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COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

April 30, 1992

Office of Environmental Quality Control
Central Pacific Plaza
220 South King Street, 4th Floor
Honolulu, HI 96813

Gentlemen:

SUBJECT: **KIHEI WASTEWATER PUMP STATION UPGRADE**
PUMP STATION NO. 3, 4 AND 5
TMK 3-9-1:147, 3-9-2:139 AND 3-9-27:28
KIHEI, MAUI, HAWAII

In accordance with the requirements of Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Administrative Rules, an Environmental Assessment has been prepared for the subject project.

As the proposing agency, we are forwarding herewith one copy of OEQC Form 91-1. Four copies of the Environmental Assessment were supplied earlier under separate cover. We have determined that there will be no significant impacts as a result of this project and therefore are filing the Environmental Assessment as a Negative Declaration. These documents are respectfully submitted for publication in the OEQC Bulletin.

Very truly yours,

George N. Kaya
Director of Public Works

attach.

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1992-05-08-MA-FEA - Kihei Wastewater Pump Station No 3, 4, & 5 upgrades

MAY 8 1992

ENVIRONMENTAL ASSESSMENT

KIHEI WASTEWATER PUMP STATION NOS. 3, 4, AND 5 UPGRADES

Prepared for:

County of Maui
Department of Public Works

April 1992

Michael T. Munekiyo Consulting, Inc.

ENVIRONMENTAL ASSESSMENT

KIHEI WASTEWATER PUMP STATION NOS. 3, 4, AND 5 UPGRADES

Prepared for:

County of Maui
Department of Public Works

April 1992

Michael T. Munekiyo Consulting, Inc.

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Preface

The County of Maui, Department of Public Works proposes to upgrade three (3) wastewater pump stations in Kihei, Maui, Hawaii (TMK 3-9-01:147, 3-9-02:139, and 3-9-27:28). Pursuant to Chapter 343, Hawaii Revised Statutes, Chapter 200 of Title 11, Administrative Rules, Environmental Impact Statement Rules, and in connection with the Special Management Area assessment application, this Environmental Assessment documents the project's technical characteristics and environmental impacts, and advances findings and conclusions relative to the significance of the project.

Summary

Applicant and Landowner

The Applicant for the proposed project is the County of Maui, Department of Public Works. The landowner for the three (3) wastewater pump stations is the County of Maui.

Property Location and Description

The project consists of improvements to Kihei Wastewater Pump Station (WWPS) Nos. 3, 4, and 5. WWPS No. 3 is located at the edge of Kalepolepo Park, abutting South Kihei Road (TMK 3-9-01:147). Existing improvements on the site include a 20-ft. by 20-ft. concrete masonry block (CMU) building, an asphalt concrete driveway and landscaping with a drip irrigation system.

WWPS No. 4 is located mauka of South Kihei Road on a 10,050 square foot parcel (TMK 3-9-02:139). It is characterized by a 20-ft. by 20-ft. CMU structure, asphalt concrete driveway and small parking area. Gravel covers the remainder of the site with bestill or yellow oleander hedges at the north, south and west borders.

WWPS No. 5 is also located mauka of South Kihei Road on a 10,000 square foot parcel (TMK 3-9-27:28). Existing improvements include a 20-ft. by 20-ft. CMU structure with an asphalt concrete driveway and parking area. Landscaping is composed of oleander hedges on the property boundaries.

Proposed Action

The Applicant proposes to modify and replace existing equipment within the pump station structures as well as below grade. WWPS Nos. 3, 4, and 5 would require the following improvements:

1. Replacement of existing pumps and piping;
2. Replacement of existing electrical apparatus, including motor control centers;
3. Replacement of existing standby generators and manual and automatic transfer

switches;

4. Replacement of wet well level measurement instrumentation;
5. Addition of new magnetic flow meters;
6. Modification of existing pump station ventilation systems;
7. Construction of new wet wells; (Flag)
8. Replacement of influent sluice gates; and
9. Replacement of underground ductline for electrical service.

In addition, improvements at WWPS No. 5 include replacement of the existing variable speed controller and construction of a below-grade valve vault.

For WWPS Nos. 3, 4, and 5, proposed improvements outside the existing pump station structures include a 250 gallon above-ground diesel fuel storage tank at each site and fencing to provide security.

Findings and Conclusion

The proposed improvements to Kihei WWPS Nos. 3, 4 and 5 would increase reliability by replacing aging and outdated equipment. Additional pumping capacity is also being provided which is necessary to serve ongoing development.

The proposed project will not involve substantial earthwork and construction activities. However, these activities may create temporary nuisances normally associated with construction activities. Dewatering discharges will be routed to the closest County drainage system. Noise impacts related to dewatering pump operations are expected to be mitigated. The extent of construction impacts should not be adverse.

From a long-term perspective, the project is not anticipated to cause adverse environmental impacts. There are no known archaeological features or rare/threatened species of fauna and flora at the three pump station sites. The project also will not

generate adverse air quality or noise conditions. Each of the pump station sites does not encroach into scenic coastal view corridors or impact views from mauka vantage points.

The Corps of Engineers has indicated that the mauka edge of the WWPS No. 4 site may be a wetland. Since it is currently not certain whether the mauka edge of the WWPS No. 4 site is considered a wetland, no construction activities are scheduled to take place in this area. If the determination is made that the mauka portion is not a wetland, then the existing hau bush vegetation may be cleared, fencing may be erected and gravel ground cover and landscaping may be placed in this area. If the mauka portion of the WWPS No. 4 site is considered a wetland, site work would avoid the wetland area (e.g., fencing to be placed within the existing gravelled area). All work would be coordinated with the Corps of Engineers to assure that wetlands in the vicinity of WWPS No. 4 are not impacted by the proposed action.

No additional County personnel are required as a result of the proposed improvements. In this regard, the project is not considered significant in terms of its impacts to public services and other infrastructure systems. In light of the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

Chapter I

Introduction and Background

I. INTRODUCTION AND BACKGROUND

The County of Maui, Department of Public Works (DPW) proposes to upgrade three (3) wastewater pump stations in Kihei, Maui, Hawaii. These are identified as Wastewater Pump Station (WWPS) Nos. 3, 4, and 5. See Figure 1. To provide the context within which the proposed project is to be undertaken, this chapter describes existing improvements at the wastewater pump station sites.

A. EXISTING WASTEWATER PUMP STATION IMPROVEMENTS

WWPS No. 3 is located in the southeast corner of TMK 3-9-01:147, which is the site of Kalepolepo County Park. The parcel is shared with the U.S. Department of Commerce's Ionosphere Station, which is situated on the northern half of the property. The site is characterized by a 20-ft. by 20-ft. concrete masonry unit (CMU) building, an asphalt concrete (AC) driveway and access road, and landscaping with a drip irrigation system. See Figure 2. This is typical of each of the three sites. The grassed area on the ocean side is an extension of the adjacent park. The driveway allows access from South Kihei Road which forms the site's eastern boundary. The park's parking lot borders the north face of the property, while the park itself is found on the western side. The southern boundary is shared with the Menehune Shores, a condominium complex. Access to the site is secured by a cable stretching across the driveway. A pole and cable fence cordons off the site from the parking lot. Across South Kihei Road are the resort complexes of Kihei Resort, Kihei Bay Surf and Kihei Bay Villa.

WWPS No. 4 is located mauka of South Kihei Road on TMK 3-9-02:139. This site is a 10,050 square foot parcel owned by the County of Maui. The site is similar to WWPS No. 3 with the exception of gravel replacing the grassed areas. The pump station building is a 20-ft. by 20-ft. CMU structure. The area fronting the building is paved with asphalt concrete, providing a driveway and small parking area. Landscaping consists of

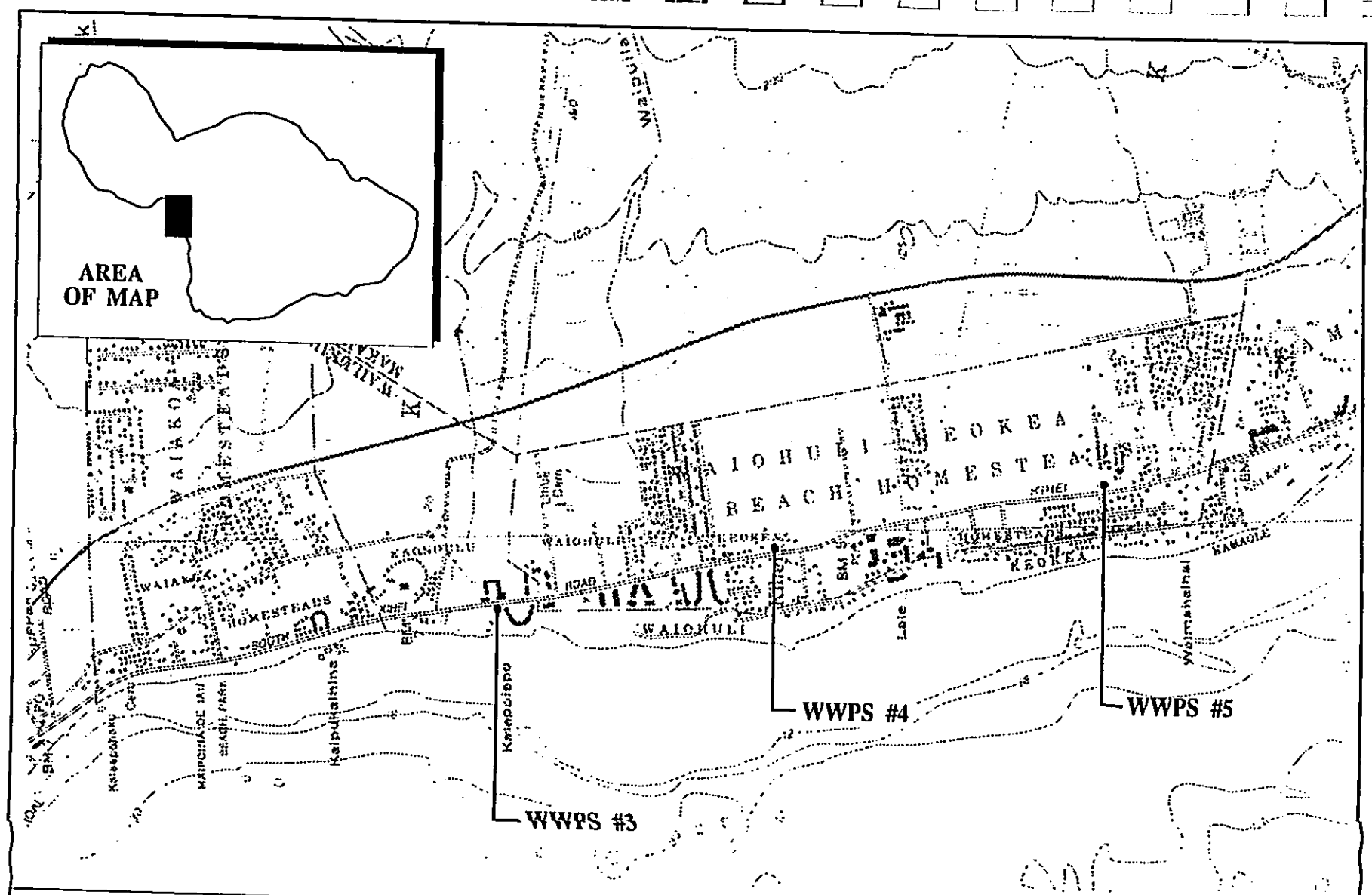

Figure 1 Kihei Wastewater Pump Station Upgrades

Regional Location Map

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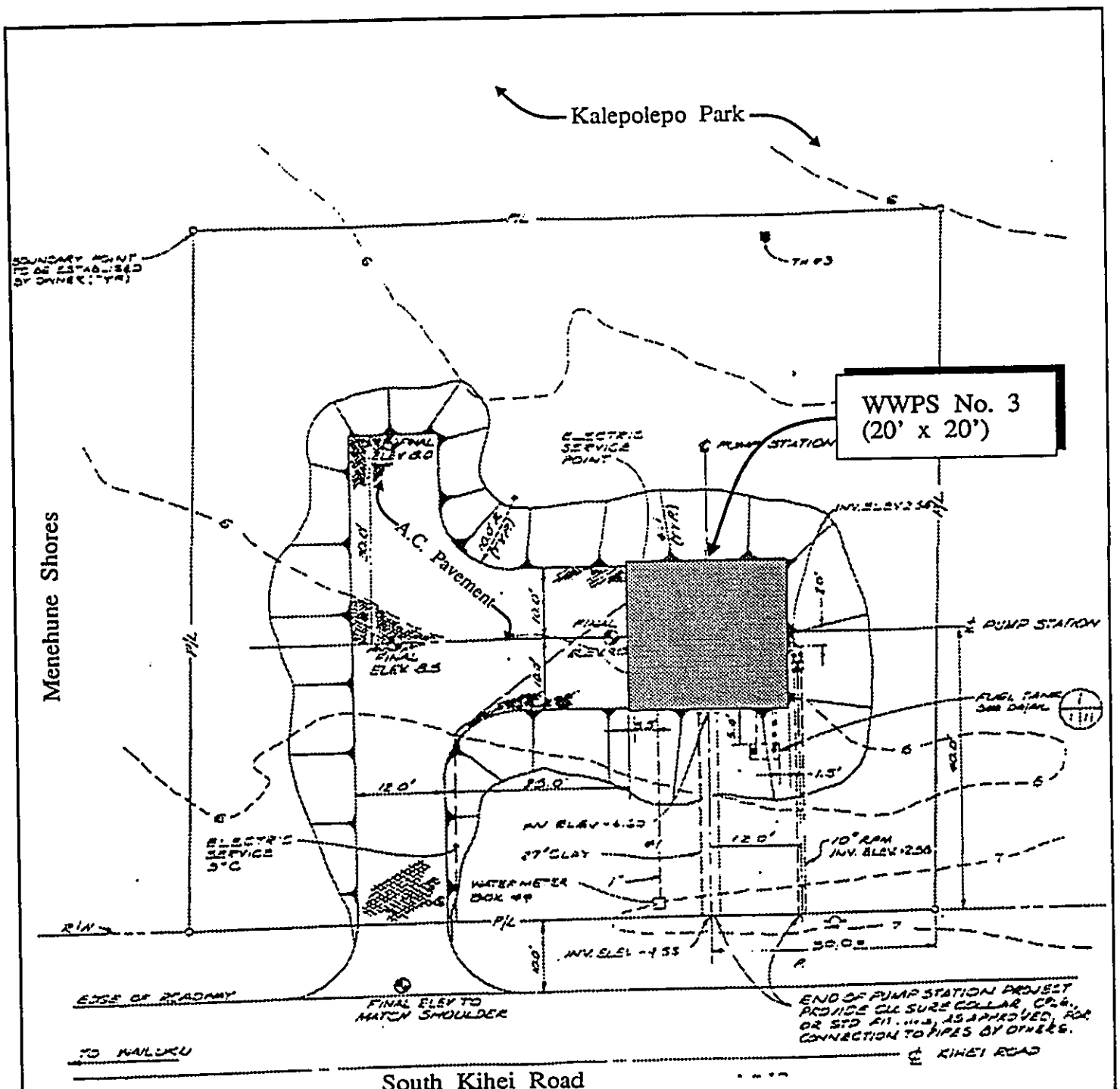

Figure 2 Kihei Wastewater Pump Station Upgrades

WWPS No. 3 Plot Plan

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

Michael T. Munekiyo Consulting, Inc.

bestill or yellow oleander hedges on the north, south and west borders and a plumeria tree. See Figure 3. Irrigation is by means of a drip system. A natural growth of hau trees has encroached into the eastern edge of the site. The surrounding areas include either vacant lots or residences. South Kihei Road forms the property's western boundary from which access is gained.

WWPS No. 5 is also located mauka of South Kihei Road on TMK 3-9-27:28. This 10,000 square foot parcel is owned by the County. Like WWPS Nos. 3 and 4, the site encompasses a 20-ft. by 20-ft. CMU structure. See Figure 4. An AC paved area provides a driveway and parking area. Landscaping bordering the site consists of oleander hedges with a drip irrigation system. Welakahao Street forms the northern boundary of this site and is also the means of access to the site. The property across Welakahao Street is vacant and undeveloped. An open field forms the east and south boundaries beyond which are residences and a church, respectively. The western border is formed by South Kihei Road across which are residences and a small nursery.

WWPS Nos. 3, 4, and 5 all have a similar configuration. All incorporate a cylindrical substructure topped by a one-level block superstructure. The substructure is split by a single wall into wet well and dry well compartments. All pumps are located in the dry wells and are vertically mounted centrifugal pumps.

Each existing pump station structure houses electrical apparatus, including motor control centers and a standby diesel generator. In addition, WWPS No. 5 contains a variable speed drive. Diesel fuel is stored in a 150-gallon underground tank at each pump station site.

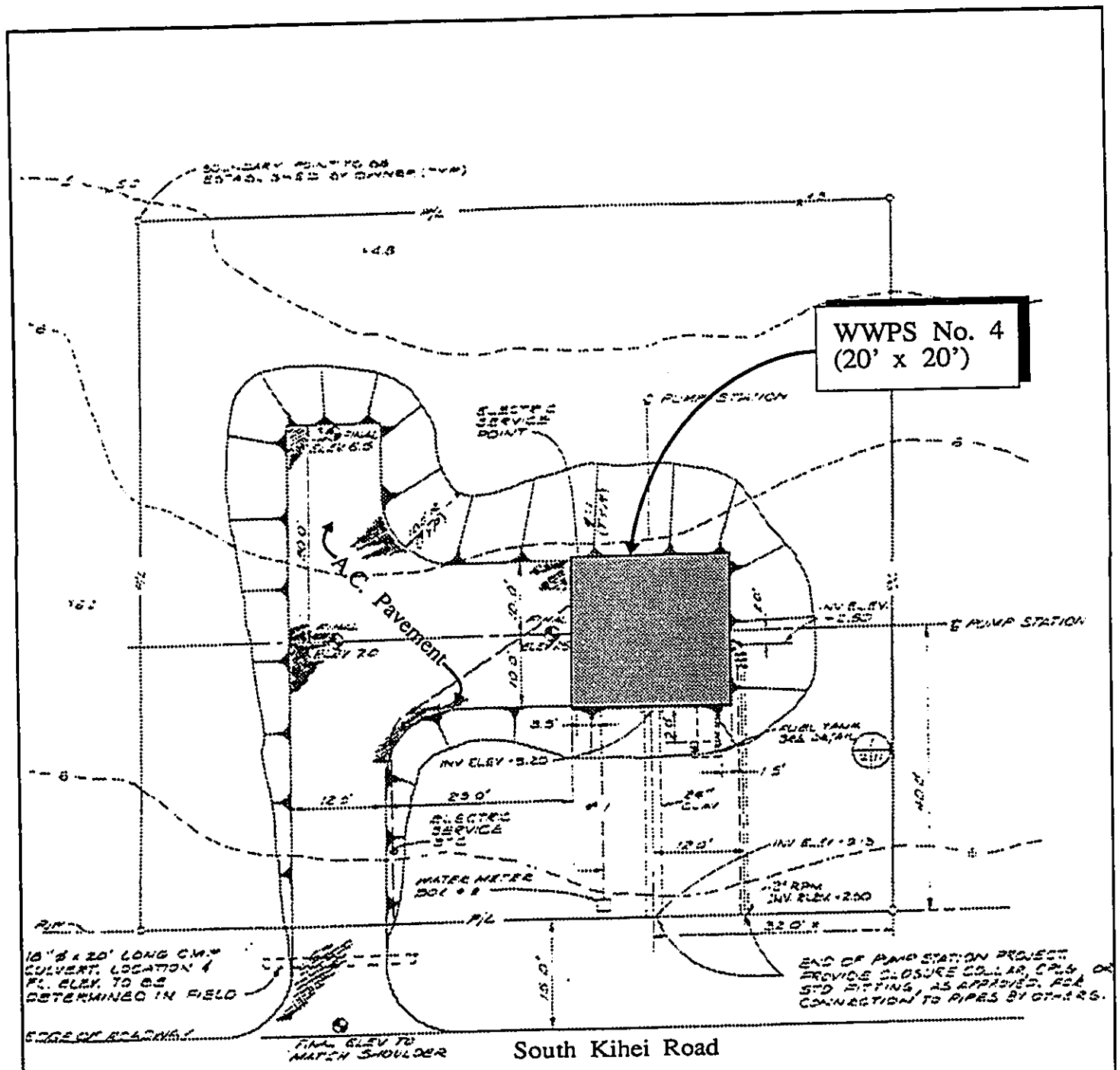

Figure 3 Kihei Wastewater Pump Station Upgrades

WWPS No. 4 Plot Plan

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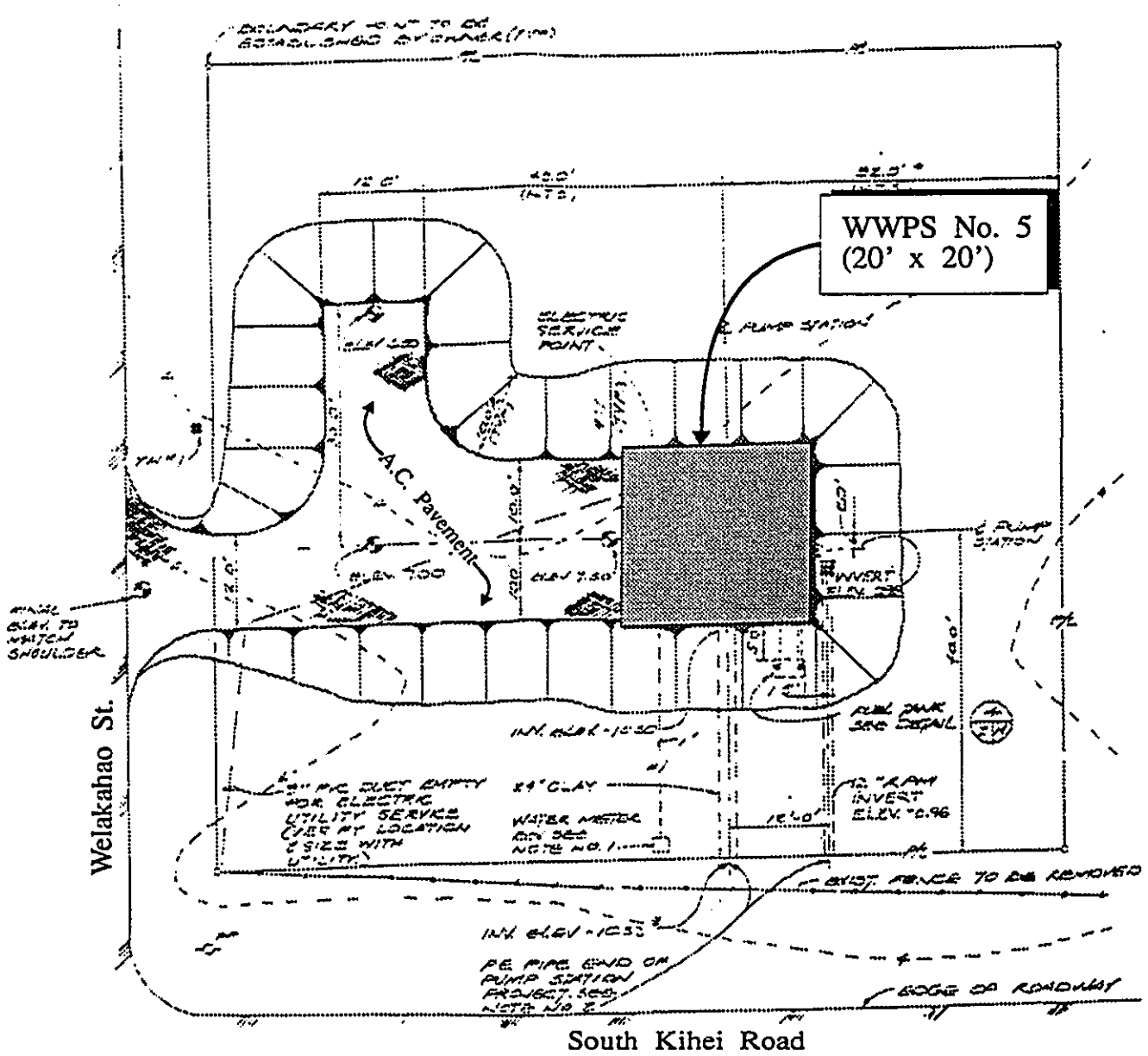

Figure 4 Kihei Wastewater Pump Station Upgrades

WWPS No. 5 Plot Plan

NOT TO SCALE

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Both the dry well and wet well are accessed through the superstructure floor. The dry well is accessed via a circular stair and the wet well is accessed via a floor hatch.

Ventilation is provided by a single blower which supplies both the upper level and the dry well through a single duct. Ventilation out of the structure is via louvers.

Chapter II

Description of the Proposed Project

II. DESCRIPTION OF THE PROPOSED PROJECT

A. PROJECT NEED

The Kihei wastewater pump stations, which were designed in 1973, collect wastewater from North and South Kihei and convey it to the Kihei Wastewater Reclamation Plant. WWPS Nos. 2, 3, 4, and 5 convey wastewater from North Kihei to WWPS No. 6, and WWPS Nos. 8 and 7 convey wastewater from South Kihei to WWPS No. 6. WWPS No. 6 then pumps the combined north and south flows to the Kihei Wastewater Reclamation Plant. Figure 5 illustrates the geographic relationship of the pump stations, sewer transmission lines and reclamation plant.

Proposed improvements to WWPS Nos, 3, 4, and 5 are intended to improve reliability and increase the capacity of the stations which is necessary to serve ongoing development.

B. PROPOSED IMPROVEMENTS

Replacement or modification to subsurface equipment and equipment within the existing pump station structures are being proposed.

WWPS Nos. 3, 4, and 5 require the following technical improvements:

- Replacement of existing pumps and piping;
- Replacement of existing electrical apparatus, including motor control centers;
- Replacement of existing standby generators and manual and automatic transfer switches;
- Replacement of wet well level measurement instrumentation;
- Addition of new magnetic flow meters;
- Modification of existing pump station ventilation systems;

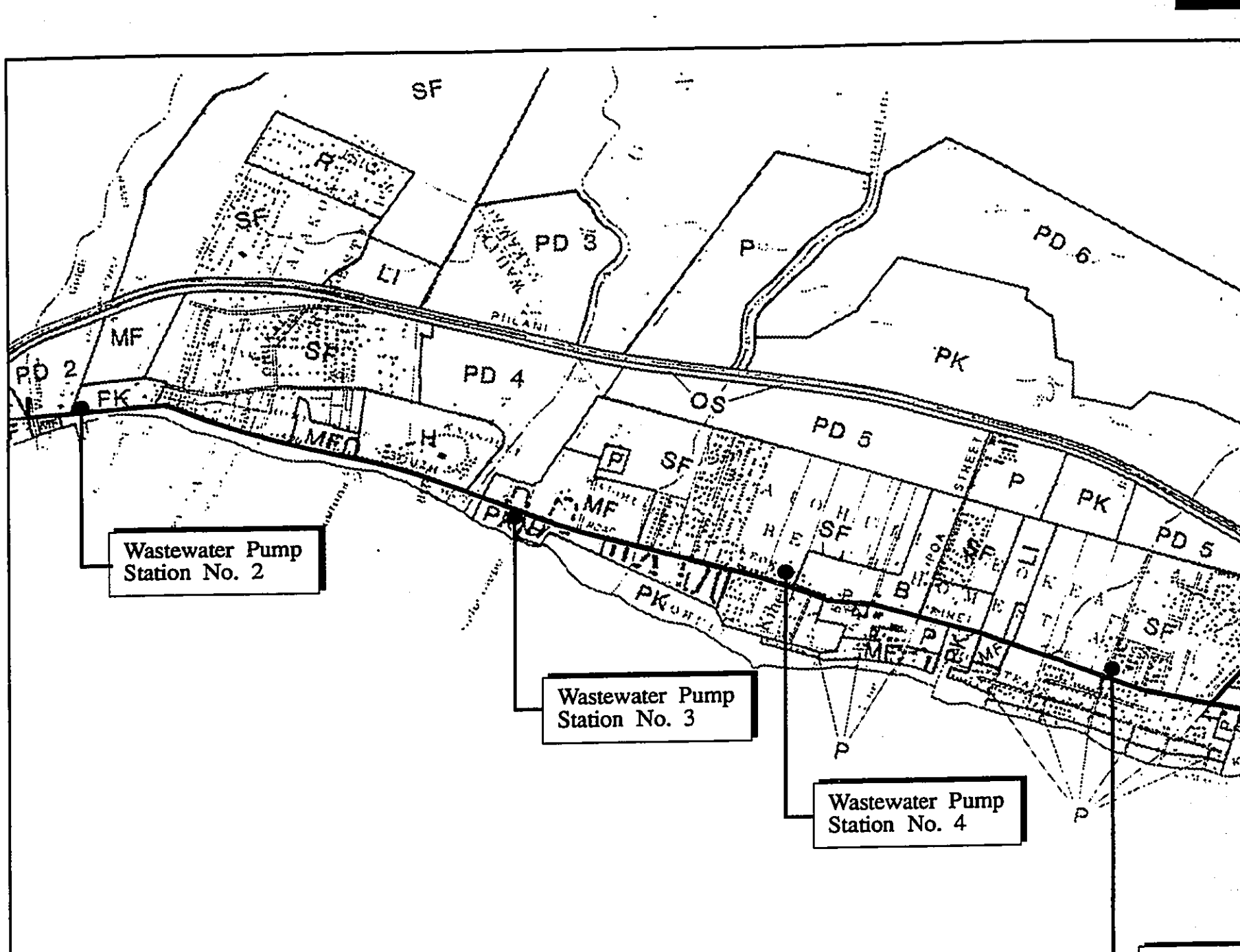
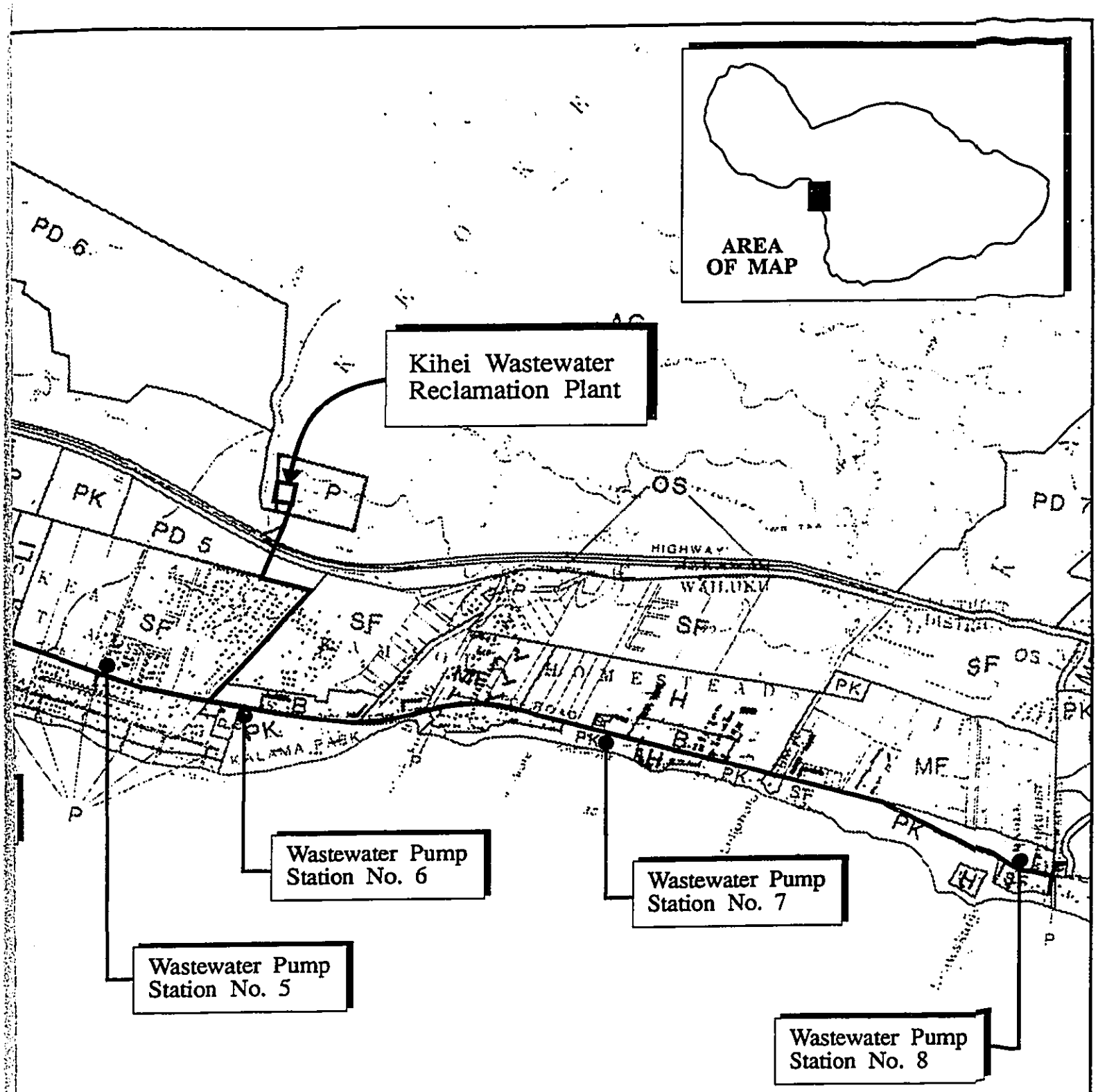


Figure 5

Kihei Wastewater Pump Station
Site Plan

1000 4000
0 Feet
2000



Pump Station Upgrades

te Plan

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Prepared for: County of Maui, Department of Public Works

- Construction of new wet wells;
- Replacement of influent sluice gates; and
- Replacement of underground ductline for electrical service.

In addition, improvements at WWPS No. 5 include replacement of the existing variable speed controller and construction of a below-grade valve vault.

The foregoing improvements affect pump station elements which are located at or below grade, or within the pump station structure.

Proposed improvements outside the existing structure and above grade include a 250 gallon above-ground diesel fuel storage tanks at each site and the provision of fencing to provide security for each site.

The total cost of all improvements is projected to be $4.5 million. Assuming all applicable permits are obtained, construction is projected to start in July 1992 and be completed by December 1993.

C. ***PROPOSED IMPROVEMENTS APPLICABLE TO THE SPECIAL MANAGEMENT AREA ASSESSMENT***

Although total cost of improvements equals $4.5 million, only the above-ground diesel fuel storage tanks and fencing are subject to the County of Maui's Special Management Area (SMA) requirements. Since these improvements would cost approximately $100,000, and the proposed action will not result in any significant impacts, an application for a minor SMA permit is being submitted.

Chapter III

Description of the Existing Environment

III. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Climate

The Kihei Coast, which encompasses the three project sites, is generally sunny, warm and dry the entire year. In Kihei Town, the average annual high temperature is 86 degrees Fahrenheit with the average low temperature being 63 degrees Fahrenheit (Environment Impact Study Corporation, 1982). June through August are historically the warmer months of the year, while the cooler months are January to March.

Average rainfall distribution in the Kihei-Makena region varies from under 10 inches per year to 20 inches per year in the higher elevations. Rainfall in the Kihei-Makena region is highly seasonal, with most of the precipitation occurring in the winter months.

Northeast tradewinds prevail approximately 80 to 85 percent of the time. Winds average 10 to 15 miles per hour during afternoons, with slightly lighter winds during mornings and nights.

The Ma'alaea-Kihei-Makena region is subject to unique wind conditions due to specific terrain. The Ma'alaea area, which lies at the base of the central isthmus flanked by two mountain masses, is subject to a wind tunnel effect. As the wind squeezes between the mountain masses, its force becomes compressed, at times increasing velocity to more than 50 percent above the normal velocity in the Wailuku area. The wind fans out over Ma'alaea Bay, retaining the added velocity, with the inshore segment blowing parallel to the Kihei Coast. Along the shore, it meets the eddy current of the trades deflected along the southeast slopes of

Haleakala. This results in unpredictable local winds from Kalama Park to Cape Kina'u.

2. *Topography and Soil Characteristics*

The topography of the three project sites is relatively flat or with a slight slope, characteristic of the nearshore coastline in Kihei.

Underlying the WWPS No. 3 site is the Kealia series of soils which consist of poorly drained soils. The soil type at this project site consists of Kealia silt loam (KMW). See Figure 6. This soil is poorly drained and has a high content of salt. Ponding occurs in low areas after a heavy rain. The soil has a brackish water table that fluctuates with the tides, has a high concentration of salt, and is moderately alkaline.

Underlying the sites of WWPS Nos. 4 and 5 is the Jaucas series of soils which occur as narrow strips on coastal plains, adjacent to the ocean.

The soil type at the WWPS No. 4 project site is Jaucas sand, saline (JcC). See Figure 7. This soil occurs near the ocean in areas where the water table is near the surface and salts have accumulated. It is somewhat poorly drained in depressions but excessively drained on knolls.

The soil type at the site of WWPS No. 5 is Jaucas sand (JaC). See Figure 8. The slope range of the soil is 0 to 15 percent, but in most places the slope does not exceed 7 percent. In a representative profile, the soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. In many places, the surface layer

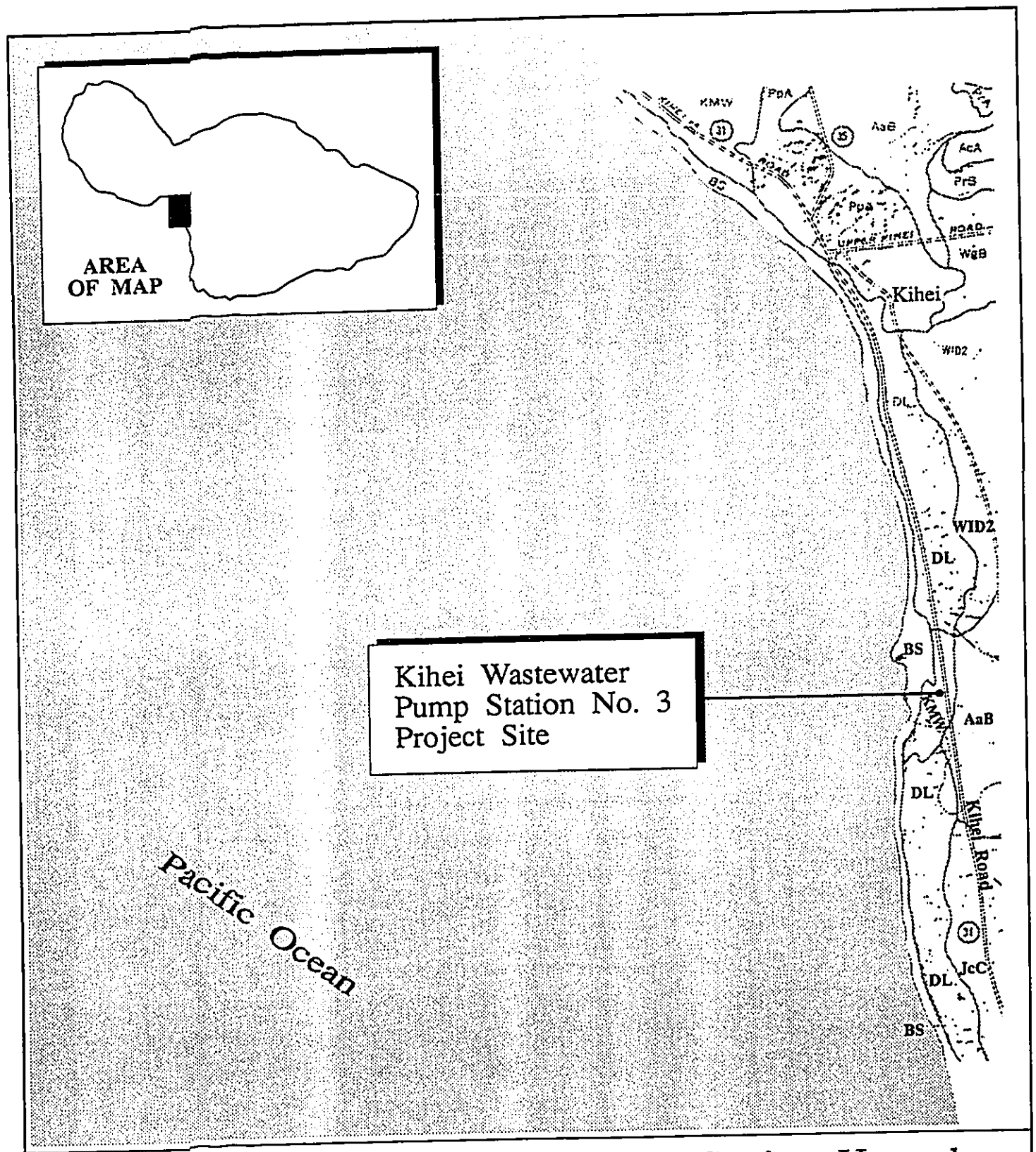

Figure 6 Kihei Wastewater Pump Station Upgrades
Soil Classification at WWPS No. 3

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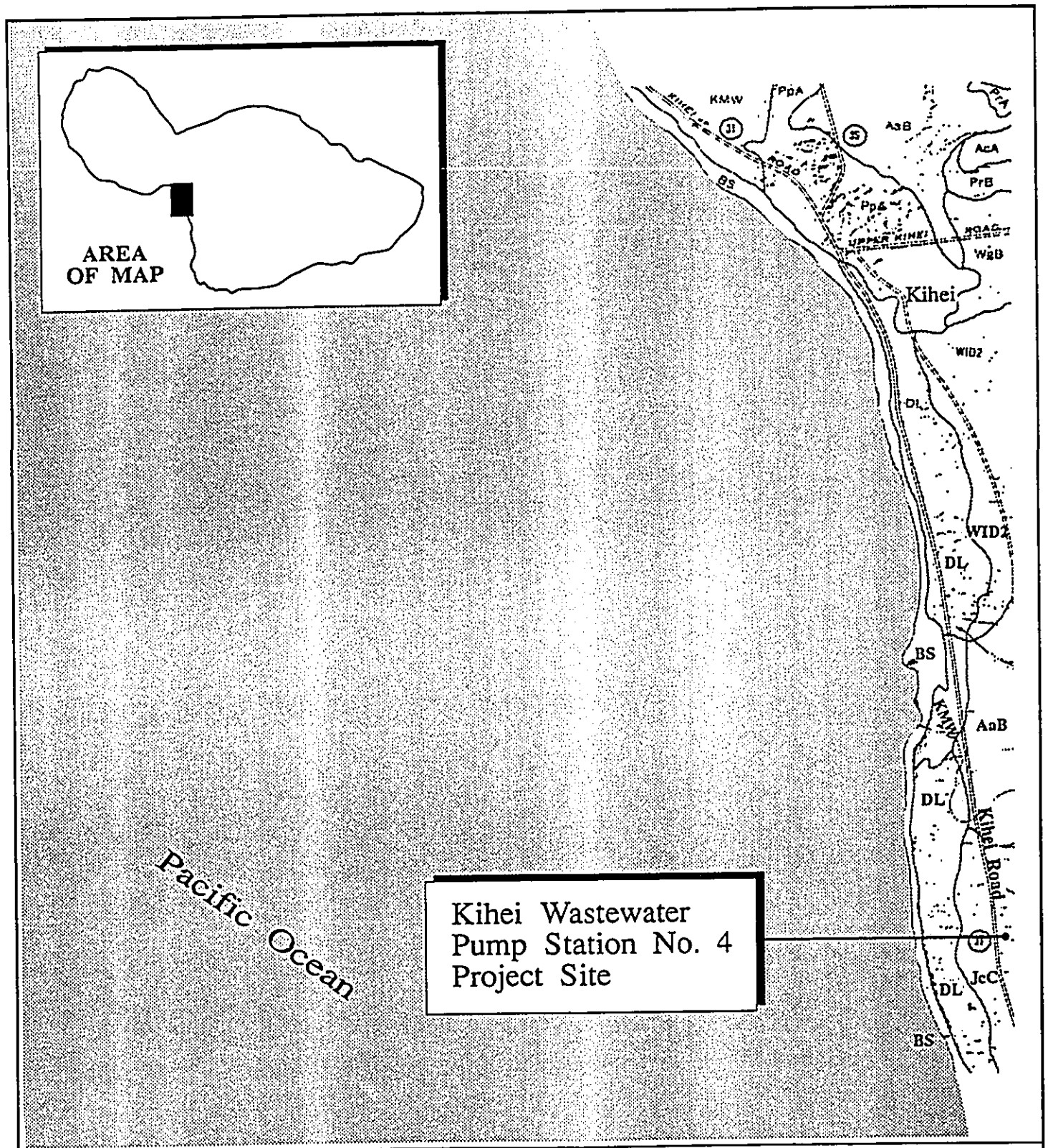

Figure 7 Kihei Wastewater Pump Station Upgrades
Soil Classification at WWPS No. 4

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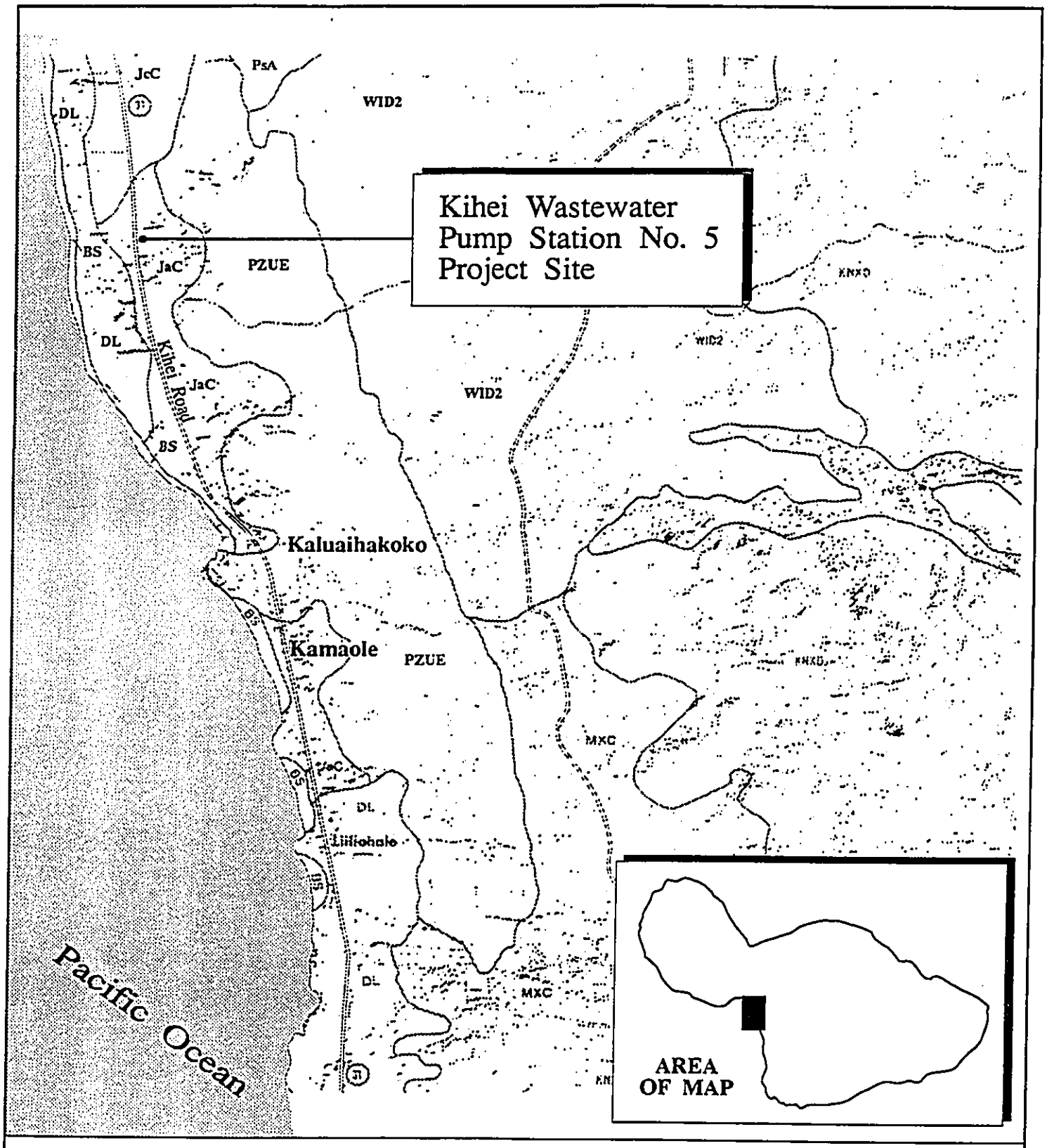

Figure 8 Kihei Wastewater Pump Station Upgrades
Soil Classification at WWPS No. 5

Michael T. Munekiyo Consulting, Inc.
Prepared for: County of Maui, Department of Public Works

is dark brown as a result of accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile.

3. *Flood and Tsunami Hazard*

In accordance with the Flood Insurance Rate Maps (FIRM) issued by the Federal Emergency Management Agency, WWPS Site No. 3 is in Zone A4 (areas inundated by the 100-year flood with a base flood elevation of 10 feet above mean sea level). WWPS No. 4 is located in Zone AH (areas inundated by the 100-year flood with a base flood elevation of 6 feet above mean sea level). WWPS No. 5 is in Zone AH (areas inundated by the 100-year flood with a base flood elevation of 7 feet above mean sea level) and Zone C (areas of minimal flooding). See Figure 9, Figure 10, and Figure 11.

4. *Flora and Fauna*

The flora and fauna of the three project sites is characteristic of the urban nature of Kihei. Landscaping is composed of introduced plant species which include oleander, bestill and plumeria. There are no endangered plant species found at any of the sites. Fauna and avifauna is also characteristic of urban areas.

5. *Wetlands*

According to the Corps of Engineers, a portion of the WWPS No. 4 site may be considered wetlands. See Figure 12. The affected area encompasses the eastern (mauka) edge of the site which is a natural growth of hau trees. The hau growth varies from 18 to 25 feet mauka of the existing pump station structure. The remainder of the WPPS No. 4 site, which is covered with gravel, is not affected by the possible wetlands designation.

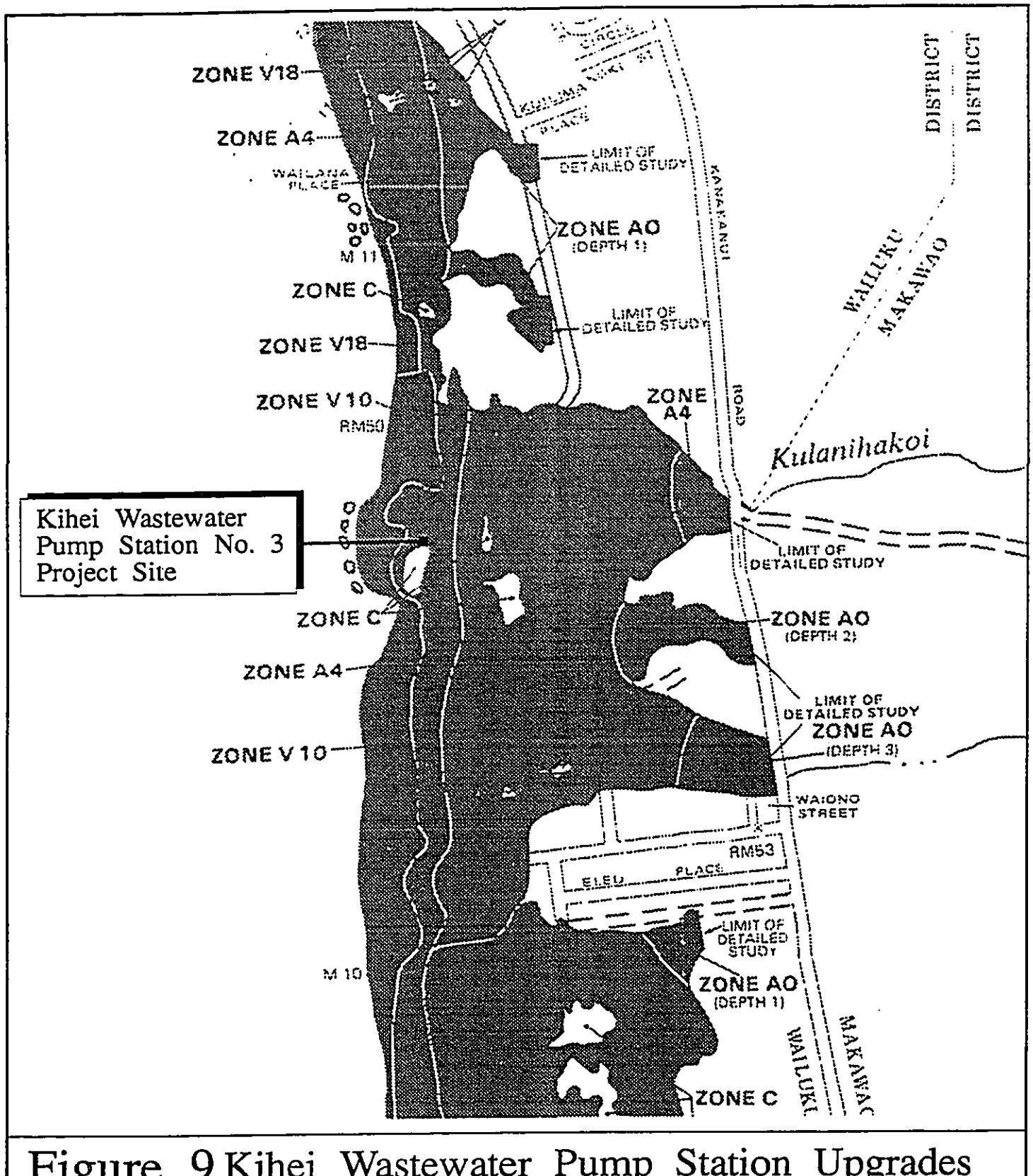

Figure 9 Kihei Wastewater Pump Station Upgrades

Flood Insurance Rate Map - WWPS No. 3

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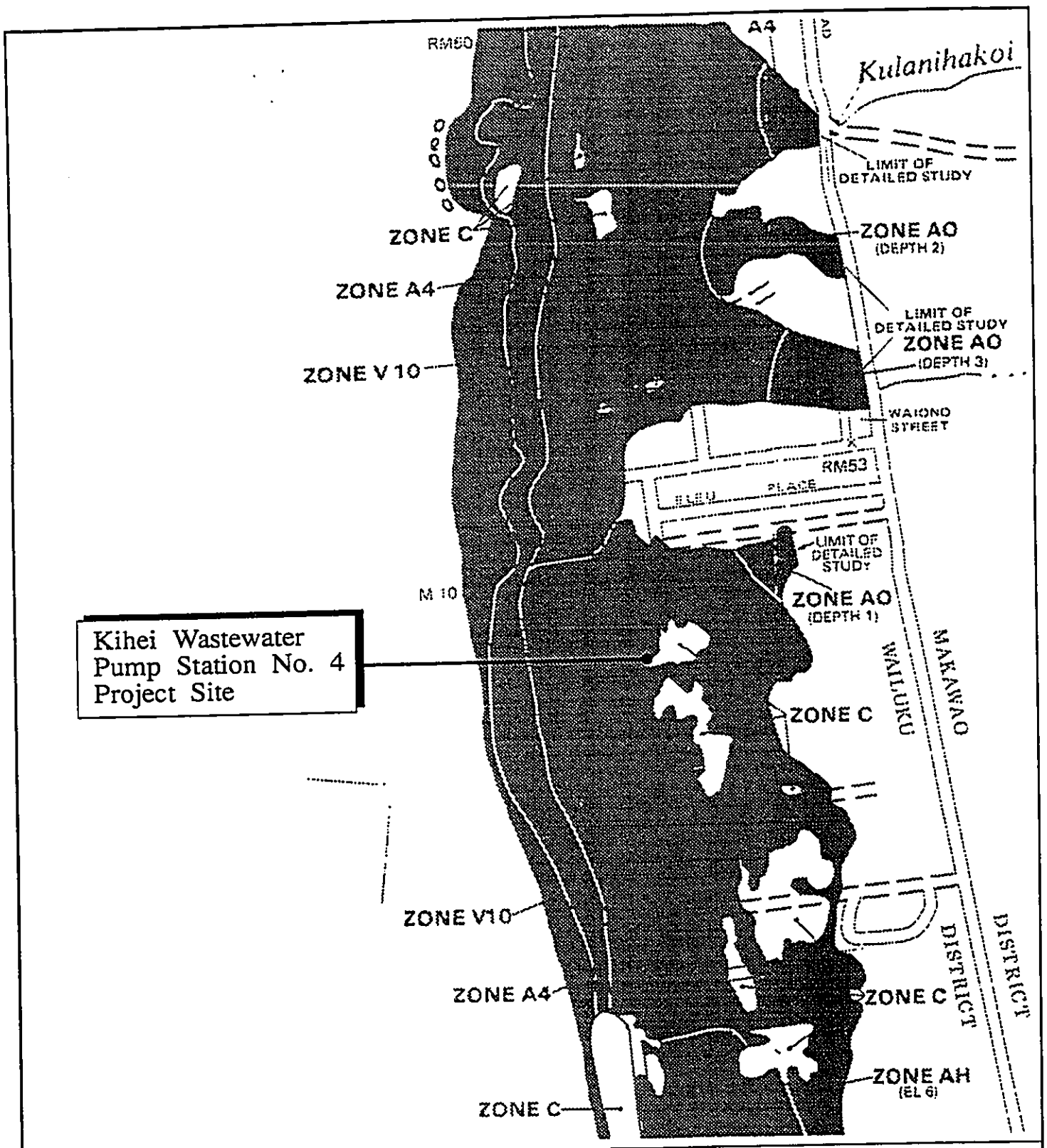

Figure 10 Kihei Wastewater Pump Station Upgrades
Flood Insurance Rate Map - WWPS No. 4

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Prepared for: County of Maui, Department of Public Works

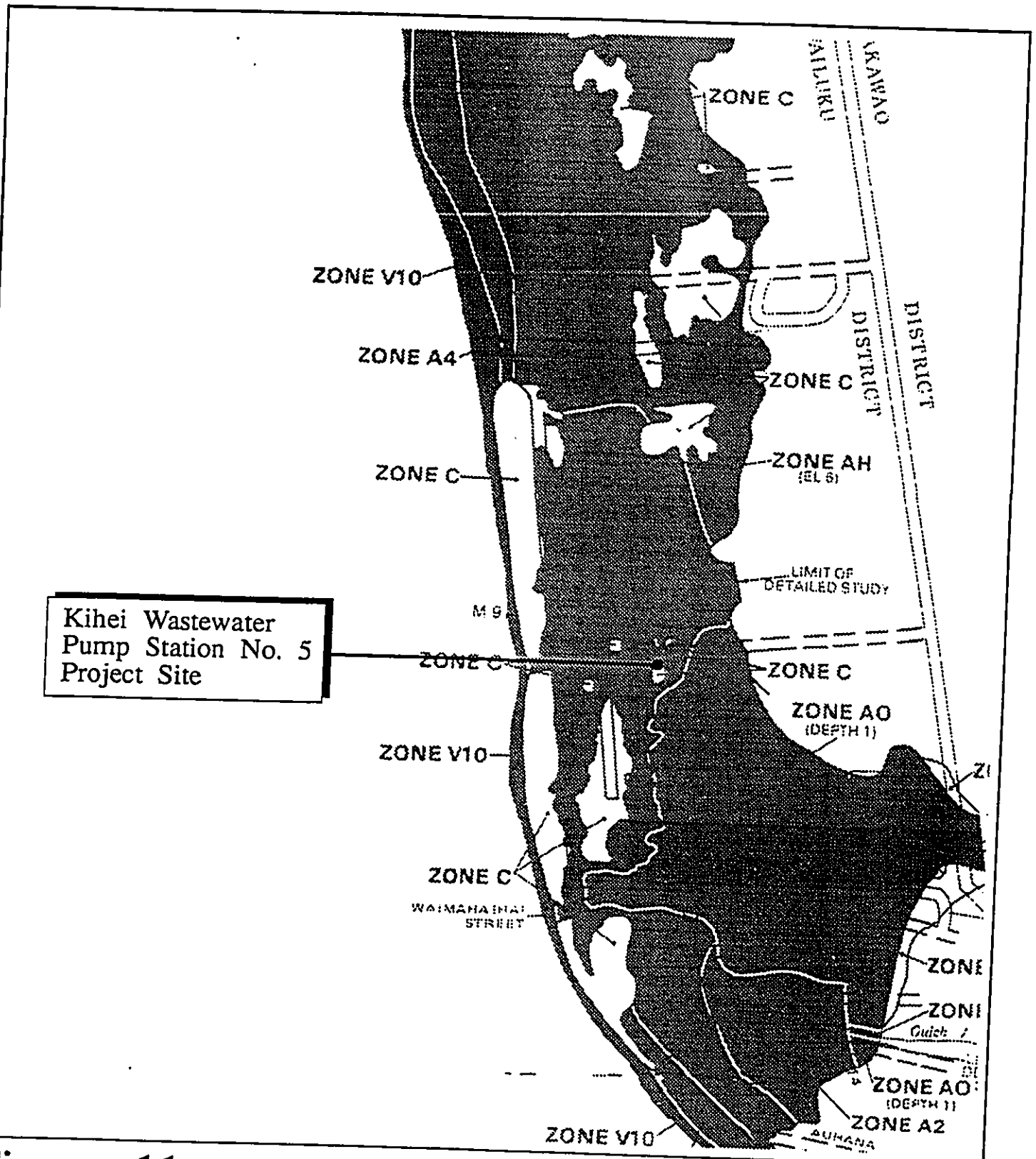

Figure 11 Kihei Wastewater Pump Station Upgrades
Flood Insurance Rate Map - WWPS No. 5

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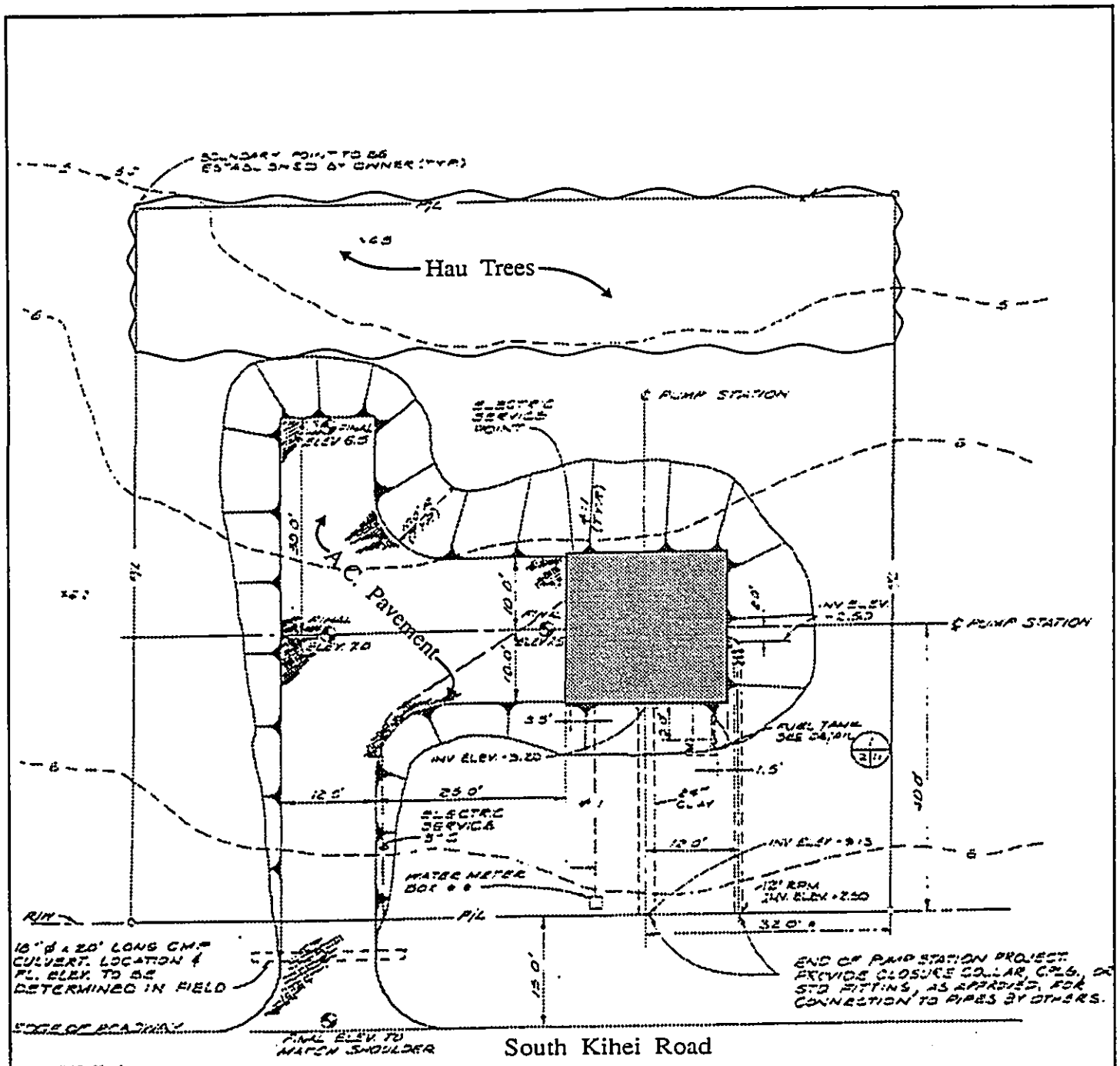

Figure 12 Kihei Wastewater Pump Station Upgrades

Portion of WWPS No. 4 Site Subject to Wetlands Determination

NOT TO SCALE

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Prepared for: County of Maui, Department of Public Works

The Corps of Engineers proposes to conduct a site visit to determine whether the mauka edge of the pump station site is a wetland. Construction activities associated with improvements at WWPS No. 4 will be coordinated with the Corps of Engineers to avoid impacts to any adjoining wetland areas.

6. ***Air Quality***

There are no point sources of airborne emissions in the immediate vicinity of the project sites. The air quality of the Kihei area is considered good with existing airborne pollutants attributed primarily to automobile exhaust from the region's roadways. Another source of airborne emissions may include smoke from sugarcane burning which occurs in the Central Maui isthmus. This source is intermittent, however, and prevailing tradewinds quickly disperse particulates which are generated. Regarding odors, there have been intermittent complaints regarding odors at WWPS No. 3. An odor control unit is currently in operation at WWPS No. 3 which aids in odor mitigation.

7. ***Noise Characteristics***

There are no fixed noise generators in the vicinity of the project sites. Background noise in this locale can be attributed to traffic travelling along South Kihei Road.

8. ***Archaeological Resources***

The sites for WWPS Nos. 3, 4 and 5 have been cleared and graded to accommodate subsurface and above-ground pump station improvements. Accordingly, the project is not anticipated to have adverse impacts to archaeological resources.

B. COMMUNITY SETTING

1. Land Use and Community Character

The Kihei-Makena Community Plan region includes a diverse range of physical and socio-economic environments. With its dry and mild climate and proximity to recreation-oriented shoreline resources, the visitor-based economy has grown steadily over the past few years. The town of Kihei serves as the commercial and residential center of the region with the master-planned communities of Wailea and Makena serving as the focal point for visitor activities.

The project sites are located in Kihei Town. WWPS Nos. 3, 4 and 5 are all adjacent to South Kihei Road.

2. Population

The population of the County of Maui has exhibited relatively strong growth over the past decade, with the 1990 population estimated to be 100,374, a 41.7 percent increase over the 1980 population of 70,847. Growth in the County is expected to continue, with resident population projections to the years 2000 and 2010 estimated to be 123,900 and 145,200, respectively (DBED, 1990).

Just as the County's population has grown, the resident population of the region surrounding the project sites has increased dramatically in the last two decades. Population gains were especially pronounced in the 1970's as the rapidly developing visitor industry attracted many new residents. The current resident population of the Kihei-Makena region is estimated at 11,600 (Austin, Tsutsumi & Associates, 1991). The projected resident population for the years 2000 and 2010 are 20,393 and 25,762, respectively.

3. *Economy*

The economy of Maui is heavily dependent upon the visitor industry. In 1989, for example, total visitor expenditures equalled $2.3 billion. The dependency on the visitor industry is especially evident in Kihei-Makena, which is emerging as one of the State's major resort destination areas. The openings of the Four Seasons Hotel, the Grand Hyatt and Kea Lani Hotel will boost the region's significance as a resort destination.

Support for the visitor industry is found in Kihei, where numerous retail commercial centers are found. New commercial centers in Kihei, such as Azeka's and the Longs Drugs complexes, will lend further support to the regional economy.

4. *Police and Fire Protection*

The County of Maui's Police Department is headquartered at its Wailuku Station. The Department consists of several patrol, investigative and administrative divisions. The Department's Kihei Patrol covers the Kihei-Makena region.

Fire prevention, suppression and protection services are offered by the County's Department of Fire Control. The Kihei Station, which services the Kihei-Makena region, is located on South Kihei Road. WWPS No. 3 is located approximately 2 miles from the Kihei Fire Station. WWPS No. 4 is approximately 1.3 miles, and WWPS No. 5 is approximately 0.3 mile from the Kihei Station.

5. *Medical Facilities*

Maui Memorial Hospital, the only major medical facility on the Island, services the Kihei-Makena region. Acute, general and emergency

care services are provided by the 145-bed facility which is located in Wailuku. Medical/dental offices are located in the Kihei area to serve the region's residents.

6. Recreational Facilities

Diverse recreational opportunities are available in the Kihei-Makena region. Recreational facilities in close proximity to the project site include the Kalepolepo Park, Silversword Golf Course, Kalama Park, Kamaole Beach Park, and numerous other beach parks along the Kihei coastline. Shoreline recreation includes swimming, fishing, picnicking and snorkeling.

The Wailea-Makena resort areas to the south of the project site offer additional opportunities for golf, tennis and ocean-related activities.

7. Schools

The State Department of Education operates two schools in the Kihei area. Kihei Elementary School covers Grades K to 6, while Lokelani Intermediate School includes Grades 7 and 8. Public school students in Grades 9 through 12 attend H.P. Baldwin High School in Wailuku.

C. INFRASTRUCTURE

1. Roadway System

South Kihei Road and Piilani Highway are the two major routes serving the Kihei region.

Access to WWPS Nos. 3 and 4 are from South Kihei Road. Although the WWPS No. 5 site abuts South Kihei Road, a driveway access is provided from Welakahao Street.

2. ***Water***

The Kihei-Makena region is served by the Central Maui Water System. Source wells located in upper Waiehu provide water for the region. The distribution system in the vicinity of the project sites include a series of 6-inch, 8-inch and 12-inch waterlines.

3. ***Drainage***

Surface runoff from the three pump station sites sheet flows largely to South Kihei Road. In the case of WWPS No. 3, a portion of the surface runoff sheet flows into the adjoining Kalepolepo Park.

In the vicinity of WWPS No. 3, there is a 24-inch storm drain located on the mauka side of South Kihei Road. The drainline continues north until its intersection with Kulanihakoi Gulch. The closest drainage facility to WWPS No. 4 is a 24-inch storm drain approximately 900 feet away. For WWPS No. 5, there are two 24-inch storm drain pipes which connect with an open channel running northwest on South Kihei Road. The channel connects with 30-inch storm drain pipes at Kapu Place. The storm drain pipes run approximately 300 feet along South Kihei Road before connecting with a drainage channel leading to the ocean.

4. ***Electrical System***

Electrical service to the sites is provided by Maui Electric Company.

Chapter IV

Potential Impacts and Mitigation Measures

IV. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. IMPACTS TO THE PHYSICAL ENVIRONMENT

1. Drainage and Erosion Control

In reference to short-term construction-related impacts, a new wet well will be constructed at each pump station site. The new wet wells, measuring approximately 8-feet by 8-feet, would be adjacent to the existing pump station structure and below-grade to connect with existing transmission lines. Because of its elevation near sea level, the installation of the wet wells will involve dewatering during its period of construction. All discharges will be pumped to a County drainage system by the use of pipes or other acceptable means. For WWPS No. 3, a 24-inch County storm drain exists on the mauka side of South Kihei Road. For WWPS No. 4, the closest County system is approximately 900 feet away at the intersection of Uluniu Road and South Kihei Road. In the case of WWPS No. 5, the County utilizes an open channel which runs along South Kihei Road and connects with a storm drain pipe system. It is anticipated that the construction period for the wet wells would be minimized to the greatest extent possible in order to mitigate any possible impacts. If necessary, the discharge shall be filtered or otherwise treated to comply with all applicable Federal, State and County regulations. For subsurface construction near sea level, dewatering procedures are necessary to implement the project. When completed, the improvements would increase reliability and efficiency of the pump stations.

In the long-term, the only proposed above-grade improvements outside of the existing wastewater pump station structures are above-ground diesel fuel storage tanks and fencing to provide

security for the sites. In the case of WWPS No. 3, these improvements are anticipated to occur within a 10,000 square foot area (100-feet by 100-feet) centered around the superstructure. In the case of WWPS Nos. 4 and 5, all construction activities will take place within existing gravelled areas.

The above-ground tanks are anticipated to be placed on a concrete slab no greater than 50 square feet at each of the pump station sites.

It is anticipated that on-site runoff from the subject sites will cause no adverse impacts to adjacent and downstream properties.

2. ***Flora and Fauna***

There are no known significant habitats or rare, endangered or threatened species of flora and fauna located on the project site. The proposed improvements are not considered a significant adverse impact upon these environmental features.

3. ***Wetlands***

Since it is currently not certain whether the mauka edge of the WWPS No. 4 site is considered a wetland, all construction activities are scheduled to take place within the existing gravelled area. Should the Corps of Engineers determine that the mauka edge of WWPS No. 4 is not a wetland, then the vegetation may be cleared up to the mauka property line. Fencing would be erected and gravel ground cover and landscaping would be placed in this area. If the mauka portion of the WWPS No. 4 site is considered a wetland, then all construction work and appurtenant storage and staging would take place within the existing gravelled area of the site without

impacting wetland areas. All work will be coordinated with the Corps of Engineers to assure that wetland areas in the vicinity of WWPS No. 4 are not impacted by the proposed construction activities.

4. ***Air Quality and Noise***

Air quality and noise parameters in the immediate vicinity of the project sites are anticipated to be affected by short-term construction activities. However, since site work is not substantial, dust generated from construction activities is not expected to adversely affect surrounding properties. Also, while most of the project's construction, modifications and upgrades involve installation of equipment within the existing pump stations, some noise impacts, however, may be anticipated from dewatering pump operations for wet well construction. Should a diesel fuel generator be utilized, housing which encloses the generator would be installed to mitigate noise impacts. An electrically run generator may also be used depending on the extent of required dewatering. Although the electric generator would result in more quiet operation, its capability is also limited relative to a diesel generator.

On a long-term basis, the projects will not generate adverse air quality or noise conditions.

Regarding odor, the access hatch to the wet well will be sealed as part of the wet well construction, thereby reducing odor impacts. Moreover, equipment upgrades are also anticipated to reduce turbulence within the wet wells which aid in keeping odors confined within the wells. The project can be anticipated to reduce any odor impacts on the surrounding community.

5. *Scenic and Open Space Resources*

WWPS No. 3 is located within Kalepolepo Park, which is makai of South Kihei Road, while WWPS Nos. 4 and 5 are located mauka of South Kihei Road. Additional structures to be considered within the existing sites include above-ground storage tanks and fencing to provide security for the pump station sites. However, existing landscaping will be maintained or replaced. The proposed above-ground improvements do not encroach into scenic coastal view corridors or impact views from mauka vantage points.

6. *Archaeological Resources*

The sites have been in urban use for a number of years and surface character has been altered during original construction of the wastewater pump stations and laying of transmission lines. Accordingly, the improvements to WWPS Nos. 3, 4 and 5 are not anticipated to have adverse impacts to archaeological resources.

B. *IMPACTS TO COMMUNITY SETTING*

1. *Population and Local Economy*

The proposed improvements will improve reliability and increase the capacity of the stations to permit the handling of wastewater flows.

The proposed improvements will help to preserve the long-term economic vitality of the region by ensuring the integrity of the wastewater reclamation system. Additionally, improved facilities for wastewater reclamation will promote the public health and welfare of the residents of the Kihei District.

2. *Public Services*

The proposed improvements will not require any additional persons

to handle operations and maintenance. Thus, the employment-related impacts of the project upon public service needs, such as police and fire protection, medical facilities, recreational facilities and schools are considered negligible.

3. ***Impacts to Wastewater Reclamation System***

The proposed improvements represent an incremental improvement to the Kihei Wastewater Reclamation System. The improvements to WWPS Nos. 3, 4 and 5 replace aging and outdated equipment which increases the reliability of the system.

The proposed improvements also would provide additional pumping capacity which is necessary to serve ongoing development. The proposed diesel tanks provide fuel for back-up electricity generation. The proposed capacity of the new above-ground tanks have been increased from 150 gallons to 250 gallons. The bigger tanks would sustain pumpage continuously for a 72-hour period in the event electricity is not available.

4. ***Impacts to Other Infrastructure Systems***

The proposed improvements will not have any significant impact on roadway, water or solid waste disposal systems. With no additional employees anticipated as a result of the proposed improvements, and maintenance expected to decrease with the new equipment in place, the proposed project's impacts upon other infrastructure systems is expected to be negligible.

Chapter V

Relationship to Land Use Plans, Policies and Controls

V. RELATIONSHIP TO LAND USE PLANS, POLICIES AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes the four major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural", and "Conservation". WWPS Nos. 3, 4 and 5 are within the "Urban" district. See Figure 13.

B. GENERAL PLAN OF THE COUNTY OF MAUI

The General Plan of the County of Maui (1990 Update) provides long-term goals, objectives and policies directed toward the betterment of living conditions in the County. Addressed are social, environmental, and economic issues which influence both the quantity and quality of growth in Maui County.

Implementation of the General Plan would be facilitated by the proposed improvements to WWPS Nos. 3, 4 and 5. The following General Plan objective is addressed by this project:

Objective:

To provide efficient, safe and environmentally sound systems for the disposal and reuse of liquid and solid wastes.

C. KIHEI-MAKENA COMMUNITY PLAN

Nine (9) community plan regions have been established in Maui County. Each region's growth and development is guided by a Community Plan, which contains objectives and policies drafted in accordance with the County General Plan. The purpose of the Community Plan is to outline a relatively detailed agenda for carrying out these objectives.

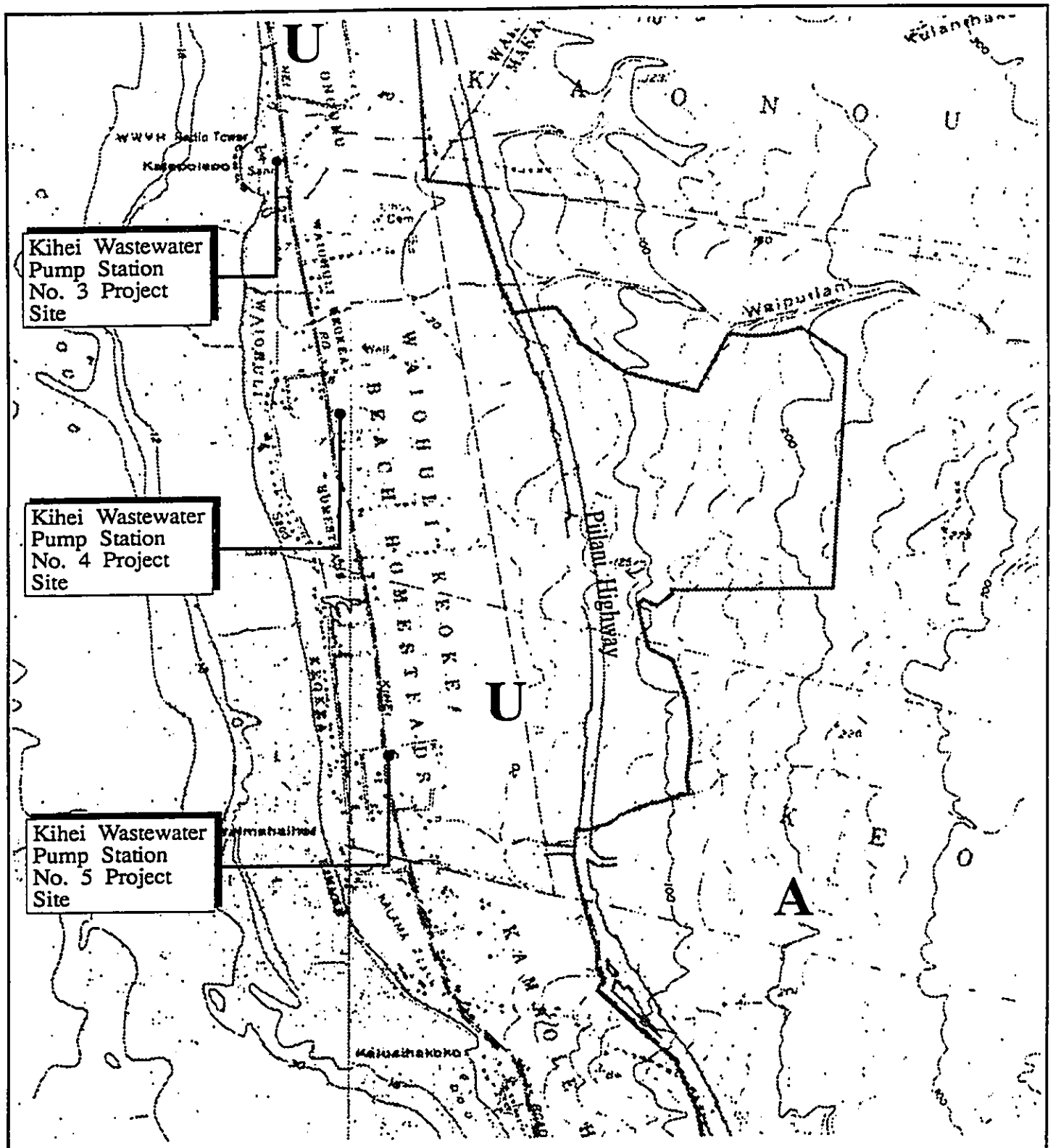


Figure 13 Kihei Wastewater Pump Station Upgrades

State Land Use District Designations - WWPS Nos. 3, 4, and 5

Michael T. Munekiyo Consulting, Inc.

Prepared for: County of Maui, Department of Public Works

The proposed project falls within the jurisdiction of the Kihei-Makena Community Plan. The proposed project would facilitate implementation of the Kihei-Makena Community Plan by addressing the objective to "coordinate improvements to existing sewage transmission lines and the central treatment plant to meet the needs of future population growth."

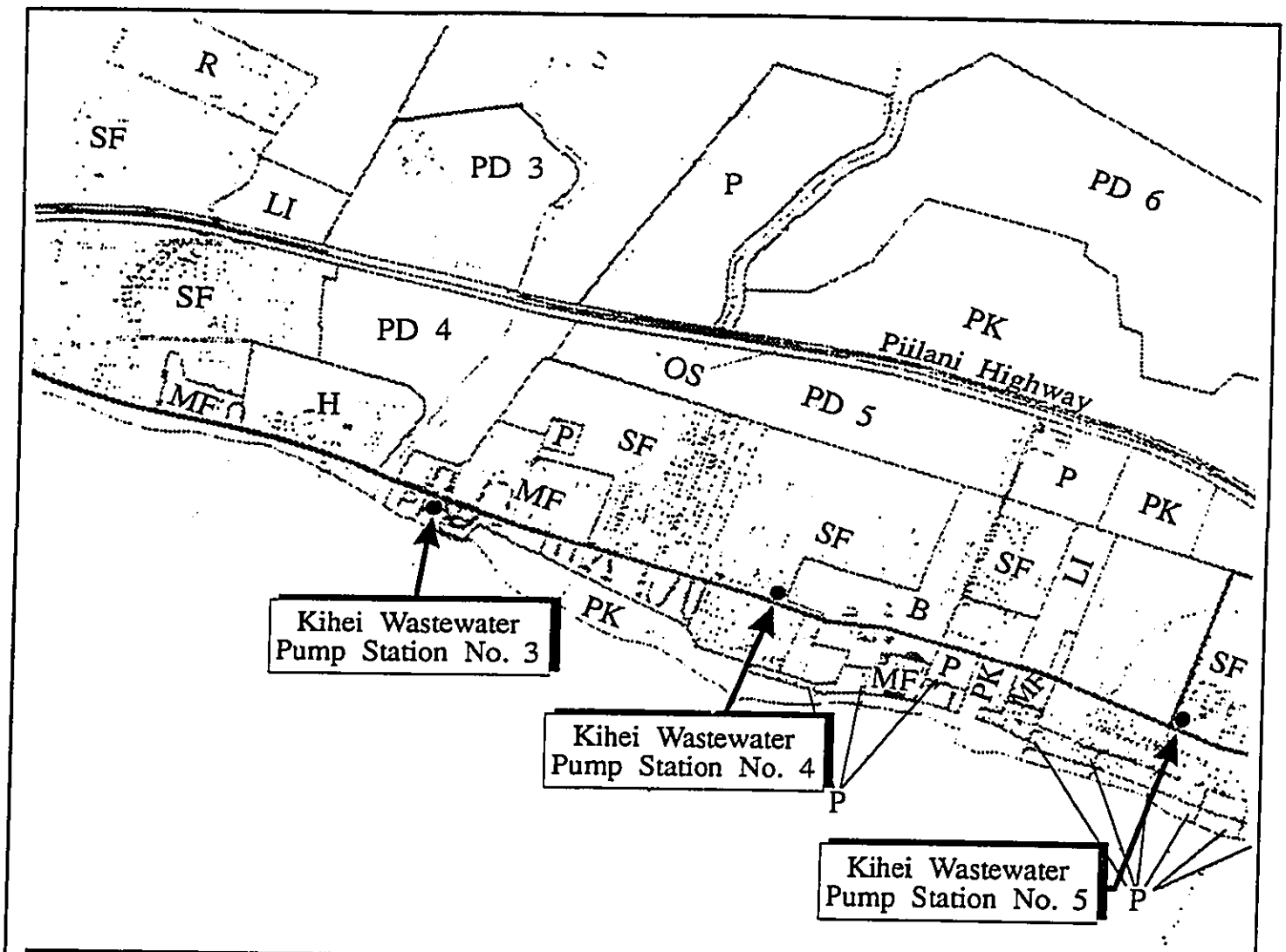
The Kihei-Makena Community Plan sets forth the detailed land use in the Kihei-Makena Community Planning Region which include the three WWPS sites. WWPS No. 3 is located on lands designated Park (PK). Surrounding land uses include Hotel in the north, Project District 4 to the northeast, and Multi-Family to the east. See Figure 14.

WWPS No. 4 is located on lands designated as Single-Family and is surrounded by lands under the same designation. Nearby, to the south, are lands classified as Business. See Figure 14.

WWPS No. 5 is located on lands designated as Single-Family and is surrounded on all sides by lands also designated as Single-Family. See Figure 14.

D. COUNTY OF MAUI SPECIAL MANAGEMENT AREA

The subject property is located within the County of Maui's Special Management Area. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Maui Planning Commission.



KEY			
AG	Agriculture	H	Hotel
R	Rural	P	Public/Quasi-Public
SF	Single Family Residential	PK	Park
MF	Multi-Family Residential	OS	Open Space
B	Business/Commercial	PD	Project District
I	Industrial	C	Conservation
LI	Light Industrial		

Figure 14 Kihei Wastewater Pump Station Upgrades

Kihei-Makena Community Plan
Land Use Designations

0 1000 2000 4000 Feet

Michael T. Munekiyo Consulting, Inc.

Prepared for: County of Maui, Department of Public Works

1. ***Recreational Resources***

Objective: Provide coastal recreational resources accessible to the public.

Policies:

a. Improve coordination and funding of coastal recreation planning and management; and

b. Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:

(1) Protecting coastal resources uniquely suited for recreation activities that cannot be provided in other areas;

(2) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

(3) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(4) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(5) Encouraging expanded public recreational use of County, State and federally owned or controlled shoreline lands and waters having recreational value;

(6) Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters; and

(7) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits, and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response: The proposed project is not anticipated to affect existing coastal or inland recreational resources. Improvements at WWPS Nos. 3, 4 and 5 are confined to the existing sites. Regarding WWPS No. 3, access to the shoreline through Kalepolepo Park will continue as it currently exists. WWPS Nos. 4 and 5 are located mauka of South Kihei Road and do not affect public access to the shoreline.

2. ***Historical/Cultural Resources***

Objective: Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

1. Identify and analyze significant archaeological resources;

2. Maximize information retention through preservation of remains and artifacts or salvage operations; and

3. Support State goals for protection, restoration, interpretation and display of historic resources.

Response: The sites of WWPS Nos. 3, 4 and 5 are not anticipated to contain any significant archaeological resources. The sites are located in an urban area and have already been significantly altered during the construction of the original pump stations and transmission lines.

3. ***Scenic and Open Space Resources***

Objective: Protect, preserve and where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

1. Identify valued scenic resources in the coastal zone management area;

2. Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;

3. Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and

4. Encourage those developments which are not coastal dependent to locate in inland areas.

Response: The project should have an insignificant impact on coastal scenic and open space resources. Landscaping will be maintained or restored to buffer newly erected fencing. The landscaping establishes a visually pleasing complement to the surrounding area.

4. ***Coastal Ecosystems***

Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

1. Improve the technical basis for natural resource management;

2. Preserve valuable coastal ecosystems of significant biological or economic importance;

3. Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

4. Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

Response: Improvements to pump station sites are not expected to adversely impact coastal ecosystems. The project does not involve extensive grading. Applicable erosion control measures will be implemented during and after construction. Dewatering discharges during construction will be pumped to the closest County drainage system and will be filtered or otherwise treated, if necessary, to comply with all applicable Federal, State and County regulations.

5. Economic Uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

1. Concentrate in appropriate areas the location of coastal dependent development necessary to the State's economy;

2. Ensure that coastal dependent development such as harbors and ports, visitor facilities, and energy-generating facilities are located, designed and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management area; and

3. Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

   a. Utilization of presently designated locations is not feasible;

   b. Adverse environmental effects are minimized; and

c. Important to the State's economy.

Response: The proposed project enhances the viability and allows for the increase in capacity of the Kihei Wastewater Reclamation System. An adequate wastewater reclamation system is an important component in aiding the implementation of land use policy to encourage uses important to the State's economy.

6. ***Coastal Hazards***

Objective: Reduce hazard to life and property from tsunami, storm waves stream flooding, erosion and subsidence.

Policies:

1. Develop and communicate adequate information on storm wave, tsunami, flood, erosion and subsidence hazard;

2. Control development in areas subject to storm wave, tsunami, flood, erosion and subsidence hazard;

3. Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

4. Prevent coastal flooding from inland projects.

Response: It is not anticipated that the proposed project would result in increased runoff from the subject properties. During construction, trenches will be kept free from water during the installation, testing, and backfilling of pipes. Dewatering discharges will be directed to County drainage systems.

7. ***Managing Development***

Objective: Improve the development of review process, communication, and public participation in the management of coastal resources and hazard.

Policies:

1. Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;

2. Facilitate timely processing of application for development permits and resolve overlapping of conflicting permit requirements; and

3. Communicate the potential and short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Response: In compliance with the Special Management Area Rules and Regulations of the County of Maui, required project assessment documentation will be filed with the County Planning Department. In addition, early consultation is provided through the process of preparing the Environmental Assessment.

Applicable State and County requirements will be adhered to in the design and construction of the proposed project.

Chapter VI

Findings and Conclusion

VI. FINDINGS AND CONCLUSION

The proposed improvements to Kihei WWPS Nos. 3, 4 and 5 would increase reliability by replacing aging and outdated equipment. Additional pumping capacity is also being provided which is necessary to serve ongoing development.

The proposed project will not involve substantial earthwork and construction activities. However, these activities may create temporary nuisances normally associated with construction activities. Dewatering discharges will be routed to the closest County drainage system. Noise impacts related to dewatering pump operations is expected to be mitigated. The extent of construction impacts should not be adverse.

From a long-term perspective, the project is not anticipated to cause adverse environmental impacts. There are no known archaeological features or rare/threatened species of fauna and flora at the three pump station sites. The project also will not generate adverse air quality or noise conditions. Each of the pump station sites does not encroach into scenic coastal view corridors or impact views from mauka vantage points.

The Corps of Engineers has indicated that the mauka edge of the WWPS No. 4 site may be a wetland. Since it is currently not certain whether the mauka edge of the WWPS No. 4 site is considered a wetland, no construction activities are scheduled to take place in this area. If the determination is made that the mauka portion is not a wetland, then the existing hau bush vegetation may be cleared, fencing may be erected and gravel ground cover and landscaping may be placed in this area. If the mauka portion of the WWPS No. 4 site is considered a wetland, site work would avoid the wetland area (e.g., fencing to be placed within the existing gravelled area). All work would be coordinated with the Corps of Engineers to assure that wetlands in the vicinity of WWPS No. 4 are not impacted by the proposed action.

No additional County personnel are required as a result of the proposed improvements. In this regard, the project is not considered significant in terms of its impacts to public services and other infrastructure systems. In light of the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

Chapter VII

Agencies Contacted in the Preparation of the Environmental Assessment

VII. AGENCIES CONTACTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

The following agencies were contacted during the preparation of the Environmental Assessment:

1. U.S. Army Corps of Engineers

2. State of Hawaii
   Department of Health

3. State of Hawaii
   Department of Land and Natural Resources

4. County of Maui
   Department of Planning

5. County of Maui
   Department of Parks and Recreation

6. Kihei Community Association

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