonmarine sedimentary rock of the Capistrano and Monterey formations and the San Onofre Breccia which are overlain by bedrock-derived landslides, modern alluvial deposits in the main drainage channels and various types of native soils. Economically useful geologic resources do not occur on-site, with the exception of materials which may be suitable for daily and final cover or liner construction in further development of the landfill. Given the low strength of some bedrock units and the potential instability of numerous landslides on the site, new slope failures and reactivation of existing landslides are possible. In fact, a landslide occurred in 1998 in a Zone 1 stockpile area and portions of a number of the larger landslides on the east portion of the site display evidence of recent movement under existing conditions. The footprints for Zones 1 and 4 have been configured to enhance stabilization of refuse fills. Other stabilization measures for unstable cut slopes in the various units of bedrock and landslide debris include construction of low angle (2:1) or shallower cut slopes, buttress and/or stabilization fills, and structurally reinforced fills.

2.1.3 ENVIRONMENTAL PROTECTION ELEMENTS

The design for landfill operations under the GDP includes a number of environmental protection elements which respond to the established GDP goals and applicable local, state and federal regulations. These elements include

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compliance with surface and groundwater monitoring requirements and air and gas monitoring requirements. These controls are described below:

Groundwater Protection Systems

Leachate is liquid which passes through the landfill, coming in contact with disposed wastes and possibly absorbing contaminants. The sources of moisture in a landfill may include: (1) rainfall which infiltrates the surface cover; (2) moisture in the refuse; and (3) moisture generated by decomposition.

Landfill regulations minimize the production of leachate by preventing infiltration. Infiltration reduction is accomplished by prohibiting disposal of liquid wastes in the landfill, effective drainage management which diverts surface water flows away from the landfill, separating the bottom of the landfill from groundwater by means of a liner, and placing a low-permeability final cover.

Drainage improvements for the site include perimeter storm drain channels around the fill areas, downdrains and terrace drains on the slopes and desilting basins. Final storm drain improvements are designed to accommodate flows from a 24-hour, 100-year storm event. The existing desilting basin at the south portion of Zone 1 will be enlarged and improved for future development of Zone 1. A detention/desilting basin between Zones 1 and 4 is proposed to meet stormwater detention requirements for ultimate development of the landfill. Interim desilting basins will also be constructed as part of on-going landfill operations.

WMU1 contains no liner or underlying LCRS, since landfill operations in this area were initiated in 1980, before the 1984 adoption of the California Code of Regulations (CCR) Title 23, Chapter 15 (now Title 27) which established standards for leachate control. The existing groundwater extraction system was constructed as a condition for acceptance of bio-solids at the landfill. The system consists of four groundwater extraction wells, which are situated in a line roughly perpendicular to the Prima Deshecha Cañada streambed and slightly downstream of the toe of WMU1. The purpose of these wells is to extract groundwater which is flowing downstream, away from the landfill, in the alluvium which fills the canyon bottom. The wells are situated so that groundwater flowing downstream under WMU1 through the alluvial aquifer can be captured, if leachate is detected in the groundwater.

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The collected leachate, if any, is tested and initially disposed off-site or applied to the surface of the landfill as a dust control measure. The final methods of disposal of landfill leachate must be approved by the SDRWQCB and the LEA. Eventually, depending on the quantities and composition of the leachate, including the degree of contamination, an on-site leachate treatment facility may be installed with the effluent being discharged to the public sanitary sewer system or used as on-site dust control. To date, the extracted groundwater has not been found to be affected by leachate and is used for landfill operational purposes.

For that portion of Zone 1 which is lined, leachate may be collected and disposed. In accordance with Title 27, new areas to be landfilled under the GDP will be underlain by a liner and LCRS. For the development of Zone 1, an alternative liner design petition was prepared and approved by the SDRWQCB in WDR 93-86, Addendum No. 1. The liner system design meets the requirements for alternative designs provided in Section III.A.1.b and Section III.A.3 of the State Water Resources Control Board Resolution No. 93-62. A typical cross-section of the alternative liner design is included in Figure 9.

Any variations of this design approach for the liner and LCRS will be submitted to the SDRWQCB for approval. Any liquid percolating through the landfill would collect and flow by gravity through the above-described system to storage tanks that will be located at the base of the landfill. Collected liquids will be tested prior to final disposition.

Air Quality Protection Systems

Landfill gas in the active fill area is currently collected by an active gas extraction system of horizontal collection piping and vertical wells. The gas is piped to the existing flare station and beyond that facility to the new energy recovery facility. As the landfill continues to receive refuse, the system will be expanded through the installation of both horizontal collection piping and vertical wells. Collected landfill gas will continue to be converted to electricity with additional flares installed as back-up as capacity requirements dictate. Some minor grading of the area may be necessary to create pads for additional flares and piping. Additional above-grade piping would be required to transport landfill gas from newly developed areas to the existing flare station and on to the energy recovery facility.

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As gas flows through the landfill gas collection system, it cools and moisture condenses, resulting in a liquid called condensate. Condensate is separated from the landfill gas and is currently collected in tanks for off-site disposal. The condensate may eventually be treated in a leachate/condensate treatment system prior to discharge or it may be piped to the flare station for combustion. The final disposal methods of landfill gas condensate must be approved by the SDRWQCB and the LEA.

The IWMD has provided for energy recovery as an alternative to continued flaring of the landfill gas. An Energy Recovery Facility (ERF) has been designed, built and is currently being operated by NEO California LLC (NEO) under a lease with the County. NEO will own the rights to all the landfill gas from the landfill for at least 20 years. The ERF is located north of WMU2 and northeast of the current scale house. The ERF accomplishes two objectives:

- The ERF provides additional capacity for the destruction of increasing quantities of landfill gas, a by-product of the decomposition of buried refuse.
- The ERF converts the gas to electricity, which is sold to SDG&E. Sufficient power may be generated to supply approximately 3,000 homes.

At closure, the site will still require a flare station and/or a gas utilization facility until landfill gas is no longer produced by the landfilled waste.

2.1.4 INTERIM AND FINAL REVEGETATION/LANDSCAPING

An important consideration of the landfill development, for erosion control as well as visual enhancement, is revegetation and landscaping of completed surfaces. Requirements for revegetation and landscaping for the Prima Deshecha Landfill are imposed by State requirements and by the Cities of San Clemente and San Juan Capistrano. Interim revegetation and landscaping requirements are included in the CUP with the City of San Juan Capistrano and the MOU with the City of San Clemente as summarized below:

CUP with City of San Juan Capistrano Requirements

- The final landfill slopes shall be concurrently reclaimed and revegetated within 90 days of completion. If directed by the LEA, the permittee shall install a temporary vegetation cover on all slopes and other areas that are to remain inactive for a period longer than 90 days.

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- To the extent possible, revegetation shall blend with species indigenous to the area and be drought tolerant and shall be capable of rapid establishment. Plant selection shall not include exotic, invasive species as determined by the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (DFG).

In addition to the above specific requirements of the CUP, the City of San Juan Capistrano has also requested that the use of Native California plants for revegetation be consistent with the existing plant palette bordering the landfill.

MOU with San Clemente Requirements

- Trees have been planted to screen the landfill in a location which has been approved by the City. The design of the treescape is described in plans and specifications titled "Prima Deshecha Landfill Mass Excavation Grading Plans for Zone 1 - Phase A," approved by the Board of Supervisors on May 13, 1997 and shall be in accordance with the "Tree Planting Plan" contained in those plans and specifications dated March 23, 1997.
- Interim landscaping treatment is to be provided consistent with erosion control measures required by current regulations.

As required by CCR, Title 27, final landscape plans are included in the existing Preliminary Closure and Post-Closure Maintenance Plan (1993). This document will be updated to reflect the closure design elements of the approved 2001 GDP, as part of the landfill SWFP revision process. The Final Closure Plan for each zone will be prepared two years prior to closure of each landfill zone and will include existing or modified landscape plans. A discussion of funding for final closure and post-closure improvements including landscaping is included in Section 2.1.5.

2.1.5 FINAL CLOSURE AND POST-CLOSURE MAINTENANCE FUNDING

In order to ensure that landfill operators are able to fund final closure improvements for their sites, Title 27 of the CCR requires that operators establish financial assurance mechanisms for both closure and post-closure.

The following describes IWMD's funding for landfill closure/post-closure costs in accordance with the CCR, Title 27.

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Closure

Title 27 of the CCR requires that IWMD establish a Closure Escrow Account for each active landfill and to fund each escrow annually so that sufficient funds are set aside for estimated closure costs at the time of closure. The amount required for closure is based on a Preliminary Closure Plan with cost estimates developed by IWMD and approved by the CIWMB in accordance with State regulations. The IWMD sets aside \$1.15 per ton of refuse disposed at each of its three active landfills for closure funding. The funds are deposited into a trust account and transferred annually to each landfill's Closure Escrow Account. The escrow amounts are calculated by dividing annual refuse tonnage disposed by remaining permitted landfill capacity and multiplying the result by the remaining closure cost amount. The Preliminary Closure Plan cost for the entire Prima Deshecha site approved by the CIWMB in February, 1993 is \$44,725,318. As of January, 2001, Zone 1 closure is anticipated in approximately 18 years and Zone 4 in approximately 66 years. As of December 31, 2000, the Prima Deshecha Landfill Closure Escrow Account balance is \$4,648,959.

Post-Closure

Title 27 allows the IWMD to guarantee post-closure funding for the landfills through an approved financial assurance mechanism known as a Pledge of Revenue. The Pledge of Revenue financial mechanism allows the IWMD to forego funding of the post-closure costs in advance and pay the costs as they occur, beginning when closure construction is complete and continuing annually through the 30-year post-closure period. The IWMD has elected to use the Pledge of Revenue financial assurance mechanism, and currently has no funds set aside for post-closure maintenance of the landfills at this time. However, under the IWMD Fifteen-Year Financial Plan, beginning in Fiscal Year 2003/04, IWMD will establish and begin funding a post-closure account within its Environmental Liability Reserve Fund. Funding for post-closure will be achieved by setting aside \$0.38 of the \$1.00 collected per ton for the Environmental Liability Reserve Fund.

Integrated Waste Management System Financial Stability

IWMD has developed a Fifteen-Year Financial Plan (Plan). Under the Plan, IWMD has developed tonnage and revenue assumptions and projections that

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incorporate both operations and regulatory compliance cost obligations, which include funds set aside for closure and post-closure activities as described above. An Independent Engineer has validated the assumptions and projections and concluded that IWMD cashflow and net operating income support the operation and maintenance of the disposal system, under its current per ton tipping fee.

2.2 CIRCULATION AND ROADWAY PLAN

2.2.1 INTRODUCTION

A key element of the GDP is the identification of the circulation and roadway improvements necessary to support the landfilling and recreation uses and to accommodate the arterial highway needs detailed in the currently approved MPAH, OCCP and City Circulation Plans. Internal, local circulation networks will be developed, as necessary, for the phased landfill operations and interim recreation use activities on site. Provisions for the future extension of La Pata Avenue through the site (Figure 11) as a major regional arterial link of the MPAH (Figure 1) are also included in this GDP. The currently approved MPAH and OCCP identify the approved ultimate capacity and conceptual alignment for this roadway.

Other roadways identified in the GDP include the extension of Camino de los Mares through the southwest corner of the site (see Figure 11). The circulation plans for the Cities of San Clemente and San Juan Capistrano identify the alignment for Camino de los Mares, which is proposed to connect to Camino Las Ramblas in San Juan Capistrano. As currently reflected on the MPAH, Camino Las Ramblas would be extended from its current terminus in a northeasterly alignment to the west and north of the landfill boundaries, eventually joining La Pata Avenue.

None of the arterial highway extensions will be constructed by the County IWMD as part of the landfill development. The County's construction of La Pata Avenue is neither contingent nor dependent on the development of the site in accordance with the GDP. Although not all of these circulation improvements will be implemented in conjunction with the GDP, it is important that the GDP not preclude the future development of these approved roadway extensions.

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2.2.2 ARTERIAL EXTENSIONS

The following section describes each component of the arterial circulation system (see Figure 11) including the alignment for the connection of La Pata Avenue through the site and the ability to extend Camino de los Mares and Camino Las Ramblas, given the configuration of the GDP. Although these roadways would not be developed as part of the GDP, this analysis was conducted to ensure that the GDP landfilling and recreational uses would not ultimately preclude their extension.

La Pata Avenue

La Pata Avenue currently consists of a 1.5-mile long, three-lane road providing access to the landfill between the northerly limits of the landfill and Ortega Highway. It provides two southbound (uphill) lanes and one northbound (downhill) lane. An extension of La Pata Avenue through the landfill is proposed in the current MPAH and OCCP which would be a new arterial highway accommodating regional transportation demands and could also serve current and future development of the landfill. This proposed roadway extension would also include some realignment and widening of the existing La Pata Avenue. Within the aforementioned limits, the MPAH classifies La Pata Avenue as a Primary Arterial Highway from Ortega Highway to just south of the southerly landfill property where it is then classified as a Major Arterial Highway to Avenida Pico. The San Juan Capistrano Circulation Element classifies La Pata Avenue between the landfill's southerly limits and Ortega Highway as a Secondary Arterial Highway which provides equivalent traffic capacity as the County's Primary Arterial Highway. The San Clemente Circulation Element classifies La Pata Avenue as a Primary Arterial Highway.

Ultimate MPAH and OCCP improvements would upgrade existing La Pata Avenue to its current designation of Primary Arterial Highway. The project would include a new four-lane extension of La Pata Avenue through the landfill to join the planned Avenida La Pata in San Clemente. The completion of La Pata Avenue between Ortega Highway and Avenida Pico would complete a major segment of the MPAH and OCCP and improve north-south circulation in the area. Various improvement alternatives for the La Pata Avenue alignment through the site have been previously identified and compared, including alternatives analyzed in Final EIR 548. The alignment, shown in Figure 11, from Ortega

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Highway through the site is the County Preferred Alignment as illustrated in the La Pata Avenue Project Report (November, 1996), which is a County staff-recommended alignment and has not been officially adopted. Should a different alignment ultimately be approved, adjustments in the GDP might be required.

Camino de los Mares

This existing Camino de los Mares roadway located within the City of San Clemente consists of a four-lane roadway terminating at the southern property line of the site. The extension of Camino de los Mares (north of its existing terminus in Forster Ranch at the southwest landfill boundary) to Camino Las Ramblas would create a secondary arterial highway as designated on the Cities' Circulation Plans. This road extension is shown on Figure 11 in the southwest corner of the property. There is sufficient property within the GDP boundaries, unaffected by landfill operations, to allow extension of this arterial highway. If this extension is constructed, a connection for alternate (southern) access to Zone 1, after closure of the landfill, could be developed.

Camino Las Ramblas

The MPAH indicates that Camino Las Ramblas will continue in a northeasterly direction from its intersection with the proposed Camino de los Mares extension and proceed adjacent to the westerly and northerly landfill boundaries, eventually joining La Pata Avenue (see Figure 1). The City of San Juan Capistrano passed a resolution on December 14, 1999 that stipulates the City's intention to pursue deletion of the Camino Las Ramblas extension to La Pata Avenue. Therefore, the City must submit a request to the OCTA to amend the MPAH. Prior to any action taken by OCTA, the City of San Juan Capistrano would be required to prepare and process a General Plan Amendment (i.e., Circulation Element) Amendment and appropriate CEQA documentation. If the amendment is approved by the City of San Juan Capistrano, the amendment would then be forwarded to the OCTA Board for action. The MPAH Amendment Process could take up to a year or longer to process through the OCTA.

An amendment to the MPAH as a result of actions taken by the City of San Juan Capistrano and/or San Clemente regarding the alignment of these arterial roadways may also necessitate a revision to the 2001 GDP to ensure consistency between the 2001 GDP Circulation Component and the MPAH.

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2.2.3 INTERNAL CIRCULATION SYSTEM

The general development concept is for the site to function primarily as a solid waste disposal facility and, secondly, to provide interim and ultimate recreational opportunities for the general public. To this end, the following criteria has been established for the internal roadway circulation plan:

- Landfill operations shall remain uninterrupted.
- Landfill operations traffic shall be separated from on-site recreational traffic.
- Landfill operations must be allowed to cross under the SDG&E and SCE electrical transmission lines without interrupting traffic flow on La Pata Avenue, if constructed.
- Refuse truck traffic will be approaching the landfill from the north via Ortega Highway and La Pata Avenue.
- If La Pata Avenue is eventually connected to the City of San Clemente roadway system, some trucks collecting refuse in San Clemente may approach the landfill from the south. (However, in accordance with the MOU with the City of San Clemente, haulers utilizing the landfill for refuse disposal cannot use Camino de los Mares as an access route. Also, in the event that the County contracts with haulers to import waste to the landfill from outside Orange County, and access to the landfill via San Clemente City streets is required, approval of a designated haul route shall first be obtained from the City of San Clemente, which shall be compensated for that access in accordance with the MOU.)

Other issues considered in developing the internal circulation system include protection of sensitive biological resources, aesthetic considerations regarding ridgeline impacts, geotechnical constraints and physical constraints associated with the existing utility easements.

The conceptual circulation plan, shown in Figure 11, also identifies individual on-site access roads, provides for the connection of La Pata Avenue and for the extension of Camino de los Mares through the site.

The proposed site access and circulation system is intended to segregate existing and future landfill-related traffic from traffic generated by interim recreational uses. The goal of segregation is complicated by the dynamic nature of landfill-related circulation patterns which will continue to change as the fill area elevation increases and as operations shift from Zone 1 to Zone 4. Currently,

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landfill access is provided by La Pata Avenue which extends south from Ortega Highway and terminates at the northern boundary of the landfill site.

After the Zone 1 landfill is closed, an intersection at the landfill entrance is proposed to separate Zone 4 landfill traffic from recreational traffic accessing the regional park or golf course and multiple-use trail staging areas proposed directly to the west of the entrance facilities. After entering the site, landfill traffic for Zone 4 would initially use a northerly perimeter road. Eventually, landfill traffic may access Zone 4 from a new scalehouse location to the south from the La Pata Avenue extension (see Figure 11). These new entrance facilities in the middle of the property ultimately could be used for Zone 4 recreational uses following closure.

2.3 RECREATION ACTIVITIES PLAN

2.3.1 INTRODUCTION

Proposed recreational uses on the Prima Deshecha site should respond to the needs of south Orange County residents. Various agency groups representing the Cities of San Juan Capistrano and San Clemente, the Talega Valley Reserve and the County of Orange have previously recommended that the proposed recreational uses on the site take into consideration the existing recreational activities adjacent to or near the project site (i.e., multiple use trails). These uses should also be consistent with the County of Orange Master Plan of Regional Recreational Facilities which identifies proposed future recreational facilities.

2.3.2 RECREATIONAL USE POTENTIAL

Given the variety of possible recreational uses on the site, research was previously conducted to determine whether the recreational uses would be compatible with adjacent land uses designated on the General Plans of the adjacent cities and the County of Orange. Specifically, the Orange County Public Facilities and Resources Department/Harbors, Beaches and Parks (PF&RD/HBP) and the Cities of San Juan Capistrano and San Clemente, through the public review process for EIR 548, developed a list of possible recreational uses including a regional staging area and multiple use trails which are currently appropriate to meet the demands of county-wide residents. However, these demands may change over time. They will, therefore, be re-evaluated in a needs

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analysis prior to the time of landfill closure, when the recreational needs can be assessed with greater certainty. EIR 548 was prepared to serve as the environmental documentation for the 1995 Prima Deshecha GDP. The 1995 proposed GDP also included Landfill, Circulation and Recreation Components and was intended to be the long-range planning program for landfill, circulation and recreation programs occurring on the subject property. Although the proposed 1995 GDP was not approved by the Orange County Board of Supervisors, Final EIR 548 was certified in November 1995.

2.3.3 PHASING FOR INTERIM AND ULTIMATE RECREATIONAL USES

The purpose of the recreation plan component of the GDP is to identify opportunities and locate sites for various interim and ultimate recreational uses in the context of pre- and post-closure landfill operations. Figure 3 shows areas designated for recreational development and landfill operations. The GDP is divided into five zones which delineate current and future landfill operations, and potential interim and ultimate recreational areas. Discussions commencing in January, 2001 with representatives of the Cities of San Clemente and San Juan Capistrano are focused on identifying specific trail alignments around Zone 1. Interim uses are those recreational activities which can occur during landfilling operations on the site. The primary use of the site is as a landfill. While waste management operations are occurring, however, limited interim and ultimate recreational activities can occur on other locations at the site depending on the status of landfill closure, satisfactory access and protection of public health and safety.

As previously illustrated, Figure 3 depicts alignments for regional and local riding and hiking trails throughout the site in areas designated as Zone 2. Although some section of these trails have been constructed, the majority are not yet built. None of the trails on or in the immediate vicinity of the site are yet constructed. For the majority of these trails, final alignments have not yet been determined. Therefore, it is not possible to predict when an individual trail would be completed and open for use by the public. Trails depicted along the perimeter of the Zone 4 landfill area will be available as interim recreational use only during filling operations of the Zone 1 landfill. Once landfill operations are moved to Zone 4, it is proposed that this perimeter trail be closed to the public based on protection of public health and safety. PF&RD/HBP may evaluate the possibility of relocating this trail away from landfill operations. This would depend upon its use and

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importance as a regional trail and the existence of a through trail along the western perimeter of the site at that time.

A regional park or golf course (see Figure 10) for Zone 1 is a viable use which can be implemented as soon as the Zone 1 landfill is closed, sufficient settlement has occurred and concessionaires (in the case of a golf course) are identified. However, a recreation needs analysis will be performed just prior to Zone 1 closure before a final use plan is adopted. As mentioned above, trails may also be implemented in those areas which are unaffected by landfill operations or where landfilling has been completed and formally closed. This allows for staging of recreational uses over an extended time frame when landfill operations would also be occurring on the site.

An ultimate regional park recreational use, the proposed Prima Deshecha Regional Park as depicted on the Master Plan of Regional Recreational Facilities of the Recreation Element, has been designated for Zone 4. Although the PDL site has been designated as "Regional Park" by the County on the adopted Land Use Element, ultimate regional park recreational uses have not been identified for Zone 4. However, Zone 4 will not be available for regional park use until after the closure of the Zone 4 landfill, which is not anticipated until about 2067. Consequently, a commitment to implement specific uses is not included in the 2001 GDP since recreational demand for this park might be quite different by that time. A needs analysis and park plan reflecting the recreational needs of south Orange County residents will be more appropriately developed nearer to the time of closure of Zone 4.

2.3.4 NATURAL OPEN SPACE

In addition to recreational uses, two areas of the site will be retained as natural open space. Zone 3 contains two natural areas on the site (see Figure 3) which will not be impacted by landfill operations and should be protected and retained in their natural state in concert with the Natural Community Conservation Plan (NCCP) program being developed by the County of Orange, landowners, environmental groups and resource agencies. These natural areas include habitat used by the California gnatcatcher which is an avian species protected by the Federal Endangered Species Act. Some habitat enhancement may be implemented on-site subject to the provisions of an approved NCCP, where

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habitat areas were disturbed in the past or to compensate for habitat lost as a result of implementation of the GDP landfilling, circulation and recreational uses.

2.3.5 REGIONAL PARK FINANCING PLAN

The PF&RD/HBP provides administrative, planning, and operational services for the County regional park system. Funding for PF&RD/HBP is provided from a percentage of County property tax revenues dedicated to the regional park system. PF&RD/HBP Capital Project funds are allocated based upon rating and ranking criteria specified within their Five-Year Capital Plan.

The Five-Year Capital Plan is updated annually. County regional park programs and construction of other potential recreational improvements are identified and implemented in conjunction with this Five-Year Capital Plan. Prima Deshecha Landfill is currently designated on the County Master Plan of Regional Recreational Facilities as a proposed regional park. The Five-Year Capital Plan is reviewed by the PF&RD/HBP Commission, and presented to the Board of Supervisors for approval as part of the County's annual budget process.

County regional parks are designed for passive, open space use; in contrast, urban community parks provide for active recreational uses. If the needs assessment for a regional park indicates that active recreational programs are needed over and above those provided by the County regional park system, those programs become the responsibility of the local municipality park and recreational planning process. The goal of County Regional Recreational Park programs is to accommodate Orange County's regional recreation needs.

However, County parks have provided rent-free leased space for active community uses within regional parklands (i.e., Mile Square Park in Fountain Valley and Yorba Regional Park in Yorba Linda), with the local municipality providing for the programming and operations of these facilities.

Zones 1 and 4 Regional Park Financing

The IWMD will begin preparation of a Final Closure and Post-Closure Maintenance Plan approximately five years prior to the cessation of waste acceptance in Zones 1 and 4. These documents will be submitted to the CIWMB two years prior to the planned closure as required per CCR, Title 27. The closure plan, including final end use, must be approved by regulatory agencies

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prior to initiation of closure activities. During the five-year period prior to the last date of waste acceptance, the PF&RD/HBP will include the Prima Deshecha Regional Park in their Five-Year Capital Plan. The process will involve a needs analysis for regional, and as appropriate, local uses undertaken in cooperation with adjacent cities and interest groups. A definitive cost study will also be conducted as part of this process once the proposed uses are established.

Zone 2 Trail Financing

The Recreational Element of the County General Plan includes a Master Plan of Regional Riding and Hiking Trails Component. County trail development, maintenance and operations are funded as part of the PF&RD/HBP Five-Year Capital Program (Fund No. 405 of the County Service Area No. 26 annual budget). Other funding sources include new, private developments and the cities. The City trails proposed in Zone 2 of the GDP are funded by the individual cities.

SECTION 3.0
GDP PHASING

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3.0 GDP PHASING

3.1 OVERVIEW

The implementation of the 2001 GDP landfill plan is proposed to be phased over a span of approximately 66 years from January, 2001. Active landfilling will continue in Zone 1 concurrently with the development of trails for recreational use around the perimeter of the site. When landfilling in Zone 1 has ceased, closure activities have been completed, satisfactory access has been established, sufficient settlement has occurred, and landfilling has begun in Zone 4, the ultimate recreational use in Zone 1, a regional park or 18-hole golf course, can be developed. When the landfilling in Zone 4 is complete, the ultimate recreational uses can be developed for that site after closure activities have been completed and sufficient settlement has occurred. The only long-term landfill related activities that will occur on the site after Zone 4 is filled will be associated with the continued collection and disposal of leachate and landfill gas, ongoing maintenance of the landfill final cover and groundwater monitoring.

The proposed phasing and factors affecting phasing for the landfill, recreation and circulation uses on the site are described in Sections 3.2 through 3.5. In Section 3.6, actions subsequent to approval of the 2001 GDP to plan, design and implement the GDP uses are identified.

3.2 LANDFILL PLAN PHASING

Zone 1 includes the lateral (eastward) and vertical development of the previous WMU1 area from 125 acres to 271 acres (see Figure 4) over a period of approximately 18.1 years from 2001. This time span is based on assumptions presented in Section 2.1.2. Zone 4 encompasses a landfill footprint of 409 acres in the east portion of the site, which would last for approximately 48.3 years based on a disposal rate of 4,000 tpd. The total life of the site for landfill purposes, as of January, 2001, is estimated to be approximately 66 additional years or to 2067. The total in-place and remaining capacity for the site is summarized in Table 2 (see page T-2). This life could be extended if less refuse is accepted for disposal and/or if new technologies are developed which have the effect of increasing the landfill capacity. One such technology is the use of tarps, currently utilized at the landfill, as well as greenwaste or other alternative

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approaches to daily cover on the active face of the landfill. However, soil for daily cover will continue to be necessary.

As the owner/operator of the landfill, the County of Orange is required to provide amendments to operating permit documentation to the LEA at least every five years, or more frequently, to discuss any changes in the site design, operations plan and/or the remaining life of the landfill.

For operational guidance and to allow a closer examination of the environmental impacts of the GDP over time, phasing scenarios were developed for the landfill which include a four phase plan for sequential development of Zone 1 (see Figures 12 and 13) and a nine phase plan for the development of Zone 4 (see Figure 14). Table 2 presents a summary of information on capacity, excavation and projected life for Zones 1 (by phase) and 4. Figures 12 through 14 illustrate the sequential progress of the landfilling activities at the site from existing conditions to the end of landfilling operations under the GDP. The design is intended to minimize the need for stockpiling and double handling of cover material (soil), although substantial stockpiling will be necessary. In general, soil is excavated in new development areas on the site and is stockpiled in future disposal areas and/or is used as daily cover for ongoing operations. It is intended that all excavated soil be used on-site, and that no exporting or importing of soil will be necessary. Should there be a need to import or export soil in the future, that plan would be subject to separate CEQA documentation.

3.2.1 ZONE 1 - LANDFILLING

As indicated above, four phases of excavation are proposed for the development of Zone 1 (refer to Figure 12). Filling has occurred in the landfill areas, WMU1, Phases A and A1 with future development continuing to the south and east of the present active footprint of the landfill. The ultimate development of Zone 1 will provide a total area of 271 acres for refuse fill.

Phase A and A1

The first phase (Phase A) of lateral development in Zone 1 extends to the east of WMU1 and was the first lined cell in Zone 1. Development of Phase A began in July, 1997 and a liner and LCRS was installed prior to refuse filling in that area.

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The Phase A development required the excavation of approximately 4.1 mcy of soil, the majority of which (2.4 mcy) was stockpiled to the north and west of WMU1 (Stockpile 2). Approximately 1.7 mcy of the material excavated from Phase A was stockpiled in a 17-acre area to the south of the landfill (Stockpile 1), adjacent to the

Prima Deshecha Cañada water course running through the site. As a result of unusually heavy rains during early 1998, a landslide developed in Stockpile No. 1.

It is estimated that the Stockpile 1 Landslide is more than 2.0 mcy (which is greater than the 1.7 mcy of stockpiled material). It extends over 2,500 feet adjacent to the Prima Deshecha Cañada stream much of this length shows areas of distress to the stream. At the present time, flows through the stream have not been completely blocked although movement of the slide mass has narrowed the stream along the toe of the failure. Recent monitoring has indicated that the slide mass is moving in a northeasterly direction (directly into the stream) and it is anticipated that the landslide will eventually block flows through the channel. Remediation of this landslide is proposed as part of the Phase B development.

As a result of the landslide, a Phase A1 area was developed to ensure ongoing operations during the approval process for the landslide remediation plan. Phase A1 is a lined area and is located north of WMU1 (previously Stockpile Area 2) and provides an additional 1.8 years of airspace capacity.

Phase B

The excavation for the next phase (Phase B) of development will be along the southern boundary of Phase A and future Phases C and D (see Figure 12). The design basis for the excavation of Phase B is the remediation of the landslide in Stockpile No. 1 which includes realignment of the Prima Deshecha Cañada stream to the south. The remediation project includes the removal of alluvial and stockpile material and recompaction of soil fill to stabilize the slide, and the realignment of the natural open channel so that it would carry water to the east and south of the existing stockpile. To provide a positive grade required to establish this new stream alignment (a minimum 1% grade), some ponding would be required and compacted fill would need to be placed in the channel and surrounding area upstream of the stockpile.

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This project would involve the complete removal of approximately 1.7 mcy of stockpiled material and recompaction of approximately 1.2 mcy to stabilize the landslide, achieve channel grades, and provide liner subgrade. The excavation of approximately 1.4 mcy of hillside, comprised of non-native grasslands, would also be required to achieve the realigned channel grade. The realigned natural stream channel would cover in excess of 6 acres, would vary in width from 50 to 85 feet and would be approximately 3,100 feet long. The approximate 85-foot width of the majority of new channel corridor would be adjacent to a 25-foot wide landfill perimeter maintenance road, improved drainage channel and a setback for a final cover keyway. The realigned stream would be outside the area of landfill operations, thus minimizing indirect impacts on streambed biological resources from daily landfill operations and would provide opportunity for additional riparian habitat.

The entire area to the south of Phase A and future Phases C and D will be excavated for Phase B; however, only the west portion of Phase B will be lined for refuse filling (see Figure 13). The remaining area of Phase B will be used as a stockpile area and will be lined as part of Phase D for refuse filling. Future Phase B filling will extend north into the WMU1 fill area.

Phase C

The third phase (Phase C) will extend to the east of Phase A. The construction of the liner system in Phase C will likely occur in two stages due to the projected life of Phase C.

Phase D

The fourth and final phase (Phase D) will extend to the east of Phases C and B. The construction of the liner system in Phase D will also likely occur in two stages based on the projected life for Phase D.

Phases C and D will involve the excavation and stockpile of materials for daily cover in the west portion of Phase B and over previous fill areas (for Phase D). Filling in Phase D will reach the remaining final grades in Zone 1.

The Zone 1 final grades are based on MOUs with the Cities of San Clemente and San Juan Capistrano and a CUP with the City of San Juan Capistrano.

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Excavation of the first phase in Zone 4 will commence toward the end of filling Phase D of Zone 1.

In addition to the four phases of liner development in Zone 1, the existing desilting basin at the toe of Zone 1 will be enlarged and improved and a permanent LCRS facility is proposed south of Zone 1 as shown in Figure 4.

3.2.2 ZONE 4 - LANDFILLING

The current phasing scenario for Zone 4 proposes to begin operations in the northwestern corner (see Phase A in Figure 14) upon completion of Zone 1. Operations and development of the landfill would then proceed in a counter-clockwise direction, with a series of excavations and refuse fills (Phase A through I) until the final grade at 1,010 feet amsl (consistent with the San Clemente MOU) is reached. A more detailed phasing scenario will be developed prior to filling in Zone 4 based on geotechnical stability analyses for each incremental phase. Figure 4 presents the final grades of the completed landfill.

Excavated material in Phase A will be used for daily cover and compacted fills proposed for future phases in Zone 4. Excess excavation material from Phase A will be stockpiled in Phases B and F. Phases B, C, D, E and F will not require any soil stockpiling for their development. Once fill operations reach Phases G and H, soil material excavated to develop these phases will be stockpiled on the previously filled Phase D.

3.3 RECREATIONAL PLAN PHASING

The phasing and implementation of recreational uses of the site are constrained in that the landfilling activities and uses will always take precedence over the recreation and circulation improvements on the site and will always govern the timing of uses proposed to occur in areas that were formerly used for landfilling. In addition, the decision to proceed with an interim or ultimate recreational use must be supported by evidence that these uses will not impact ongoing landfilling operations on the site and that public health and safety can be protected. When the active disposal of solid waste on the site is completed, the ultimate recreational uses proposed to be implemented cannot interfere with or adversely affect long-term landfill management activities, including cover maintenance,

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landfill gas collection and disposal, leachate collection and recovery, groundwater well monitoring and other ongoing landfill maintenance and post-closure activities. Active recreational uses are proposed for Zones 1 and 4 with trail uses proposed in Zone 2 (including a trail crossing across Zone 5) as described below.

3.3.1 PHASING OF RECREATIONAL USES IN ZONE 1

Zone 1 is an area where current landfilling takes place. The area now being filled will gradually be moved eastward to include all of the 271 acres designated for landfilling in Zone 1. In approximately 18 years, as of January, 2001, or the year 2019 at the current GDP projected rate of disposal, Zone 1 would be completely filled. After closure activities have been completed, satisfactory access established, and sufficient settlement has occurred, the ultimate recreational uses as identified in a needs analysis could be implemented.

3.3.2 PHASING OF TRAIL USES

The PF&RD/HBP will coordinate the development of trails on the Prima Deshecha site with the development of trails outside the site proposed by the Cities of San Clemente and San Juan Capistrano. The County PF&RD/HBP's proposed Prima Deshecha Trail traverses the Prima Deshecha site along the northeastern perimeter of the property around Zone 4 as shown on Figure 3. The County trail will connect directly with the Cristianitos, University of California and the San Juan Creek trails, which themselves provide connections to other trails in the area to the south and north, respectively. The off-site connections for the County trails are shown on Figure 3.

As discussed in Section 2.3.4, trails depicted along the perimeter of Zone 4 will be available as interim recreational use only during filling operations of Zone 1. Discussions commencing in January, 2001 with representatives of the Cities of San Clemente and San Juan Capistrano are focused on identifying specific trail alignments around Zone 1. Upon commencement of filling operations in Zone 4, these trails will be closed to the public. PF&RD/HBP may evaluate the possibility of relocating these trails away from landfill operations. This would depend upon their use and importance as a regional trail and the existence of a through trail along the western perimeter of the site at that time. Trail heads proposed directly west of the current entrance facilities will be developed after Zone 1 is closed and directly east of the current entrance facilities after Zone 4 is closed.

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On-site City trails around Zone 1 are shown on Figure 3 and can be used throughout the development of Zones 1 and 4. Also identified in Figure 3 are the off-site connections to City trails. The GDP proposes to eventually connect the County trail along Zone 4 with on-site City trails proposed along Zone 1 to provide a complete loop for trail users. These on-site trail connections would not occur until Zone 4 is closed (upon cessation of landfilling) and a trail crossing under future La Pata Avenue in Zone 5 is provided to the south.

3.3.3 PHASING OF RECREATIONAL USES IN ZONE 4

Zone 4 is the largest zone on the site, covering approximately 409 acres of refuse area. No interim uses are proposed for Zone 4, although trail uses are proposed during the operational life of Zone 1. After all landfilling operations have been completed in Zone 4, satisfactory access is established and sufficient settlement has occurred, the implementation of the ultimate recreational activities could begin. The ultimate recreational uses for Zone 4 include a wide range of possibilities, and at this time, the designated use for this zone is a regional park. Depending on the demand for recreational uses at the time of implementation, a needs analysis would be conducted and a park plan developed consistent with these demands and adjacent land uses in the area. The park plan would be prepared concurrently with development of the final closure plan.

3.4 CIRCULATION PLAN PHASING

Two road fee programs were developed to provide funding for construction of La Pata Avenue. The first is the San Clemente Regional Circulation Financing and Phasing Program from which Avenida La Pata was recently deleted by the City of San Clemente. The second is the Avenida La Pata Supplementary Road Fee Program which was formulated by the Board of Supervisors on November 12, 1991, to provide an additional revenue of \$8.5 million for the construction of La Pata Avenue. The Area of Benefit of the latter program consists only of the unincorporated Talega Planned Community. The County has no immediate plans to construct this portion of the roadway; therefore, road fund availability is not being considered at this time.

Construction of the extension of Camino de los Mares through the southwest corner of the site would be initiated by the Cities of San Clemente and/or San

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Juan Capistrano. Construction of any roadways through the site would be coordinated among the cities and the IWMD.

3.5 FACTORS AFFECTING PHASING

The implementation and phasing of the GDP landfilling, recreational uses and circulation may be affected by factors that could either change in the future or that are otherwise outside the control of the IWMD, PF&RD/HBP and other interested agencies and parties. Some of these potential factors are discussed in this section.

3.5.1 FACTORS AFFECTING LANDFILL PHASING

The phasing and staging of the landfilling uses under the GDP could be affected by the following factors:

- Increase or reduction in the rate of disposal could result in landfilling operations occurring for a shorter or longer period on the site.
- The capacity and life of the site could be increased or decreased based on changes in landfill design standards and regulations, changes in daily cover use and final cover requirements, changes to the permitted refuse inflow rate and other similar changes.
- Increased recycling activities could result in a reduction in the volume of solid waste disposal in the landfill.

3.5.2 FACTORS AFFECTING CIRCULATION PHASING

The phasing of the circulation and roadway improvements under the GDP could be affected by the following factors:

- Timing and construction of other arterial or freeway improvements in the area.
- Availability of funding to construct the extension of La Pata Avenue through the site, to extend Camino de los Mares and Camino Las Ramblas, and to construct the widened segment of La Pata Avenue north of the site.
- Phasing of the recreational uses and other demand for the extension of La Pata Avenue through the site.
- Amendments to arterial highway extensions in the MPAH and changes to City general plan circulation elements.

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3.5.3 FACTORS AFFECTING RECREATION PHASING

The phasing of the implementation of the recreational uses under the GDP could be affected by the following factors:

- Changes in the life of Zones 1 and 4 due to factors discussed in Section 3.5.1.
- Phasing of the on-site circulation improvements and the access roads to the individual recreational zones.
- Changes in the existing and future demand for recreational resources in south Orange County, including changes in the demand for the types of recreational uses proposed for the site.
- Receipt of a satisfactory proposal by a concessionaire to develop and operate a golf course on Zone 1, if that is the final selected use for the area.

3.6 SUBSEQUENT ACTIONS

Upon certification of EIR 575 and approval of the 2001 GDP, permit revision applications will be submitted to the LEA and SDRWQCB to reflect the new landfill plan. Also, an application for an amended Conditional Use Permit with the City of San Juan Capistrano will be submitted.

The two primary support documents for the application are the Joint Technical Document and the Preliminary Closure and Post-Closure Maintenance Plans (PCPCMP). The Joint Technical Document includes:

- Disposal Site Improvements.
- Disposal Site Operations.
- Disposal Site Controls.
- Disposal Site Design.
- Disposal Site Characteristics.

The PCPCMP includes:

- Final Cover Design.
- Final Grading and Drainage Plans.
- Landfill Gas Control System Plans.

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- Landscaping and Irrigation Plans.
- Site Security Plan.
- Closure Plan Implementation Schedule.
- Post-Closure Maintenance, Monitoring and Operational Procedures.
- Closure and Post-Closure Maintenance Costs.

Once revised permits are issued, the site will be subject to a permit review at least once every five years. In addition, the LEA inspects the site monthly, the SCAQMD quarterly, the SDRWQCB at least annually, and the CIWMB every 18 months for compliance with permit conditions and regulatory standards under each agency's jurisdiction.

Other subsequent actions for the site include:

- 404 Permit from the U.S. Army Corps of Engineers.
- 401 Permit from the Regional Water Quality Control Board, San Diego Region.
- 1601 Streambed Alteration Agreement from the State Department of Fish and Game.
- On-going CEQA Mitigation Monitoring.
- Needs Analysis and Plans for Interim and Ultimate Recreational Uses.
- On-going Landfilling Operations.
- Construction Phasing Plans for Landfilling Activities.
- Final Circulation Alignments and Design.
- Construction of Interim and Ultimate Recreational Improvements.
- Preparation of Final Closure and Post-Closure Plans.

SECTION 4.0

LANDFILL REGULATIONS

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4.0 LANDFILL REGULATIONS

The Prima Deshecha Landfill is a Class III landfill which is permitted for the disposal of non-hazardous municipal solid waste and digested sewage sludge (biosolids). State law requires that landfills operate under the authority of the CIWMB which exercises its authority through approval of a SWFP issued by a LEA. Organizationally, the LEA for Orange County landfills is a department within the County of Orange Health Care Agency, Environmental Health Division. The SDRWQCB also regulates landfill operations and design to ensure protection of surface and groundwater. The SDRWQCB exercises its authority through issuance of WDRs. The South Coast Air Quality Management District (SCAQMD) also regulates landfill operations related to landfill emissions control and monitoring and fugitive dust control.

The basis for the issuance of a SWFP is continuously reviewed during the life of the landfill and the permit may be modified, revised or revoked at any time. The system of landfill operation review (and imposed adjustment, as necessary) is accomplished through a reporting and monitoring procedure established by state statute. The basic elements of this reporting and monitoring system are:

- Joint Technical Document (JTD) (Title 27, California Code of Regulations [27 CCR] 21585 and 21590). The JTD is a document which fully describes the landfill site operations, design and future plans and is the primary regulatory support document for a SWFP. The information contained in the JTD is used by the LEA to monitor compliance with a SWFP. In order to maintain a valid permit, the operator must continuously update the JTD, through the filing of amendments to keep the information current.
- Review of Permits (27 CCR 21675). The SWFP shall be reviewed and, if necessary, revised from the date of last issuance at least once every five years. A permit review report is prepared by the LEA to determine if any permit changes have occurred at the site which require that action be taken by the operator.
- Recordkeeping Requirements (27 CCR 20515). The disposal site operator must maintain operational records which are open to inspection by the LEA and any other authorized regulatory or enforcement agency during normal business hours.
- State Minimum Standards (27 CCR). Title 27 CCR minimum standards are administered by the CIWMB, LEA and the local RWQCB. These regulations are oriented toward refuse disposal operations and site design including provisions for

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odor and litter control, hazardous waste exclusion, protection of surface water and groundwater quality, landfill gas control, and closure and post-closure care.

Although the CIWMB has primary oversight and regulatory responsibilities for the site and has designated the County of Orange Environmental Health Care Agency, Environmental Health Division as its LEA, the site is regulated at other federal, state and local levels. The site must also comply with regulatory and administrative requirements set forth by the U.S. Environmental Protection Agency (USEPA), the USFWS, the United States Army Corps of Engineers (ACOE), the DFG, CEQA, the SDRWQCB, the SCAQMD, the Orange County Fire Authority, the County of Orange Public Facilities and Resources Department, City MOUs and Land Use Permits. The following are descriptions of these agencies and the regulations or requirements they are responsible for at the site.

FEDERAL LEVEL

United States Environmental Protection Agency

On October 9, 1991, the USEPA promulgated Subtitle D changes to the Resource Conservation and Recovery Act providing for nationwide minimum standards for landfilling municipal solid waste which became effective October 9, 1993. The regulations include requirements relating to daily cover, liners, landfill gas control, recordkeeping, groundwater monitoring, and closure and post-closure maintenance. After the USEPA approves a state plan, the regulations allow discretion on the part of state regulators to grant some flexibility to landfill operators in implementing Subtitle D regulations. California has been designated an "Approved State".

U.S. Army Corps of Engineers

The ACOE Regulatory Branch is responsible for assuring compliance with Section 404 of the Clean Water Act with respect to wetlands resources. Most activities involving wetland impacts require the approval of an individual 404 permit by the ACOE.

U.S. Fish and Wildlife Service

The USFWS reviews and comments on all federal actions that affect wetlands and waters of the United States, including all 404 permitting applications submitted to the ACOE. In addition, the USFWS is responsible for assuring compliance with the Federal Endangered Species Act (FESA), which concerns activities that affect plant or animal

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species listed in the FESA. USFWS implements the FESA through various mechanisms: the Natural Community Conservation Plans, Interim Habitat Loss Mitigation Plans, and Habitat Conservation Plans.

STATE AND LOCAL LEVEL

California Department of Fish and Game

Any activity that affects a river, stream, or lake may require a Lake or Streambed Alteration Agreement in accordance with the provisions of Sections 1600-1607 of the DFG Code.

California Environmental Quality Act

County landfill projects are required to be in compliance with CEQA. When approving landfill projects, the County is required to adopt adequate environmental documentation in order to comply with this law.

South Coast Air Quality Management District

The California Clean Air Act, Federal Clean Air Act and the Lewis-Presley Air Quality Management Act authorize the adoption of rules and regulations for air quality permits and govern the enforcement of those permits and rules. These acts are all administered and enforced by the SCAQMD. Various rules apply to landfill operations, including landfill emissions control and monitoring, sulfur emissions monitoring, and fugitive dust control. The SCAQMD conducts periodic inspections of the site and, similar to the RWQCB, may impose civil liabilities for permit violations.

New Source Performance Standards/Emission Guidelines (NSPS/EG): On March 12, 1996, the USEPA promulgated standards of performance for new municipal solid waste landfills and emission guidelines for existing municipal solid waste landfills. These standards/guidelines for active landfills are intended to limit gaseous emissions to prevent public nuisance and possible detriment to public health caused by exposure to such emissions.

Title V: Title V is part of the 1990 Clean Air Act Amendments and consists of a single air permit, which consolidates and replaces all the previously issued air permits for a facility. The USEPA granted interim approval of the SCAQMD Title V program in

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February, 1997 and the program became effective March 31, 1997. The SCAQMD program is called Regulation XXX.

Ozone and Particulate Matter (PM₁₀ and PM_{2.5}): The USEPA promulgated new clean air standards for ozone and fine particulates on July 18, 1997 based on the most recent medical studies regarding public health. The USEPA will be finalizing policies to implement the new air quality standards. In addition, the USEPA will require new controls after the year 2002. The SCAQMD is soliciting preliminary public comments on possible control approaches and the best means to monitor the progress towards attainment of the new air quality standards.

Rule 1150.1 - Landfill Gas Emissions: The purpose of the current Rule 1150.1 for active and inactive landfills is to prevent public nuisance and possible detriment of public health caused by exposure to landfill gas emissions. The SCAQMD has recently rewritten these rules to meet the federal NSPS/EG requirements.

Rule 431.1 - Sulfur Emissions: The purpose of this rule is to reduce sulfur oxides (SO_x) emissions from the burning of gaseous fuels in stationary equipment and requires a permit to operate from the SCAQMD. The SCAQMD rewrote the Rule to raise the average daily limit of 40 parts per million (ppm) to 150 ppm effective June 12, 1998.

Rule 403 - Fugitive Dust Emissions: The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

Rule 402 - Nuisance: This rule prohibits annoying odors from landfill operations.

San Diego Regional Water Quality Control Board

Under the Porter-Cologne Water Quality Act (California Water Code Section 13000 et. seq.) (Porter-Cologne), the County is required to report waste discharges that could affect water quality. Porter-Cologne is administered and enforced by the State of California Water Resources Control Board and Regional Water Quality Control Boards. The SDRWQCB regulates the Prima Deshecha Landfill.

Waste Discharge Requirements: Pursuant to Porter-Cologne, the RWQCBs issue WDRs containing terms and conditions of permitted discharges for landfills. The WDRs typically mandate a regular self-monitoring program to detect pollutants. In the event of

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a violation of a WDR, the RWQCB may issue either a cease and desist order or a cleanup and abatement order which mandate deadlines for remedial action. A landfill operator's failure to comply with a RWQCB order or reporting requirements may result in administrative or judicial civil liabilities ranging up to \$25,000 a day.

National Pollutant Discharge Elimination System: National Pollutant Discharge Elimination System (NPDES) is a federal program of the Clean Water Act, administered by the RWQCB which regulates non-point storm water pollution. In 1997, the USEPA reauthorized the program and the County filed new Notices of Intent in compliance with the program.

Solid Waste Assessment Testing: Porter-Cologne also instituted the water quality Solid Waste Assessment Testing (SWAT) program, which requires an analysis of surface and groundwater under and within a one mile radius of a designated landfill for leakage of hazardous waste. If leakage outside of the landfill occurs, operators of the landfill must notify the State Department of Health Services and the CIWMB. These agencies may impose remedial action upon the landfill depending on the nature and extent of the release.

Orange County Fire Authority

The Orange County Fire Authority regulates the storage and use of flammable or combustible liquids and the adequacy of fire break roads at the site.

Public Facilities and Resources Department

The County of Orange PF&RD regulates the construction of structures at the site and issues building, mechanical, electrical, and plumbing permits for certain landfill projects.

Cities of San Clemente and San Juan Capistrano

MOUs between the County of Orange and the City of San Juan Capistrano (approved in September, 1995) and between the County of Orange and the City of San Clemente (approved in July, 1997) have been issued which specify requirements, guidelines and conditions for the operations and development of the site.

The MOU with the City of San Juan Capistrano identifies mitigation agreed to by the County for impacts on the City due to the acceptance of out-of-County waste at the

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landfill. This MOU addresses road improvements, ridgeline preservation, sound/visual berms, park planning and traffic circulation as they relate to the General Plan Amendment for the site and the GDP.

The MOU with the City of San Clemente establishes GDP guidelines (including grading and height limits, zone boundary adjustments and landscape treatment), provides for the development of a joint feasibility study to determine appropriate flood control infrastructure for the Prima Deshecha Cañada watershed from the landfill to Interstate 5 and addresses certain water quality issues.

A CUP (No. 95-4) has also been issued by the City of San Juan Capistrano for that portion of the site within the City boundaries. The permit places conditions on the landfill use and landfill-related uses for Zone 1.

Rancho Mission Viejo, LLC (RMV)

The RMV agreements between the County and Rancho Mission Viejo, LLC place restrictions on the eastern 945 acres of the Prima Deshecha property including Zone 4. These restrictions are contained in a Settlement Agreement and Covenant and Declaration of Restrictions.

The Settlement Agreement contains requirements for County's use of restricted area on PDL property and RMV use of no-build area adjacent to PDL property on RMV lands.

The Covenant and Declaration of Restrictions contains restrictions on landfill operations area and restricted area on PDL property as well as requirements for maintenance, dust and litter controls for La Pata Avenue.

The project described in the GDP as amended can be implemented under the requirements in the Settlement Agreement and Covenant & Declaration of Restrictions.

SECTION 5.0

TECHNICAL REFERENCES

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5.0 TECHNICAL REFERENCES

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TABLES

**PRIMA DESHECHA LANDFILL
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Table 1

**Prima Deshecha Landfill
2001 General Development Plan
Summary of Remaining Capacity And Life
(as of January, 2001)**

Landfill Area	In-Place Refuse Volume (mcy)⁽¹⁾	Remaining Refuse Capacity (mcy)	Total Refuse Capacity (mcy)	Remaining Life (years)
Zone 1	13.1 ⁽²⁾	27.8	40.9	18.1 ⁽⁵⁾
Zone 4	1.5 ⁽³⁾	89.0	90.5	48.3 ⁽⁶⁾
Total	14.6	116.8	131.4⁽⁴⁾	66.4

The following assumptions are the basis for Table 1 and are subject to change as operations progress:

- (1) mcy = million cubic yards
Conversion from net air space based on 4:1 refuse-to-soil ratio.
- (2) WMU1, Phase A and Phase A1 in-place refuse volume.
- (3) WMU2 in-place refuse volume.
- (4) Currently permitted refuse capacity (1995 SWFP) = 81 mcy.
- (5) Assumes refuse inflow rate of 2,500 tons per day (tpd) from 1/1/01 to 12/31/03; 3,000 tpd from 1/1/04 to 12/31/08; 3,500 tpd from 1/1/09 to 12/31/13; and 4,000 tpd from 1/1/14, thereafter.
- (6) Assumes a daily refuse inflow rate of 4,000 tpd. Zone 4 life after closure of Zone 1.

Note: Assumes unit weight of waste in-place is 1,333 lbs/cy for Zones 1 and 4. Does not account for final cover; accounts for 3-foot liner. Topography date of October 1, 1999 was used to determine airspace volumes and projections of 2,200 tpd and 3:1 refuse-to-soil ratio to December 31, 1999 and 2,500 tpd from January 1, 2000 to December 31, 2000 (4:1 refuse-to-soil ratio).

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Table 2

**Prima Deshecha Landfill
2001 General Development Plan
Summary of Capacity, Excavation Volume and Life
For Zone 1 (By Phase) and Zone 4 (as of January, 2001)**

Description	Excavation (cy)	Remaining Refuse Capacity (cy) (4)	Remaining Life (Years)
ZONE 1			
Phase A (1)		1,687,800	1.5
Phase A1	156,000 (2)	2,099,300	1.8
Phase B	2,215,000 (2)	3,243,200	2.3
Phase C	3,596,000 (3)	10,844,800	7.1
Phase D	2,880,000 (3)	9,936,000	5.4
Total	8,847,000	27,811,100	18.1
ZONE 4			
Total	34,533,500 (3)	89,036,000	48.3
<p>The following assumptions are the basis for Table 2 and are subject to change as operations progress:</p> <p>(1) Includes operations in WMU1, Phase A and Phase A1 since January 2001.</p> <p>(2) Net excavation material to stockpile after realignment of stream for Stockpile 1.</p> <p>(3) Net excavation material to stockpile after compacted fills.</p> <p>(4) Refuse inflow rate assumptions: 2,500 tpd from 1/1/01 to 12/31/03; 3,000 tpd - 1/1/04 to 12/31/08; 3,500 tpd - 1/1/09 to 12/31/13; 4,000 tpd - 1/1/14 thereafter. Topography date of October 1, 1999 was used to determine airspace volumes and projections of 2,200 tpd and 3:1 refuse-to-soil ratio to December 31, 1999 and 2,500 tpd from January 1, 2000 to December 31, 2000 (4:1 refuse-to-soil ratio).</p>			

FIGURES