RELOOC

REGIONAL LANDFILL OPTIONS FOR ORANGE COUNTY

RELOOC
Strategic Plan

Planning Together
For The Future

Presented To:
COUNTY OF ORANGE

By:
The RELOOC Team

December 2001

- Approved by the RELOOC Steering Committee - December 12, 2001
- Approved by the Waste Management Commission - February 7, 2002
- Approved by the County Board of Supervisors – May 21, 2002

RELOOC

The RELOOC Team Consists of the Following Members:

RELOOC Steering Committee
Chair, Ron Hoesterey, Waste Management Commission
Vice Chair, Pat McGuigan, Waste Management Commission
Scott Diehl, Host City Representative, San Clemente
John S. Gelff, Host City Representative, San Juan Capistrano
Janet Huston, League of California Cities (Orange County Division)
Clark Lehmann, Waste Management Commission
William Mahoney, County of Orange Executive Office
Tim O'Donnell, City Managers Association
Bev Perry, Host City Representative, Brea
Greg Smith, Host City Representative, Irvine
Jerry Werner, Community Representative
Tom Wood, City Managers Association

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Consultant Services
Bryan A. Stirrat & Associates, Lead Consultant
GeoLogic Associates
P&D Environmental Services
Hilton Farnkopf & Hobson
Clements Environmental
Sharon Browning & Associates
LSA Associates

Introduction

Aerial Photo
Olinda Alpha Landfill

Regional Landfill Options for Orange County (RELOOC) is a long-range strategic planning project initiated by the County of Orange Integrated Waste Management Department (IWMD) in 1998. IWMD is a County department whose mission is "to meet the solid waste disposal needs of Orange County through efficient operations, sound environmental practices, strategic planning, innovation and technology." In order to accomplish this mission, IWMD has established the RELOOC planning process to assess the County's existing disposal system capabilities and develop viable long-range solid waste disposal options for the County.

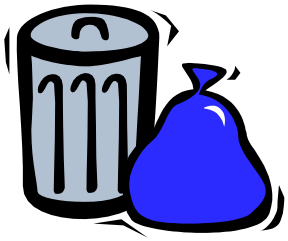
Policy guidance for the RELOOC strategic planning process has been provided by the RELOOC Steering Committee, formed in consultation with the County of Orange Waste Management Commission, membership consisting of:

- Community-at-Large
- City Managers
- Landfill Host Cities
- Waste Management Commission
- League of California Cities (Orange County Division)
- IWMD & County of Orange CEO

This report provides a summary of the RELOOC planning process and the Strategic Plan Approach and Implementation Plan.

Planning Together For The Future

Orange County Solid Waste Disposal System



IWMD operates three municipal solid waste landfills strategically located throughout the County. Figure 1 shows the location of the three active landfills, Olinda Alpha, Frank R. Bowerman (FRB) and Prima Deshecha. The Olinda Alpha Landfill is located to serve northern Orange County. It also receives waste imported from Los Angeles, San Bernardino and Riverside counties. The FRB Landfill serves the central area of Orange County and receives imported waste from southeastern Los Angeles County. FRB is the newest landfill in the system and is fully lined. The Prima Deshecha Landfill serves the southern areas of Orange County. It also receives waste imported from cities in northern San Diego County and southern Los Angeles County. IWMD also manages four household hazardous waste collection centers located throughout the County that provide easily accessible facilities for Orange County residents to properly dispose of their household hazardous waste, therefore, reducing the amount of such waste being disposed of in the landfills. In addition to the management of the landfill disposal system, IWMD monitors a number of former refuse disposal stations including the closed Coyote Canyon Landfill and the inactive Santiago Canyon Landfill scheduled for closure in 2002.

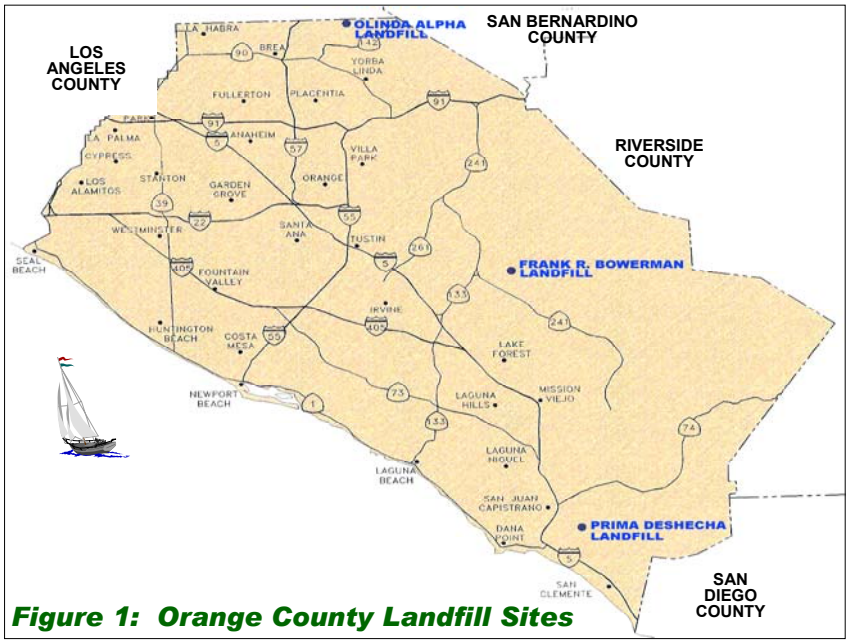


Figure 1: Orange County Landfill Sites

Caterpillar Tractor

The Solid Waste Facility Permits for the three active landfills—Olinda Alpha, FRB and Prima Deshecha—allow for acceptance of a maximum of 8,000 tons per day (tpd), 8,500 tpd, and 4,000 tpd, respectively for a maximum permitted system-wide disposal capacity of 20,500 tpd. Under agreement with the City of Irvine, the FRB Landfill is currently allowed to accept an annual average of 7,263 tpd and can increase its daily capacity by 1.75% per year until it reaches a maximum of 8,500 tpd. The Olinda Alpha Landfill, through a Memorandum of Understanding (MOU) with the City of Brea, is limited to an annual average of 7,000 tpd.

The current disposal fee for the County landfills is $22 per ton for In-County waste. This rate is fixed until 2007 by Waste Disposal Agreements with all Orange County cities and waste haulers, which were entered into in 1997. These Agreements are subject to notification for renewal in 2004 for another 10 years.

RELOOC Study Initiation

Extensive lead-time is required for planning (5 to 10 years). Since the Olinda Alpha Landfill is scheduled to close in 2013, the RELOOC study was initiated by IWMD to plan for this eventual loss of landfill capacity.

RELOOC Goals and Objectives

The focus of the RELOOC Strategic Plan is to provide for the long-term solid waste disposal needs of the citizens of Orange County for the next 40 years in the most cost-effective manner. Goals derived in concert with the RELOOC Steering Committee are as follows:

RELOOC Goals

- To have a feasible, balanced and flexible 40-year plan that addresses the County's solid waste disposal needs approved and ready for implementation by the year 2004 (when negotiations begin for the next term of the Waste Disposal Agreements).
- To maintain protection of Orange County's public health, safety, and its environment (air, water and habitat).
- To sustain the economic viability of the Orange County solid waste disposal system by ensuring:
  - Consistent and reliable public fees/rates.
  - Adequate revenue to maintain efficient, cost effective, and high quality IWMD operations.
- To provide a fair, objective, open, planning process that is:
  - Presented in non-technical, easily understood terms.
  - Applicable to an evaluation matrix.
  - Responsive to and involves stakeholders and the public.
  - Results in public understanding

The RELOOC project involved identification and technical analyses of available options, a review of the findings by key stakeholders and decision-makers and input from communities affected by RELOOC received during a community involvement program. A description of the RELOOC planning and approval process follows.

RELOOC Study Planning and Approval Process

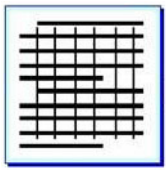
A team approach was utilized to develop the Strategic Plan for RELOOC consisting of IWMD staff, consultant services, and the RELOOC Steering Committee. The RELOOC team began the study in April 1999.

The key tasks performed by the team included the following:

- Identification of Available Options
- Capacity Analysis
- Demand Analysis
- Economic Analysis
- Environmental Impacts Analysis
- Evaluation (or Goal Achievement) Matrix of Options
- Recommended Strategic Plan

Detailed information on these tasks is contained in the RELOOC Feasibility Study Report.

Upon review of available options (In-County and Out-of-County disposal options as well as alternative technologies) and their associated ability to meet the future demand for waste disposal in Orange County over the next 40 years, several options were identified for further evaluation in the RELOOC study. Economic and environmental screening analyses were performed for these various RELOOC options. A RELOOC Goals Achievement Matrix (GAM) was then developed as a quantitative and objective tool for comparing the options. This tool was developed in cooperation with the RELOOC Steering Committee and included the following evaluation criteria:



- Environmental Impacts
- Cost of Implementation
- Level of Control
- Remaining Capacity
- Community Acceptance

The Steering Committee also assigned a level of importance weighting for each evaluation criteria, which resulted in the Level of Control and Community Acceptance criteria ranking the highest in importance. Level of Control is largely a function of whether waste disposal is available in the County system (high level of control) or provided through contracts with companies that transport the refuse to remote sites (low level of control). Because Level of Control ranked so high, the more an option maximized available In-County disposal capacity the higher it ranked in the evaluation. The preliminary results were based on the first four evaluation criteria above which could be objectively quantified and applied to the GAM. The fifth criterion, Community Acceptance, was evaluated using a Community Involvement Program (CIP) developed specifically for RELOOC.

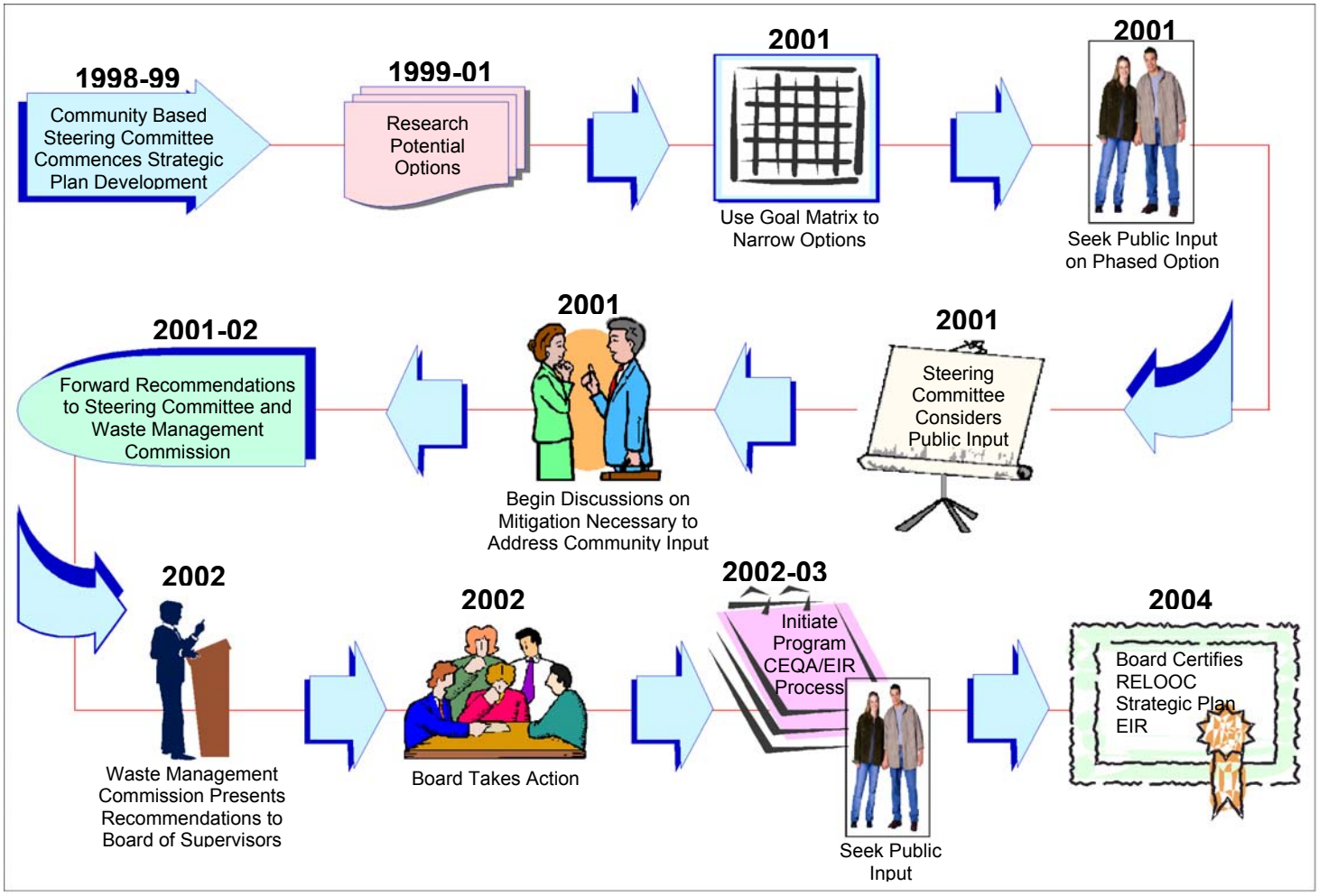
Prior to implementing the CIP, the preliminary methodology and results were presented to the Orange County City Managers Association's Solid Waste Working Group (SWWG) during a series of meetings. The SWWG consists of 10 City Managers, including representatives from the landfill host cities. This group represents the City Managers Association on solid waste issues. The SWWG's review of the RELOOC study preliminary findings and subsequent action by the

RELOOC Steering Committee resulted in a Phased Approach for the RELOOC Strategic Plan. This Phased Approach was presented in twelve meetings and other briefings to various community groups, City Councils, Chambers of Commerce, and the community-at-large, primarily in the host cities affected by the Phased Approach. The CIP public meetings for RELOOC were conducted between August 23 and October 18, 2001.

The Phased Approach, after consideration of input received during the CIP, is described in the following section. Approval of the Phased Approach requires a series of steps, which are outlined in Figure 2.

The last step in the RELOOC process is to conduct an environmental analysis and receive certification of the Environmental Impact Report and approval of the RELOOC Strategic Plan by the County Board of Supervisors. This is scheduled to occur in 2004. At that time, IWMD will implement the approved Strategic Plan.

Figure 2 – RELOOC Planning & Approval Process



RELOOC Phased Approach

The RELOOC Strategic Plan is a phased approach comprised of the following Short-term Strategies (Phase 1) and Long-term Strategies (Phase 2):

Phase 1 - Short-Term Strategies

- Fully use the existing landfill system capacity by:
  - → Maximizing operational efficiency at existing landfills.
  - → Expanding Frank R. Bowerman (FRB) and Olinda Alpha Landfills.
    - Vertical expansion at FRB, to maximize landfill site capacity.
    - Vertical and horizontal expansion at Olinda Alpha, to maximize landfill site capacity.
  - → Promoting diversion, recycling, and market development with the public and haulers.
- Seek to resolve the community's concerns related to the extended use of the landfills.
- Annually review the RELOOC strategic plan and modify as appropriate in response to disposal industry trends and advances in technology.

Phase 2 - Long-Term Strategies

- Determine if there is a need to increase the daily amount of solid waste permitted at the Prima Deshecha Landfill five years prior to the closure of Olinda Alpha.
- Identify strategies to support, develop, and implement feasible, viable alternative technologies or other approaches to maximize landfill capacity for possible consideration in future waste disposal agreements.
- Complete a study to determine the feasibility of expanding FRB Landfill into the adjacent Round Canyon prior to renegotiation of the 2017-2027 Waste Disposal Agreements.

Projects, as defined by the California Environmental Quality Act (CEQA), to be implemented under Phases 1 or 2 require CEQA analysis and review.

RELOOC Implementation Plan

The RELOOC Phased Approach has been developed to encompass implementation of strategies that can begin in the near future (Phase 1) and those that will require additional study and assessment prior to implementation (Phase 2). An implementation schedule has been developed as a guide for IWMD to ensure that the RELOOC Strategic Plan's goals and objectives are met. This implementation plan is discussed below for Phases 1 and 2.

RELOOC Implementation Plan for Phase 1 Short-Term Strategies

Caterpillar Compactor

Short-term Strategy No. 1

Fully use the existing landfill system capacity by maximizing operational efficiency at existing landfills.

- Continue to review landfill operations for use of new equipment and practices for optimum compaction to maximize capacity. Report on current and planned practices for optimizing compaction during annual review of RELOOC Strategic Plan.
- Monitor on an ongoing basis the availability, applicability, and cost effectiveness of alternative daily and final covers and liners that maximize capacity. Report on alternative daily and final cover uses (current and planned) during annual review of the RELOOC Strategic Plan.
- Conduct a feasibility study of bio-cell technology (breaking down solid waste to create greater capacity) at Prima Deshecha Landfill within two years of Board of Supervisors concurrence on the Strategic Plan Phased Approach.
- Implement bio-cell technology at Prima Deshecha Landfill, if deemed feasible, within five years of feasibility determination. Implementation includes application to regulatory agencies, CEQA analyses, and revisions to operating permits and landfill operational procedures.

Aerial Photo
FRB Landfill

Short-term Strategy No. 2

Fully use the existing landfill system capacity by vertically expanding Frank R. Bowerman Landfill, to maximize landfill site capacity.

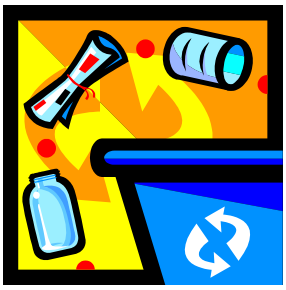
- Initiate a CEQA/EIR process upon Board of Supervisors approval of the Strategic Plan Phased Approach (scheduled for 2002).
- Complete the CEQA process and Board of Supervisors certification of the EIR, and approval of the project to expand the FRB Landfill (scheduled for 2004).
- Finalize Agreement with City of Irvine for vertical expansion of FRB Landfill coinciding with the EIR certification and approval of the Strategic Plan.
- Revise landfill operating permits for vertical expansion of FRB Landfill within two years of the EIR certification and approval of the Strategic Plan.

Aerial Photo
Olinda Alpha Landfill

Short-term Strategy No. 3

Fully use the existing landfill system capacity by vertically and horizontally expanding Olinda Alpha Landfill, to maximize landfill site capacity.

- Initiate a CEQA/EIR process upon Board of Supervisors approval of the Strategic Plan Phased Approach (scheduled for 2002).
- Complete the CEQA process and obtain Board of Supervisors certification of the EIR and approval of the project to expand and extend the life of the Olinda Alpha Landfill (scheduled for 2004).
- Finalize Agreement with City of Brea for expansion and extension of 2013 closure date for Olinda Alpha Landfill coinciding with the EIR certification and approval of the Strategic Plan.
- Revise landfill operating permits for expansion and extension of 2013 closure date for Olinda Alpha Landfill within two years of the EIR certification and approval of the Strategic Plan.



Short-term Strategy No. 4

Fully use the existing landfill system capacity by promoting diversion, recycling, and market development with the public and haulers.

- Develop a plan to expand public outreach programs implemented by IWMD and coordinate with cities to provide education on how programs by cities and practices by citizens to reduce, recycle, and reuse solid waste will result in maximizing In-County landfill capacity. The expanded public outreach program should be developed within two years of Board of Supervisors approval of the RELOOC Strategic Plan.
- Develop a plan to support practices in the County by commercial haulers and self haulers to increase solid waste diversion such as identifying new waste streams that can be recycled. Seek input from haulers through the Waste Industry Technical Advisory Committee (formed to advise the IWMD Director) and report on practices and ways to support those practices during annual review of the RELOOC Strategic Plan.
- Develop a plan to monitor and promote legislation and incentives that develops existing and creates new markets for recycled products. Support legislation that will benefit Orange County's market for recycled products through advocacy with legislators. Develop a plan to educate and offer incentives to Orange County residents to purchase recycled products. Report on education/advocacy efforts and legislation reviewed and supported during annual review of RELOOC Strategic Plan.

Short-term Strategy No. 5

Seek to resolve the community's concerns related to the extended use of the landfills.

- Negotiate conditional agreements to address impacts with host Cities affected by the RELOOC Phase 1 strategies conditioned on Board of Supervisors approval. Conditional agreements with host cities to be approved by the Board of Supervisors concurrent with approval of the RELOOC Strategic Plan.
- Upon Board of Supervisors approval and certification of the EIR for landfill expansion at the FRB and Olinda Alpha landfills, finalize host City agreements including any modifications to mitigations and associated compensation resulting from the EIR process.

Short-term Strategy No. 6

Annually review the RELOOC Strategic Plan and modify, as appropriate, in response to disposal industry trends and advances in technology.

- Monitor disposal industry trends/options such as the development of regional rail haul sites, planning studies for the required inter-modal/transfer facilities, and identification of out-of-County disposal contract options. Report on disposal industry trends/options and impacts, if any, on Orange County's solid waste disposal system during the annual review of RELOOC Strategic Plan.
- Monitor alternative technologies and evaluate applicability of potential technologies to Orange County's solid waste system. Recommend that the County's Legislative Platform include a support position for innovative and alternative technologies to reduce waste. Investigate existing disincentives that are preventing the advancement of emerging and alternative technologies and develop strategies for addressing those disincentives. Report on alternative technologies evaluated and potential for use in Orange County during the annual review of RELOOC Strategic Plan.
- Annually review the RELOOC Strategic Plan concurrent with the annual review of IWMD's 15-year Financial Plan with the Waste Management Commission and City Manager's Solid Waste Working Group.
- Recommend modifications or additions to the RELOOC Strategic Plan, if appropriate, based on annual review findings.

RELOOC Implementation Plan for Phase 2 Long-Term Strategies

Entrance to
Prima Deshecha Landfill

Long-term Strategy No. 1

Determine if there is a need to increase the daily amount of solid waste permitted at the Prima Deshecha Landfill five years prior to the closure of Olinda Alpha.

- Assess cost and level of control implications associated with exporting waste out-of-County and the benefit of retaining waste in-County for as long as possible.
- If the above assessment determines that waste should be retained in-County for as long as possible, re-evaluate capacity and demand projections for the County and determine the required increase in permitted daily waste disposed at the Prima Deshecha Landfill in order to accommodate in-County waste at the two remaining landfills.

If an increase in permitted daily tonnage at the Prima Deshecha Landfill is deemed necessary, the following actions would be required:

- Assess impacts on surrounding cities affected by increased tonnage identified through a Community Involvement Program.
- Negotiate and revise Agreements to address mitigations with affected cities.
- Revise landfill operating permits, including the preparation of required environmental documents.

Aerial Photo
Prima Deshecha Landfill

Long-term Strategy No. 2

Identify strategies to support, develop and implement feasible, viable, alternative technologies or other approaches to maximize landfill capacity for possible consideration in future Waste Disposal Agreements.

- Prepare a plan to educate the public about the use of technology for waste disposal and the important role and responsibility the public has in supporting the location and operation of safe new technology in Orange County. The public education process for alternative technologies should be implemented concurrent with the public outreach program to be developed as part of Short-term Strategy Number 4.
- Subsequent to any RELOOC Strategic Plan annual review that identifies potentially viable alternative technologies or other approaches to maximize landfill capacity in Orange County, determine economic viability of and the actions or steps necessary to support, develop and/or implement those approaches.
- Modify the RELOOC Strategic Plan, as appropriate, prior to renegotiation of any Waste Disposal Agreements to reflect the implementation of feasible, viable, alternative technologies or other approaches to reduce dependence on landfills.

Aerial Photo
FRB Landfill

Long-term Strategy No. 3

Complete a study to determine the feasibility of expanding FRB Landfill into the adjacent Round Canyon prior to renegotiation of the 2017-2027 Waste Disposal Agreements.

- Assess impacts on biological resources and existing reserves and identify potential mitigation requirements of regulatory agencies.
- Obtain input from the environmental community concerning the Natural Community Conservation Plan (NCCP) and related environmental issues through an Involvement Program.
- Determine ability/opportunity to mitigate impacts on biological resources and existing reserves and take action, if appropriate, to secure lands for biological mitigation.
- Assess impacts on the City of Irvine due to expansion of the FRB Landfill into Round Canyon identified through a Community Involvement Program.
- Assess the timing of the feasibility study and associated actions to maximize coordination with current and anticipated regional environmental planning efforts.

If a decision were made to expand FRB into Round Canyon, the following additional actions would then be required:

- Renegotiate Agreement with City of Irvine to address required mitigation.
- Take appropriate action to purchase Round Canyon for potential landfill expansion.
- Revise County Recreational Plan regarding Limestone Canyon Regional Park.
- Amend the NCCP for Round Canyon and take other actions deemed necessary for mitigation of impacts to biological resources and existing reserves.
- Revise landfill operating permits, including the preparation of required environmental documents.

If a decision is made not to expand FRB into Round Canyon, any lands purchased for biological mitigation could be sold or retained as open space.

For both short- and long-term strategies, any projects (as defined by CEQA) will require CEQA analysis and review prior to implementation, including additional community input.

Implementation schedules for Phases 1 and 2 are to be evaluated and modified, as necessary, during the annual review of the RELOOC Strategic Plan. The Phase 1 - Short-term Strategies are to be implemented over the next ten years (2001 to 2010) and the Phase 2 - Long-term Strategies are to be implemented during the 40-year RELOOC study period.

Implementation of the RELOOC Strategic Plan will provide the following benefits to the residents of Orange County:

Preserves Orange County's three-landfill system until capacity is reached.

Researches the potential to replace lost capacity when Olinda Alpha closes.

Maintains local control over the landfill system.

Is the most environmentally sensitive option.

Seeks to protect "Host City" communities.

Is cost effective to implement.

By maximizing In-County disposal capacity, local control over the landfill system is maintained which allows for consistent and reliable disposal operations conducted in the most cost-effective manner.

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